INTRODUCTION

Caesarean delivery is considered to be a major obstetrical surgical procedure that aims at saving the lives of both mothers and fetuses. [1] Over the last few decades, there has been a dramatic upsurge in the incidence of caesarean deliveries, both primary, and repeat caesarean section. Even though many complications may accompany a Caesarean delivery, the most common complication is surgical site infection (SSI). [2] The rate at which SSI occurs after Caesarean delivery varies from 3% to 15% across the world. [3-5]

Due to the unceasing increase in the incidence of caesarean deliveries, the prevalence of Surgical Site Infections is presumed to rise further. [6-7] SSI that accompanies a Caesarean delivery may escalate the rate of maternal mortality and morbidity. Additionally, for a mother who is trying to recover from the Caesarean procedure, the occurrence of SSI could be quite frustrating. There is a possibility that it may lead to an unnecessary extension of maternal hospitalization. As a result, the cost associated with health and personal care may increase and there may be other socio-economic repercussions. [6]

The Centers for Disease Control and Prevention defines SSI as an infection occurring within 30 days from the operative procedure in the part of the body where the surgery took place. [8] It divides SSIs into incisional SSI and

organ/space SSI. Incisional SSI is further classified into two subdivisions, which are Superficial and deep SSI. Superficial SSI involves the skin and the subcutaneous tissue, while Deep SSI involves fascial and muscle layers. [8]

There are several risk factors that may lead to post caesarean section SSI that have been captured through research. The identification of these factors is crucial for developing targeted practices that reduce the SSI rate. [2]

A number of clinical trials were conducted to explore the effects of different intervention methodologies to minimize the rate of SSI after a caesarean section. It has been reported that identifying risk factors, specifically those factors which can be adjusted like appropriate skin preparation prior to the surgery and utilization of well-defined surgical techniques have proven to have a direct impact on the rate of surgical site infections. [9]

Pathogens that cause SSI are most often found on the skin. Preoperative skin preparation using antiseptic agents has been reported to minimize the risk of Surgical Site Infections. [10] In the current scenario, there is no ideal recommended skin preparation which is considered to be the most efficient in preventing post caesarean SSI. [11-12] The Food and Drug Administration has approved a number of skin preparation modalities for use in operating rooms today.

For decades, povidone-iodine is being used in operating rooms. It acts by oxidizing sulfhydryl groups and affects microbial protein structure and function. [13] A potential disadvantage of iodine is its average drying time of 3 minutes for optimal function as well as its potential capacity for skin irritation. In recent years, the use of chlorhexidine has gained considerable popularity, since it does not require a waiting time between application and skin incision. Chlorhexidine acts against bacteria by destroying the cell membrane. [13] Chlorhexidine has the disadvantage of being more expensive than iodine. It has been demonstrated that both antiseptic agents reduce bacterial counts, although their use varies at different hospitals. However, it is not known whether these 2 agents act similarly in preventing SSI after surgical procedures. [13]

Combination of chlorhexidine and isopropyl alcoholor using 70% of isopropyl alcohol alone has a much better antimicrobial effect than 4% chlorhexidine alone and70% isopropyl alcohol alone.[14]Also, the combination of chlorhexidine and isopropyl alcohol has demonstrated a better residual antimicrobial.[15]Other trials demonstrated that 2% chlorhexidine and 70% isopropyl alcohol had enhanced immediate and long-term antimicrobial activity compared to povidone-iodine alone which had been proved clinically.[16]

Unfortunately, there is a paucity of evidence to guide the choice of an antiseptic agent at caesarean delivery. [17] The current guidelines recommend the use of an alcohol-based preoperative skin preparation agent. [24] However, it is not clear which disinfectant should be combined with alcohol.

The present study is to compare the effect of Povidone-Iodine and Chlorhexidine in lowering the risk of SSI after caesarean section. On the basis of a randomized trial comparing skin antiseptic agents at caesarean delivery, it was hypothesized that the use of a chlorhexidine-based preparation would be associated with a lower risk of SSI. [1]

AIMS AND OBJECTIVES

AIM:

To compare the effects of povidone-iodine and chlorhexidine as skin antiseptic agents to reduce the rate of surgical site infection following caesarean delivery.

OBJECTIVES:

1. To determine whether there is any significant difference in the number of positive SSI cases between the Povidone-Iodine group and Chlorhexidine group.
2. To assess the effects of Povidone-Iodine and Chlorhexidine in patients with obstetric high-risk factors such as obesity, Gestational diabetes, Gestational hypertension, previous Caesarean section, Premature Rupture of Membrane, Chorioamnionitis and Medical comorbidities like Anemia, hypothyroid, heart disease, seizure disorder, bronchial asthma and renal disorder.
3. To identify the most common organism causing wound infection in our institution and its culture and sensitivity to antibiotic.

MATERIALS AND METHODS

Study Participants: Pregnant women undergoing emergency and elective caesarean delivery at the Institute of Obstetrics and Gynaecology, Chennai.

Study Period: 1 Year (16th Dec 2020 to 15th Dec 2021)

Study design: Non-Randomized control study

Sample size: Using OpenEPi Version 3.01, the minimum sample size was calculated to be 940 with 470 participants each in Povidone -Iodine group and Chlorhexidine group.

Inclusion criteria: Antenatal women undergoing emergency and elective caesarean delivery at the Institute of Obstetrics and Gynaecology, Chennai.

Exclusion criteria:

- Skin infection at or adjacent to the operative site
- Known allergy to chlorhexidine
- Known allergy to alcohol
- Known allergy to iodine

- Inability to follow the patient's course for 30 days after caesarean delivery

Number of groups being studied: Two groups – Povidone-Iodine group and Chlorhexidine group.

Method of study: Women planned for emergency and elective caesarean section in this Institution had been recruited for this study excluding those meeting the exclusion criteria. Women of one group were assigned to receive povidone-iodine as baseline institutional standard skin preparation and women of the other group were assigned to receive chlorhexidine-alcohol for preoperative skin preparation. Skin preparation was done by the operation theatre doctors and staff nurses who performed the operation. The following infection control measures were standardized and implemented as per hospital protocol: -

- Preoperative hair trimming
- Use of established preoperative hand and/or forearm antisepsis by the surgical team
- Appropriate surgical attire and drapes
- Appropriate intravenous antibiotic prophylaxis within 1 hour before incision followed for two days after caesarean section and replaced with oral antibiotics for 3 days thereafter

- Meticulous aseptic technique and appropriate tissue handling and surgical technique
- Adequate intraoperative and postoperative blood glucose control in diabetic women
- Maintenance of the postoperative dressing for 48 hours and suture removal on the 7^{th} or 9^{th} postoperative day.

Each skin preparation solution was adopted as the preferred modality till the sample size was met in each group. Women were followed up for 30 days after caesarean delivery for the occurrence of superficial or deep surgical site infection. Statistical analysis was performed using SPSS software and Microsoft Excel.

Skin Preparation: Skin preparation was carried out by adhering to the routine preoperative skin preparation method, which is quite similar for either of the antiseptic agents. In other words, the antiseptic agent was used to clean the patient's operative site, and then in between the use of the antiseptic agent and skin incision, a waiting time of 3 minutes was allowed, however, in case of emergencies this step was skipped. Care was taken to ensure that the patients were receiving appropriate and standard measures for preventing infections, which included preoperative antibiotic prophylaxis based on their body weight. Until discharge, the patients were monitored on a daily basis, after which they were followed up by mobile communication until 30 days after delivery in order

to enquire whether they had any symptoms of SSI for identifying late-onset SSI. Demographic information, details pertaining to surgical procedures, and obstetrical/medical history was collected and used for subgroup analysis.

REVIEW OF LITERATURE

History of Skin Antisepsis:

Throughout the course of history, the world's medical community has been studying the human body's best defense against infections. [28] Physicians and healers have been aware of the anti-infective properties of certain substances since ancient times.

The antiseptic properties of wine, oil, and vinegar were recognized by the ancient Greeks and Romans. [29] Around **400 B.C**., the Greek physician Hippocrates discovered the phenomenal natural wonder that would be termed "antiseptic" by mixing vinegar and wine in wound dressings. Thus, was born the world's first process of destroying microorganisms.

In the **13th century**, the surgeon Theodoric of Bologna advised soaking dressings in wine to prevent the development of pus in wounds. [28]

In the **1700s**, English physician Sir John Pringle helped to coin the word antiseptic in a series of papers titled "Experiments Upon Septic and Antiseptic Substances". The chloride of mercury was introduced as an effective antiseptic by Genevieve Charlotte d'Arconville in **1766**. Bernard Courtois informed the world of the remarkable power of iodine in treating wounds in 1811, it became

a popular antiseptic treatment for wounds thereafter.[34] However, none of these antiseptics was sufficient to prevent certain infections, particularly following surgery. Amputations were quite common in the **1800s**, especially in the case of compound fractures in which the bone breaks and injures surrounding soft tissue. About 40 to 45 % mortality rate was observed in amputations. The introduction of anesthesia in **1846** worsened the problem further as it permitted more complicated and lengthy surgeries, thereby increasing the likelihood of infection. (29)

Puerperal fever, which occurs at the time of childbirth was another deadly form of infection. It is the streptococcus infection of the uterus that affected women who had just given birth. Epidemics of puerperal fever increased in maternity wards as more women gave birth at hospitals, thereby sharply increasing maternal death rates. Doctors paid little attention to surgical cleanliness until the relationship between bacteria and disease was discovered. (29)

In **1847**, (30) Hungarian doctor Ignaz Semmelweis noted that the mortality rates were significantly higher on maternity wards where doctors who also worked in other areas of the hospital were present than on those wards that were operated by midwives only. Handwashing procedures were introduced on these wards. Dr. Semmelweis ordered his students at Vienna General Hospital to

wash their hands in an antiseptic chloride solution of chlorinated lime (currently known as calcium hypochlorite) before examining patients. His reasoning was that tiny particles could be transmitted from body to body and cause infections. Following the implementation of this rule, the number of deaths due to infection on these maternity wards dropped drastically. In **1864**, [(31)] Louis Pasteur successfully demonstrated how microscopic bacteria caused diseases and proved Semmelweis' theory. Today, the hypothesis is known as "the germ theory of disease." Just a year later, in **1865** English physician Joseph Lister (1827–1912) put the theory into use in the successful operation of a compound fracture of the leg, after reading Pasteur's article on germ theory. He was credited with the first use of an antiseptic skin agent in surgery. Before the mid-19th century, amputation of limbs was associated with a 50% postoperative mortality from sepsis. [28]But, after Louis Pasteur's discovery that tissue decay was caused by microscopic organisms, Lister theorized that death in the postoperative period was caused by the spread of microorganisms through surgical wounds. Lister began treating wounds with carbolic acid (phenol) in an effort to prevent tissue decay and the resultant infectious complications. As a result, the incidence of surgical sepsis fell dramatically, catalyzing the adoption of modern antiseptic techniques, including instrument sterilization, the use of surgical scrub and rubber gloves, and sterile patient preparation.

There was one final obstacle to surgical antisepsis, the human hands. Surgical instruments and dressings can be sterilized, but surgeons' and nurses' hands can only be washed with antiseptics. In **1890**, [29] William Halsted, an American doctor, solved this problem. Dr. Halsted received his medical degree from Columbia University in 1877. He returned to the United States from two years of study in Europe as a convert to the Listerian method of antisepsis. Halsted became chief of surgery at Johns Hopkins Medical School after breaking an addiction caused by his experiments with cocaine as an anesthetic. There, he introduced the use of rubber gloves in surgery to protect his head nurse, Caroline Hampton, from the antiseptic that was irritating her hands. In the early **20th century**, sterilized surgical gowns and gloves became more common.

In the 20th century, [30] antiseptics evolved greatly as their infection-fighting power was significantly strengthened with the introduction of antibiotics, iodine, penicillin and boric acid. The adoption of aseptic methods such as sterilization prevented bacteria from living in given areas. Further studies eliminated the use of carbolic acid as an antiseptic. In the later years of the 20th century, operating rooms around the world started to become more and more germ-proof.

Modern Surgical Skin Preparation:

Many surgical preparations are available for preoperative antisepsis. Alcohol is frequently used for minor clean procedures, such as biopsies. However, because it has only weak antimicrobial activity, alcohol is not recommended for more extensive procedures. [30] In today's scenario, the most common skin preparation agents used include products that contain iodophors or chlorhexidine gluconate (CHG). Antiseptic agents are further classified by whether they are alcohol-based or aqueous solutions. [10]

- **Aqueous-Based Solutions:**

  Aqueous-based iodophors such as povidone-iodine (PVP-I) contain iodine complexed with a solubilizing agent that allows for the release of free iodine when in solution. [16] By destroying microbial proteins and DNA, Iodine acts as an antiseptic agent. Iodophor-based products are widely usedas they possess broad-spectrum antimicrobial properties, potency, and safety on all skin surfaces in patients irrespective of their age. In the aqueous form, most commercially available iodophors require a 2-step application in a scrub-and-paint technique, and their activity is limited by the amount of time the agent is in contact with the skin. Another product, aqueous-based chlorhexidine gluconate (CHG), works by disrupting bacterial cell membranes. CHG has moreresistant to neutralization by blood products than the iodophors and it has a more sustained antimicrobial activity. CHG is applied in a similar manner to

PVP-I, however, it should not be used in the genital areas. CHG has gained popularity as a showering and hand-scrubbing antiseptic prior to surgery and continues to be used as a skin preparation agent.

- **Alcohol-Based Solutions:**

  Two of the most effective antiseptic agents available are ethyl alcohol and isopropyl alcohol. Alcoholis relatively inexpensive. Whenused alone it is fast and short-acting and has broad-spectrum antimicrobial activity. [10] When alcohol is used with CHG or iodophors they have sustained and durable antimicrobial activity that lasts longer. [32] Alcohol can be applied with a 1-step preparation as opposed to a scrub-and-paint techniquesince it evaporates on exposed skin within moments of application.

  A limitation to the use of alcohol in the operating room is its flammability on skin surfaces prior to evaporation. Certaininstances have been reported in which the use of alcohol-based skin preparation has led to operating room fires, and hence resulting in significant injury to patients and staff. [33] By allowing the skin to completely dry and avoiding the preparation of areas with excessive body hair that can delay alcohol vaporization, such accidents can be avoided.

Additionally, alcohol-based solutions should not be applied to mucous membranes and therefore have limited utility as antiseptic agents prior to transurethral or transvaginal surgery. In recent studies, it has been determined that these products may have an easier application, improved durability, greater efficacy and a superior cost profile as compared to traditional aqueous-based solutions.

Povidone-iodine:

Povidone-iodine is an antiseptic mainly used for topical application in the treatment and prevention of wound infection. It is also commonly used in first aid for minor cuts, burns, abrasions, and blisters. All iodine-containing preparations have an excellent bactericidal activity within several minutes of application. However, these agents are often irritating to the skin, leave a residual color, can be absorbed in premature infants, and must dry before the procedure if they are to act as an effective antimicrobial agent. [(34)] The antiseptic qualities exhibited by Povidone-iodine are longer lasting than that of CHG, this is attributed to its slow absorption via soft tissue. This fact makes povidone-iodine an ideal choice for longer surgeries. Povidone-iodine is an example of an iodophor, a complex of iodine and a solubilizing carrier, which acts as a reservoir of ‘free’ active iodine. One of the many methods of preventing SSI includes the preparation of the patient’s skin prior to surgery because the majority of infections are acquired intra-operatively from the patient’s

endogenous flora that colonizes the patient's own skin, gastrointestinal tract, or mucous membranes. The antiseptic of choice, therefore, needs to be rapidly acting, broad-spectrum, and also persistent to suppress the regrowth of remaining organisms during the course of the operation. Although the Povidone-Iodine solution is broad-spectrum and shows some level of persistence, it may require several minutes to reach a maximal effect and the recommended application time is 3–5 minutes. [34] Furthermore, because of their aqueous nature, such antiseptics can take longer to dry after application.

Chlorhexidine:

Chlorhexidine [35] is characterized as being a strong base with cationic properties. It is available in both freebase and stable salt forms, with a white or yellowish appearance. It has a broad spectrum against gram-positive and gram-negative organisms, rapid onset of activity, and sustained residual activity even after being wiped off, and it is non-staining. Chlorhexidine dihydrochloride, chlorhexidine diacetate (CHA), chlorhexidine gluconate (CHG), chlorhexidine di-gluconate, and chlorhexidine phosphanilate are chlorhexidine solutions that are colorless, odorless, and have an extremely bitter taste. Chlorhexidine has been used in more than 60 different pharmaceuticals and medical devices. Its wide application is due to its broad-spectrum efficacy, safety profile, and substantivity on the skin with low irritation. It has been found to possess a high level of antimicrobial activity and a strong affinity for binding to skin and

mucous membranes. At product-dependent concentrations, chlorhexidine is widely used as a disinfectant in a range of healthcare products, including topical skin disinfectants, wound and burn care products, oral care products, handwashing solutions, urology catheter lubricants, central venous catheters, and needleless IV connectors. Chlorhexidine-saturated cloths have demonstrated a greater reduction in Vancomycin-Resistant Enterococci (VRE) when compared to soap and water. The saturated cloth resulted in a 2.5 log10 reduction of VRE on patients' skin; the incidents of VRE were reduced from 26 colorizations per 1,000 patient-days to 9 per 1,000 patient-days; as well as a significant reduction of VRE on healthcare workers' hands. Preoperative skin preparation with chlorhexidine helped to reduce surgical wound infections by reducing the normal skin flora. A combination of chlorhexidine and alcohol showed the greatest reduction in bacteria, lasting up to 24 hours. In one study, chlorhexidine gluconate was shown to have a greater skin flora reduction than povidone-iodine. The use of preoperative chlorhexidine antiseptic has been shown to reduce bacterial colonization ninefold.

Previous Studies related to Skin Antisepsis to prevent SSI

1. **Magann et al (1993)** carried out a study titled “Preoperative skin preparation and intraoperative pelvic irrigation: impact on post-caesarean endometritis and wound infection” with the objective to determine the impact of two skin preparation methods and two techniques of pelvic

irrigation on the incidence of post-caesarean endometritis and wound infection in an indigent patient population.

A randomized study was performed on 100 caesarean patients. Subjects were assigned to one of four groups, involving either standard skin preparation (povidone-iodine [7.5%] scrub followed by povidone-iodine [10%] solution) or special skin preparation (5-minute scrub with parachlorometaxylenol followed by povidone scrub and solution), and either normal saline or antibiotic (cefazolin sodium, 1 g in 500 mL normal saline) irrigation of the pelvis and subcutaneous tissue at uterine and fascial closure. Four groups of patients were formed: standard skin preparation plus normal saline irrigation, standard preparation plus antibiotic irrigation, special preparation plus normal saline irrigation, and special preparation plus antibiotic irrigation.

Endometritis occurred significantly more often in the combined groups that did not include antibiotic irrigation than in the combined groups involving antibiotic irrigation. In contrast, the comparison of skin preparation methods between povidone-iodine alone versus preparation including parachlorometaxylenol indicated no significant difference.

The authors concluded that Skin preparation with an antibacterial scrub in addition to standard povidone-iodine scrub and solution appeared to play a significant role in the reduction of post-caesarean endometritis or wound infection as does intraoperative pelvic irrigation with antibiotic solution.

2. **Kofman et al (2005)** conducted a study to identify risk factors for early wound infection (diagnosed prior to discharge) following caesarean delivery. It was a population-based study comparing women who have and have not developed a wound infection prior to discharge from Soroka University Medical Center, Ben Gurion University of the Negev, between 1988 and 2002.

A total of 19,416 caesarean deliveries were performed during the study period, of which 726 (3.7%) were followed by a wound infection. The risk factors were identified for an early wound infection post caesarean section. The authors concluded that the independent risk factors for an early wound infection are obesity, diabetes, hypertension, premature rupture of membranes, emergency caesarean delivery, and twin delivery. Information regarding higher rates of wound infection should be provided to obese women undergoing caesarean delivery, especially when diabetes coexists.

3. **Swenson et al (2009)** conducted a study to compare and evaluate in what manner three different kinds of skin preparations affected surgical site infection rates. Each of the reagents under consideration was taken up and administered as the preferred option for a period of 6months for all general surgery cases. The first period used a combination of povidone-iodine scrub-paint (Betadine) and isopropyl alcohol, then, the second period used a combination of 2% solution of Chlorhexidine with 70% isopropyl alcohol (ChloraPrep), and finally, the third period used an iodine povacrylex combined with isopropyl alcohol (DuraPrep). The research included an overall 3,209 surgeries. The minimal infection rate was observed in the third period, in which iodine povacrylex was used in combination with isopropyl alcohol as the preferred skin preparation option. The rate of SSI in period 3 was 3.9%, against 6.4% in the first period and 7.1% in the second; P = .002). There was no significant difference in results between the patients who were prepared with povidone-iodine scrub-paint and isopropyl alcohol, and those that were prepared with iodine povacrylex in isopropyl alcohol, in subgroup analysis. While, it was observed that the patients in either of these two groups had endured significantly lower rate of surgical-site infection (4.8%; P = .001)., in comparison to the Surgical Site infection rates for patients that were prepared with 2% solution of Chlorhexidine with 70% of isopropyl alcohol (8.2%; P = .001). Therefore, it was concluded that

Iodophor-based compounds may have an upper hand in reducing surgical site infections as compared to Chlorhexidine in general surgery patients.

4. **Darouiche RO et al (2010)** studied and compared the effects of Chlorhexidine alcohol and povidone-iodine for the antisepsis of surgical sites. A random allocation of patients to have preoperative skin preparation with either chlorhexidine–alcohol scrub or povidone-iodine scrub and paint was made who were planned to undergo clean-contaminated surgery in six different hospitals.

897 patients were randomly assigned to a study group - 431 of them were assigned to the chlorhexidine–alcohol group and 466 to the povidone-iodine group. Of the 897, 849 patients qualified for the intention-to-treat analysis, in which 409 patients received chlorhexidine–alcohol, and 440 received povidone-iodine. 36 patients were excluded from the per-protocol analysis because 25 of them underwent clean rather than clean-contaminated surgery, 4 were dropped out of study 1 or 2 days after surgery, and 7 of them died before the completion of the 30-day follow-up (3 in the povidone-iodine group and 4 in the chlorhexidine–alcohol group). Therefore, a total of 813 patients (391 in the chlorhexidine–alcohol group and 422 in the povidone-iodine group) were included in the per-protocol analyses.

The patients in the chlorhexidine–alcohol group had a significantly lower rate of surgical-site infection (9.5%) than in the povidone-iodine group (16.1%). Likewise, chlorhexidine–alcohol was also associated with a significantly fewer incidences of superficial incisional infections and deep incisional infections. However, with respect to the incidence of organ-space infection or sepsis from a surgical-site infection, there were no significant differences between the two study groups. In the chlorhexidine–alcohol group there wasa longer time to infection after surgery than in the povidone-iodine group. In a separate subgroup analysis, it was observed that the rate of infection after abdominal surgery was20.5% in the povidone-iodine groupversus 12.5% in the chlorhexidine–alcohol group. For patients who were undergoing non-abdominal surgery, the rate of infection was 6.1% in the povidone-iodine group versus 1.8% in the chlorhexidine–alcohol group. Based on these results the authors concluded that preoperative skin cleansingusing chlorhexidine–alcohol is superior to cleansing with povidone-iodine for preventing surgical-site infection after clean-contaminated surgery.

5. **Ingi Lee et al (2010)** conducted a systematic review comparing the use of chlorhexidine with the use of iodine for preoperative skin antisepsis to prevent surgical site infection along with cost analysis. They did an extensive search on the Agency for Healthcare Research and Quality

website, Medline, the Cochrane Library, and EMBASE up until January 2010 including all eligible studies. Inclusion criteria were that the studies should be systematic reviews, randomized controlled trials (RCTs), or meta-analyses, that compare preoperative skin antisepsis with chlorhexidine and with iodine and assess the outcomes of SSI or positive skin culture results after application. A decision-analytic cost-benefit model was developed to compare the economic value, from the hospital perspective, of antisepsis with iodine versus antisepsis with 2 preparations of chlorhexidine (i.e., 4% chlorhexidine bottle and single-use applicators of a 2% chlorhexidine gluconate (CHG) and 70% isopropyl alcohol (IPA) solution), and sensitivity analyses were also performed.

9 Randomized controlled trials with a total of 3,614 patients were included in the study. The study revealed that chlorhexidine antisepsis was associated with significantly lower rates of SSI and positive skin culture results as compared to iodine antisepsis. As per the cost-benefit model, switching from iodine to chlorhexidine led to a net cost savings of $16–$26 per surgical case and $349,904–$568,594 per year for the Hospital of the University of Pennsylvania. Sensitivity analyses revealed that net cost savings were observed under most circumstances. So, it was found that preoperative skin antisepsis with chlorhexidine was more

effective for preventing SSI than preoperative skin antisepsis with iodine and it also resulted in cost savings.

6. **Stinner et al (2011)** did a study on Time-dependent effect of chlorhexidine surgical prep, with the aim to evaluate the time-dependent effectiveness of chlorhexidine, a common surgical preparation solution, at various concentrations. Mueller Hinton plates were inoculated with Staphylococcus aureus. Starting at the top of the plate, the bacteria were spread back and forth covering the entire plate. Three different aqueous chlorhexidine gluconate solutions were tested (group 1: 4%, group 2: 2%, and group 3: 0.4%). Chlorhexidine gluconate 4% was used as a base and serial dilutions were made with sterile water to obtain the additional concentrations. Each plate was then placed within a dark-box, the IVIS100 imaging system (Xenogen Corporation, Alameda, CA, USA), to obtain luminescent data. After 2 min of contact time, groups 1 and 2 had similar reductions in bacterial load with 30% of the original bacteria remaining in each group. Group 3 had a significantly higher bacterial load (33%) when compared to both groups 1 and 2. The bacterial load in all three groups continued to decrease out to the final time point (1 h) with group 1 having the least amount of bacterial load remaining, 9%, and group 3 with the highest bacterial load remaining, 19%.

This study demonstrates two key results: first, dilution of chlorhexidine correlates directly with its bactericidal activity; second, its effectiveness is directly related to its contact time. Based on the results of this study, the authors recommend using 4% chlorhexidine for surgical site preparation and allowing a minimum of 2 min of contact time prior to making the skin incision.

7. **Ishai Levin et al (2011)** conducted a retrospective study about chlorhexidine with alcohol versus povidone-iodine for preoperative skin antisepsis in gynaecological surgery. Surgical site infections (SSIs) usually lead to significant morbidity and mortality in hospitalized patients undergoing surgery. The reported increase in the duration of hospital stays and theirassociated costs are attributed to the post-operative infections of the surgical site. The objective of this study was to determine whether skin antisepsis using chlorhexidine with alcohol protocol reduced the rate of SSIs in elective gynaecological laparotomies when compared to skin antisepsis using povidone-iodine. It was found that skin antisepsis with chlorhexidine and alcohol was associated with a significant reduction in the rate of SSIs compared with povidone-iodine antisepsis. They changed their antisepsis protocols from a 10% povidone-iodine scrub followed by 10% povidone-iodine in 65% alcohol solution to a 2% chlorhexidine scrub followed by 70% alcohol solution. No other

change in patient care before or after surgery was instituted. Their primary aim in this study was to examine the SSI rate after this change of protocol. Patients undergoing elective gynaecological surgery were studied before and after the implementation of the new protocol. Data were collected from patients' charts before and after the change in antisepsis protocol. One group of patients comprised of patients (145) undergoing elective gynaecological laparotomies during the year 2007 (group 1, povidone-iodine group). Another group included all patients undergoing elective gynaecological laparotomies between January 1st 2009, and August 31stof that year (111 patients) (group 2, chlorhexidine and alcohol group). Data were collected from 145 patients who were undergoing gynaecological elective laparotomies using a povidone-iodine protocol for preoperative skin antisepsis and 111 patients undergoing elective gynaecological laparotomies using chlorhexidine and alcohol antisepsis protocol. The patients' age and weight were statistically similar between the two groups. The proportion of patients in the two groups with risk factors for SSIs was also similar. Risk factors studied were previous myocardial infarction (MI), ischemic heart disease, noninsulin-dependent diabetes mellitus (NIDDM), obesity, hypertension, and a history of chemotherapy. There was no statistical differencebetween the two groupswith respect to the proportion of patients with midline skin incisions and the proportion of patients with tension sutures and drains.

The infection rates were found to be 14.6% for the 10% povidone-iodine protocol versus 4.5% for the 2% chlorhexidine protocol. The patients with infections in both groups were significantly found to be older and heavier. The hospital stay was significantly longer in patients with SSIs, as expected. A significant decrease in the rate of SSIs was noticed when using chlorhexidine 2% and 70% alcohol for surgical site cleansing compared to 10% povidone-iodine scrub and alcohol solution in patients undergoing elective gynaecological laparotomies. This retrospective study revealed that preoperative skin antisepsis with chlorhexidine and alcohol significantlyreduced the rate of SSI as compared to povidone-iodine antisepsis in patients undergoing elective gynaecological laparotomies. Thus, the change in antisepsis protocolfrom a 10% povidone-iodine scrub followed by 10% povidone-iodine in 65% alcohol solution to a 2% chlorhexidine scrub followed by 70% alcohol solution significantly reduced morbidity and healthcare costs associated with patients undergoing elective gynaecological surgery.

8. **Al Jama E et al (2012)** conducted a retrospective study on the incidence of post caesarean wound infection and independent risk factors associated with wound infection at a tertiary care hospital.

The study was carried out between January 1998 and December 2007 at King Fahad Hospital, Al Khobar which is the main referral centre in the region. During the period of study, there were 24 435 deliveries and 2541 lower segment caesarean sections (LSCS) giving an incidence of 10.4% of this mode of delivery in the hospital. A case control study of the clinically relevant independent risk factors for wound infection after caesarean was undertaken.

9. **Menderes G et al (2012)** compared chlorhexidine-alcohol with povidone-iodine for preoperative surgical-site antisepsis prior to caesarean deliveries. This study was a retrospective review of 1,000 consecutive cases of women who underwent caesarean delivery over a 1-year time interval. The primary outcome was any surgical-site infection within 30 days.

Mean age and parity were similar in both the groups. Women were similar regarding baseline characteristics, including acknowledged surgical-site infection comorbidities (body mass index, gestational diabetes). With respect to surgical-site infection, the overall rate was found to be similar between the two groups (5% [n=25] chlorhexidine and 5.8% [n=29] povidone-iodine). The duration of caesarean delivery was the only significant predictor of surgical-site infections, in which

every 1-minute increase in duration increased the odds for infection by 1.3%. Skin cleansing with povidone-iodine may be a cost-effective and equally efficacious alternative to chlorhexidine-alcohol among women undergoing caesarean deliveries. Routine skin preparation was undertaken with 10% Povidone-iodine solution in all the patients. No drain was used post operation in any of the patients.

Among the 2541 caesarean sections, there were 107 (4.2%) instances of wound infection. A total of 2282 (89.8%) was primary CS and 259 (10.2%) repeat CS. Of the 107 wound swabs cultured 8 (7.5%) cases showed no bacterial growth. Staph aureus was the commonest micro-organism found in 50.4% of patients either alone or combined with other organisms. Staph epidermidis was isolated in 21.5%, group B streptococcus (GBS) in 24% and E. coli in 15.4% of patients. In 44 (41.1%) cases there was a mixed growth of organisms. Factors that significantly increase the risk of wound infection such as obesity, lack of antenatal care, and prolonged labour found in this study confirms with previous reports. Increased operating time was also found to be an independent risk factor that could have resulted from difficulties encountered in patients with previous laparotomy or caesarean sections.

High-risk factors for wound infection such as obesity, prolonged labour, and length of surgical procedure are to be systematically incorporated into approaches for the prevention and surveillance of postoperative wound infection.

10. **Maiwald M et al (2012)** did a systematic review and meta-analysis of the clinical efficacy and perceived role of chlorhexidine in skin antisepsis.

The authors performed exhaustive searches for primary and secondary literature in three areas of skin antisepsis, namely blood culture collection, surgical skin preparation, and vascular catheter insertion. For this review, primary literature was defined as randomized clinical trials (RCTs) and non-randomized clinical studies. The secondary literature was defined as systematic reviews. They performed searches usingCINAHL, PubMed, the Agency for Healthcare Research and Quality website, the Cochrane Library, several clinical trials registries, and a CHG product manufacturer's (CareFusion, San Diego, CA, USA) website.

For blood culture collection, a total of 12 articles met the inclusion criteria; which included 10 primary studies and 2 systematic reviews.

Four of the primary studies were RCTs. All of the articles evaluated CHG-alcohol combinations, and none of them evaluated aqueous CHG. Ample evidence was found in favourof chlorhexidine-alcohol over aqueous competitors, but not over competitors combined with alcohols. There was no evidence supporting chlorhexidine alone for blood cultures and surgery. For catheters, enough evidence was found in favour of chlorhexidine alone for preventing catheter colonization, but not for preventing bloodstream infection. About 29 to 43% of the articles supported outcomes solely to chlorhexidine when they were actually used in combination with alcohol. 8 to 35 % of the articles had an ambiguous attribution. The use of chlorhexidine alone was recommended instead of chlorhexidine-alcohol in several practice recommendations and evidence-based guidelines. The role of alcohol had been frequently overlooked in many assessments. So, it was concluded that the perceived efficacy of chlorhexidine is actually based on the evidence for the efficacy of the chlorhexidine-alcohol combination in many cases.

11. **Jonia Amer-Alshiek et al (2013)** carried out a study named “Can we reduce the surgical site infection rate in caesarean sections using a chlorhexidine-based antisepsis protocol?”. Surgical site infections (SSIs) often lead to severe morbidity and are attributed to higher health care costs. Skin antisepsis with chlorhexidine-alcohol solution has

demonstrated to be superior to povidone-iodine in preventing SSIs in a variety of surgical interventions. In this study, the main objective was to determine whether chlorhexidine-alcohol antisepsis protocol reduces the rate of SSIs in elective gynaecological laparotomies when compared with povidone-iodine antisepsis protocol. The study was carried out in Tel Aviv at the Department of Gynaecology in a tertiary medical center. Patients who were treated with two different antisepsis protocols and who were undergoing elective gynaecological laparotomies during two periods of time were included in the study. The protocols followed for skin antisepsis were 10% povidone-iodine scrub followed by 10% povidone-iodine in 65% alcohol (n = 145) and 2%chlorhexidine followed by 70% alcohol (n = 111).

It was found that skin antisepsis with chlorhexidine and alcohol combination showed a reduction in the overall rate of SSI compared to povidone-iodine protocol. With respect to baseline characteristics and medical history, the two groups of patients were statistically similar. Patients with SSI were found to be older and obese. Hypertension, immunodeficiency, non-insulin-dependent diabetes mellitus (NIDDM) and the use of the povidone-iodine antisepsis protocol were the risk factors found to be associated with SSIs. This retrospective study revealed that, in patients undergoing elective gynaecological

laparotomies, chlorhexidine and alcohol antisepsis was attributed to a significant reduction in the rate of SSI as compared to povidone-iodine antisepsis.

12. **Cynelle M Kunkle et al (2014)** conducted a randomized controlled trial comparingskin antisepsis using chlorhexidine gluconate versus povidone-iodine prior to caesarean delivery and found that the existence of positive bacterial cultures obtained at the site of the skin incision 18 hours after the delivery was higher in povidone-iodine group.

The primary objective of the study was to compare the existence of positive bacterial cultures at the incision site in patients who had undergonecaesarean delivery with the pre-operative application of chlorhexidine gluconate (CHG) versus povidone-iodine (PVP-I).

Women undergoing a scheduled CS at about 36 gestational weeks were randomly assigned to receive either chlorhexidine gluconate or povidone-iodine. At 3 min after disinfectant applicationand at 18 postoperative hours, a swab of the incision site was performed. The prevalence of cultures with any detected bacterial growth was compared between the two groups. Of the 60 participants, 33 belonged to PVP-I group and the remaining belonged to the CHG group. No significant

differences were detected at 3 min (with 9.1% positive in the PVP-I group versus 0% positive in the CHG group). However, at 18 h post-surgery, women in the PI group were seven times more likelyto have a positive culture than women in the CHG group. Therefore, based on these results it was concluded that the existence of positive bacterial cultures obtained at the site of the skin incision 18 hours after caesarean delivery was significantly lower in the CHG group when compared to the PVP-I group.

13. **McKibben et al (2015)** conducted a review on the Practices to Reduce Surgical Site Infections Among Women Undergoing Caesarean Section. This review focussed on providing a comprehensive overview of the results of systematic reviews and meta-analyses on interventions to reduce surgical site infections among women undergoing C-section.

The authors searched PubMed and the Cochrane Database of Systematic Reviews for systematic reviews and meta-analyses published between January 2000 and May 2014 on interventions to reduce the occurrence of SSIs (incisional infections and endometritis), among women undergoing C-section. Data related to the interventions, outcomes, and strength of evidence as determined by the original article authors were extracted, and the quality of each article was assessed.

A total of 30 review articles met inclusion criteria and were reviewed. Among these articles, 77 distinct interventions were evaluated: 29% were supported with strong evidence as assessed by the original article authors, and 83% of the review articles were classified as good quality based on the assessment of the authors of this study.

Based on their review, they concluded that efforts to reduce SSI rates among women undergoing C-section should include interventions such as preoperative vaginal cleansing and the use of perioperative antibiotics because compelling evidence exists to support their effectiveness.

14. **Ngai et al (2015)** conducted a study to compare the efficiency of antiseptic agents, namely, chlorhexidine with alcohol and povidone-iodine with alcohol, and also a sequential combination of both of these solutions in minimizing or suppressing post caesarean section SSI. Their primary objective was to evaluate and compare the effectiveness of the three solutions mentioned above in the prevention of surgical site infections post caesarean delivery.

There were 2 eligibility criteria for the patients: they should have reached 37 weeks of gestation based on the best obstetric estimate and

should be undergoing scheduled or nonemergent caesarean delivery. Patients were excluded if they had a urogenital tract infection within 2 weeks of delivery, or a 2-week or more history of steroid delivery during their pregnancy, or if they were younger than 18 years old. Randomized allocation of the eligible patientswas done and they were assigned to one of the three surgical skin preparation solution groups: PA group - povidone-iodine with alcohol; CA group - chlorhexidine with alcohol; BOTH group - a combination of povidone-iodine with alcohol and chlorhexidine with alcohol used together (the povidone-iodine with alcohol was applied first, followed by the chlorhexidine with alcohol, and then their combination). Computer software was used for randomization.

From January 2013 through July 2014, 1404 patients were randomly assigned to one of the three study groups: 463 to the PA group, 474 to the CA group, and 467 to the BOTH group. With randomization, all the three groups were demographically similar and had similar risks of surgical site infection. The overall rate of surgical site infection was found to be 4.3% (60/1,404) which was statistically similar among the 3 groups (4.6% in the PA group, 4.5% in the CA group, and 3.9% in the BOTH group). The surgical site infections could be classified as follows; 46/60 (76%) were found to be superficial site infections,7/60 (12%) were organ space infections, and the remaining 7/60 (12%) were deep space infections. Therefore, the groups were quite similar in the type of surgical site

infection. A subgroup analysis was performed as a further evaluation to determine the potential associations of skin preparation solution and surgical site infection. There was a similarity in the rate of surgical site infection between these 3 groups among the patients who underwent a nonscheduled caesarean delivery, with labor before caesarean delivery. Additionally, another sub-analysis was performed on the basis of BMI, with women who met the criteria for class III obesity. In this category, there was a reduction in surgical site with the use of sequential application of both solutions. This study does not support any specific method of skin preparation prior to caesarean delivery, since similar rates of surgical site infections were observed in using different skin preparation techniques.

15. **Tuuli et al (2016)** compared the use of chlorhexidine with alcohol to povidone-iodine with alcohol for skin antisepsis in women undergoing caesarean delivery. 1636 pregnant women were assessed for eligibility for the study; of which 489 women were excluded since some of them did not meet the inclusion criteria, some declined to participate, and for the remaining patients, informed consent could not be obtained. The remaining 1147 women were randomly assigned to receive preoperative skin preparation with either chlorhexidine–alcohol or Povidone-iodine

and alcohol. After which they were included as part of the primary intention-to-treat analysis.

23 (4%) patients in the chlorhexidine–alcohol group were diagnosed with a surgical-site infection as opposed to 42 (7.3%) in the iodine–alcohol group. In the chlorhexidine–alcohol group, the superficial infection rate was reported to be 3% and, in the iodine–alcohol group it was reported to be 4.9%; also, the rate of deep infection was 1% in the chlorhexidine–alcohol group and 2.4% in the iodine–alcohol group. In terms of the frequency of adverse skin reactions, the two groups were similar. Based on these results it was concluded that the use of chlorhexidine–alcohol in comparison to iodine–alcohol, for preoperative skin antisepsis brought about a reasonably reduced degree of surgical-site infection post caesarean delivery.

16. **Aworinde et al (2016)** conducted a study on Antiseptic Skin Preparation for Preventing Surgical Site Infection at Caesarean Section. The objective was to compare the effect of povidone-iodine and chlorhexidine-alcohol on surgical site infection (SSI) after a caesarean section. This randomized control trial was carried out in the Department of Obstetrics and Gynaecology of the Obafemi Awolowo University Teaching Hospitals

Complex (OAUTHC), Ile-Ife, Osun State, Nigeria between August 2012 and July 2013.

384 patients who had an electivecaesarean section at OAUTHC, Ile-Ife; were randomized into each of chlorhexidine-alcohol and povidone-iodine group (192 each) after obtaining their consent. Patients with previous midline scar, allergy to chlorhexidine or povidone-iodine and immunocompromised patients were excluded from the study. Patients with prolonged prelabour rupture of membranes, maternal febrile conditions and apparent risk for infection like obstructed labour were excluded. All the patients had a bath with a non-antiseptic soap prior to surgery. Lower abdomen was shaved on the surgical table just before commencing antiseptic skin preparation. Subjectshad Pfannenstial incision, which was closed with Vicryl 2/0 subcuticular sutures. The subcutaneous layer wasclosed with Vicryl 2/0. Unless otherwise indicated, the surgery was done under spinal anaesthesia. All the variables known to be related to SSI such as demographics, obstetric data, neonatal data etc were recorded.

The study demonstrated that statistically, there is no significant difference in the incidence of SSI (12.2% vs. 15.1%) between the two groups. Although there was a 19% reduction in the incidence of SSI in

thechlorhexidine-alcohol group. Majority of the SSI cases were of the superficial type. The most commoncausative organism isolated for SSI was determined to be Staphylococcus aureus followed byEscherichia coli. Incidence of skin reaction was found to be higher in the povidone-iodine group thanin the chlorhexidine-alcoholgroup. The reaction consisted mainly of pruritus and erythema but none was life-threatening. These reactionswere attributed to the antiseptic because they involved the entire area the antiseptic was used on and not just the incision site.

17. **Springel et al (2017)** did a randomized open-label controlled trial of chlorhexidine-alcohol versus povidone-iodine for caesarean antisepsis and found that preoperative antiseptic skin preparation with chlorhexidine-alcohol did not result in less frequent surgical site infection than with povidone-iodine aqueous scrub and paint.

Patients were eligible for study participation if they could provide informed consent in English or Spanish, were ≥18 years of age, did not have clinical chorioamnionitis, were unlikely to be lost to follow-up, and had no sensitivities to chlorhexidine, betadine, or iodine. Treatment was assigned by computer-generated simple 1:1 randomization immediately before skin preparation.

In all, 932 subjects (461 assigned to chlorhexidine-alcohol, 471 assigned to povidone-iodine) were randomized from February 2013 through May 2016. The rate of follow-up evaluation after 30 days was 99% (455) in the chlorhexidine-alcohol group and 97% (455) in the povidone-iodine group. Surgical site infection occurred in 29 (6.3%) of the chlorhexidine-alcohol group and 33 (7.0%) in the povidone-iodine group. The rates of individual components of the primary outcome were as follows: superficial surgical site infection (4.6% v 5.5%), deep surgical site infection (0.0% v 0.4%), and endometritis (1.7% v 1.1%) in chlorhexidine-alcohol vs povidone-iodine, respectively. All results were similar in the per-protocol analysis. Preoperative antiseptic skin preparation with the chlorhexidine-alcohol 26-mL single-step applicator before caesarean did not result in less frequent surgical site infection when compared with povidone-iodine aqueous scrub and paint 236-mL wet skin preparation tray. Povidone-iodine should still be considered acceptable for preoperative surgical site antisepsis for caesarean delivery.

18. **Elsayed Elshamy (2018)** et al did a prospective observational study named chlorhexidine-alcohol versus povidone-iodine for skin preparation before elective caesarean section. Skin preparation by antiseptic solution, traditionally done by povidone-iodine, before CS is paramount for the prevention of surgical site infection (SSI) including wound infection

and/or endometritis. The aim of this study was to assess the impact of skin preparation by chlorhexidine–alcohol compared with povidone-iodine before the elective CS on the rate of SSI.

This prospective observational study was conducted at the department of obstetrics and gynaecology, King Abdul-Aziz Airbase Hospital, Dhahran, Saudi Arabia in the period between the beginning of May 2015 and the end of December 2017. A total of 1484 participants were included, with 1424 completing the study. All patients intended for elective CS at 34 weeks and beyond for various obstetric indications were eligible to participate. Patients with abnormal placentation (previa/accreta), bleeding tendency, haemoglobin concentration less than 10 g%, with active infection as chorioamnionitis or urogenital infection, with skin lesions and/or infection adjacent to the operative site, and those with known allergy to chlorhexidine, alcohol, iodine, as well as those to whom spinal anaesthesia was failed with the need for general anaesthesia, were excluded from the study. Included patients were equally allocated into two groups as follows:

Group 1 Chlorhexidine–alcohol (n ¼ 712): skin preparation was done by chlorhexidine–alcohol (ChloraPrep with tint 2% w/v/70% v/v; Care

Fusion Corporation or one of its subsidiaries, Basingstoke, Hampshire, UK).

Group 2 Povidone-iodine (n ¼ 712): skin preparation was done by povidone-iodine (PVP prep scrub solution; Midline, Laredo, TX).

There was no significant difference between the two groups regarding maternal characteristics in terms of maternal age, gestational age, body mass index, parity, previous caesarean deliveries, medical disorders, and perioperative data. There was no significant difference between the two groups regarding the overall rate of SSI, skin irritation or allergy to the antiseptic used, the need for hospital readmission, or resuturing of the wound. In this study, the overall and specific rates of SSI were comparable in the two groups, as well as the rates of readmission to the hospital and the need for secondary sutures. Chlorhexidine in alcoholic solution has the advantage of faster drying after application to the skin, which may be advantageous in reducing the time at the operating rooms. Therefore, to conclude: Skin preparation with either chlorhexidine–alcohol or povidone-iodine resulted in comparable rates of SSIs. Accordingly, both are suitable antiseptic agents for skin preparation before elective CS.

19. **Hadiati et al (2020)** carried out a systematic review of different studies on the effects of different antiseptic agents, different methods of application, or different forms of antiseptic used for preoperative skin preparation for preventing post caesarean infection. The authors searched Cochrane Pregnancy and Childbirth's Trials Register, ClinicalTrials.gov, the WHO International Clinical Trials Registry Platform (ICTRP) (9 July 2019), and reference lists of retrieved studies. They carried out the review by comparing different antiseptic agents (e.g., alcohol, povidone-iodine), different methods of antiseptic application (e.g., scrub, paint, drape), different forms of antiseptic (e.g., powder, liquid), and also between different packages of skin preparation. They mainly focused on the comparison between different agents, with and without the use of drapes. Only studies involving the preparation of the incision area were included. Three review authors independently assessed all potential studies for inclusion, assessed the risk of bias, extracted the data, and checked data for accuracy.

13 individually-randomized controlled trials (RCTs) were included, with a total of 6938 women who were undergoing caesarean section. The trial dates ranged from 1983 to 2016.

Based on the review and analysis, the authors suggest that preparing the skin with chlorhexidine gluconate before caesarean section is probably

slightly more effective at reducing the incidence of surgical site infection in comparison to povidone-iodine.

RESULTS

BASELINE CHARACTERISTICS:

1. **Age:** The table 5.5.1 and the chart (Fig 5.1.1) depict the age distribution of patients in the two groups under study (Povidone-Iodine & Chlorhexidine).

Table 5.1.1: Age Distribution

Age	Povidone-iodine		Chlorhexidine	
	N	%	N	%
18 - 20 years	31	6.60%	33	7.02%
21 -30 years	345	73.40%	345	73.40%
31 -40 years	94	20.00%	92	19.57%
Total	470	100.00%	470	100.00%

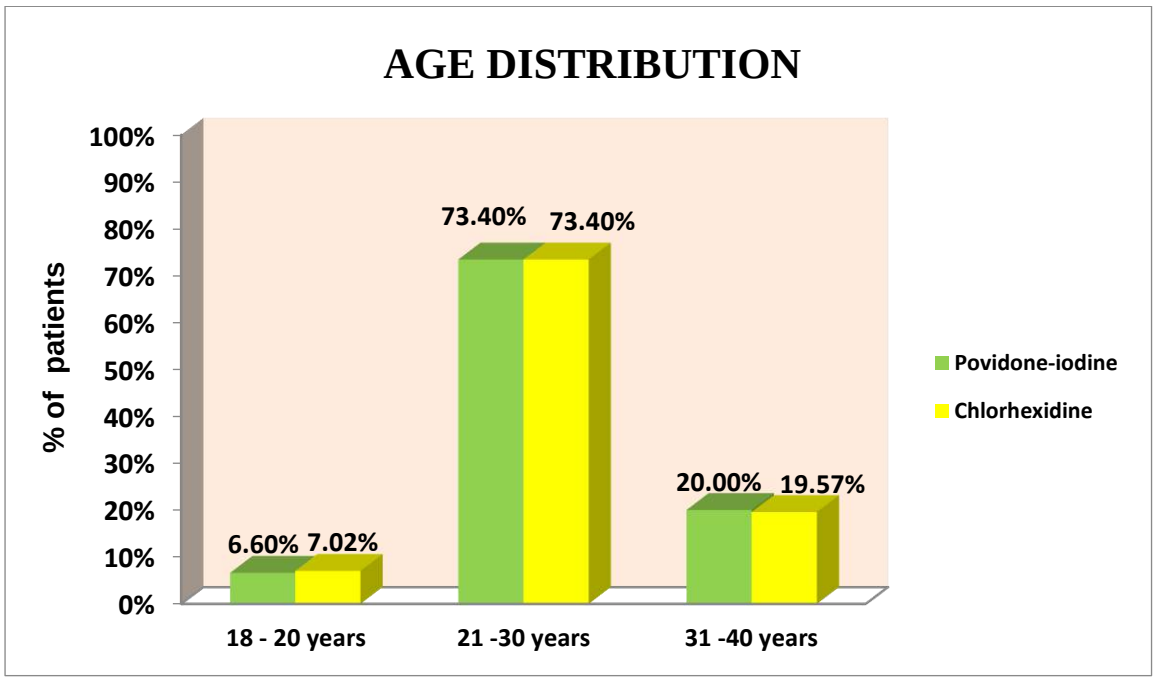

Fig 5.1.1: Age Distribution

2. **Distribution of Primi, Multi (gravida 2 - gravida 4) & Grand Multi Gravida (gravida 5 and more) Cases:** The table 5.1.2 and the chart (Fig 5.1.2) depict the distribution of Primigravida, Multigravida, and Grand Multigravida of the population under study. It can be observed that there is a slight variation between the two groups (Povidone-Iodine & Chlorhexidine) in terms of the distribution of Primigravida, Multigravida, and Grand Multigravida.

Table 5.1.2: Distribution of Primi, Multi & Grand Multi Gravida Cases

Primigravida / Multigravida / Grand Multigravida	**Povidone-iodine**		**Chlorhexidine**	
	N	**%**	**N**	**%**
Primi gravida	194	41.27%	148	31.5%
Multi gravida	270	57.45%	314	66.8%
Grand Multi gravida	6	1.3%	8	1.7%
Total	470	100.00%	470	100.00%

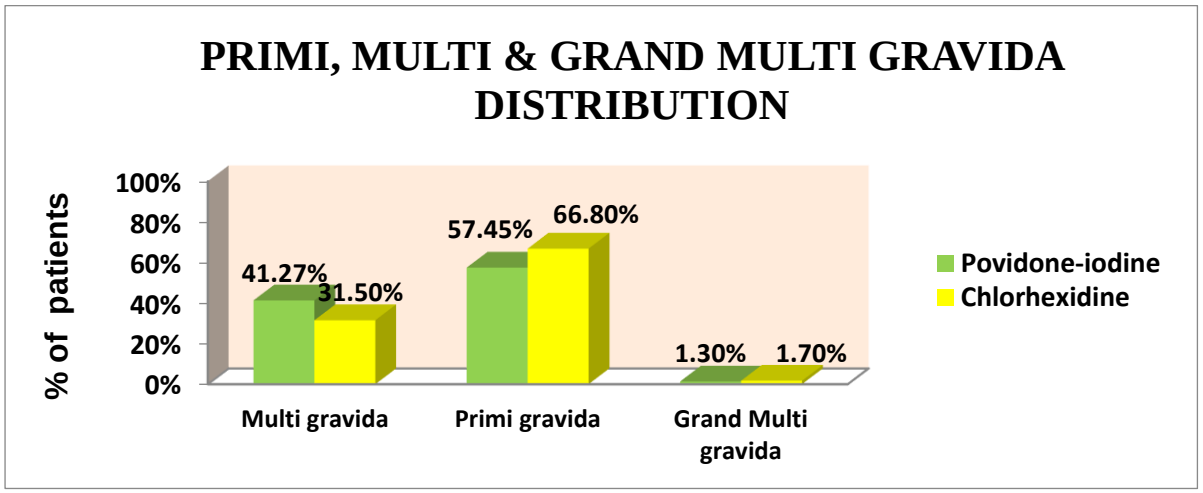

Fig 5.1.2: Distribution of Primi, Multi & Grand Multi Gravida Cases

3. **Distribution of Single / Multiple Pregnancy Cases:** The table 5.1.3 and the chart (Fig 5.1.3) depict the distribution of Single / Multiple Pregnancyof the population under study. There is a marginal difference in distribution between the two groups (Povidone-Iodine & Chlorhexidine) in this case.

Table 5.1.3: Distribution of Single / Multiple Pregnancy Cases

Single / Multiple Pregnancy	**Povidone-iodine**		**Chlorhexidine**	
	N	**%**	**N**	**%**
Single	452	96.17%	461	98.08%
Twin	18	3.83%	9	1.92%
Total	470	100.00%	470	100.00%

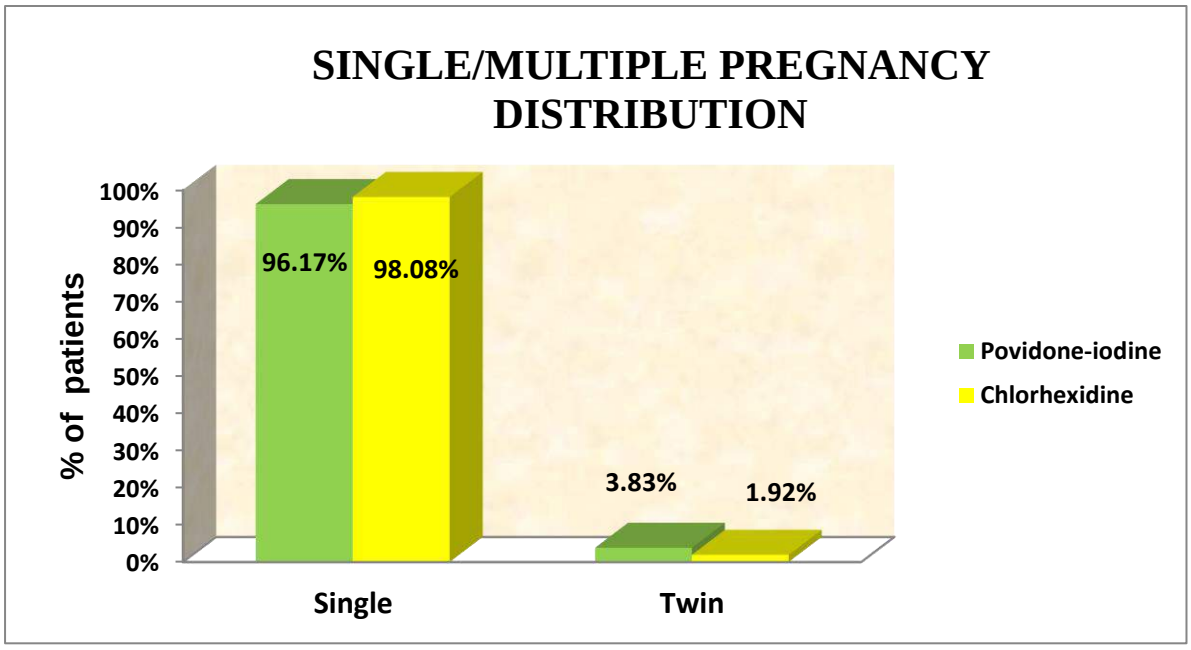

Fig 5.1.3: Distribution of Single / Multiple Pregnancy Cases

COMPARISON OF CASES WITH HIGH-RISK FACTORS BETWEEN THE POVIDONE-IODINE GROUP AND CHLORHEXIDINE GROUP:

1. **Distribution of patients with Obesity (BMI > 30):** The table 5.2.1 and the chart (Fig 5.2.1) depict the distribution of Obese Patients in the population under study. There is a marginal difference between the two groups, with 16.38% of Obese patients in the Povidone-Iodine group vs13.19% in the Chlorhexidine group.

Table 5.2.1: Distribution of patients with Obesity

Obese	Povidone-iodine		Chlorhexidine	
	N	%	N	%
Yes	77	16.38%	62	13.19%
No	393	83.62%	408	86.81%
Total	470	100.00%	470	100.00%

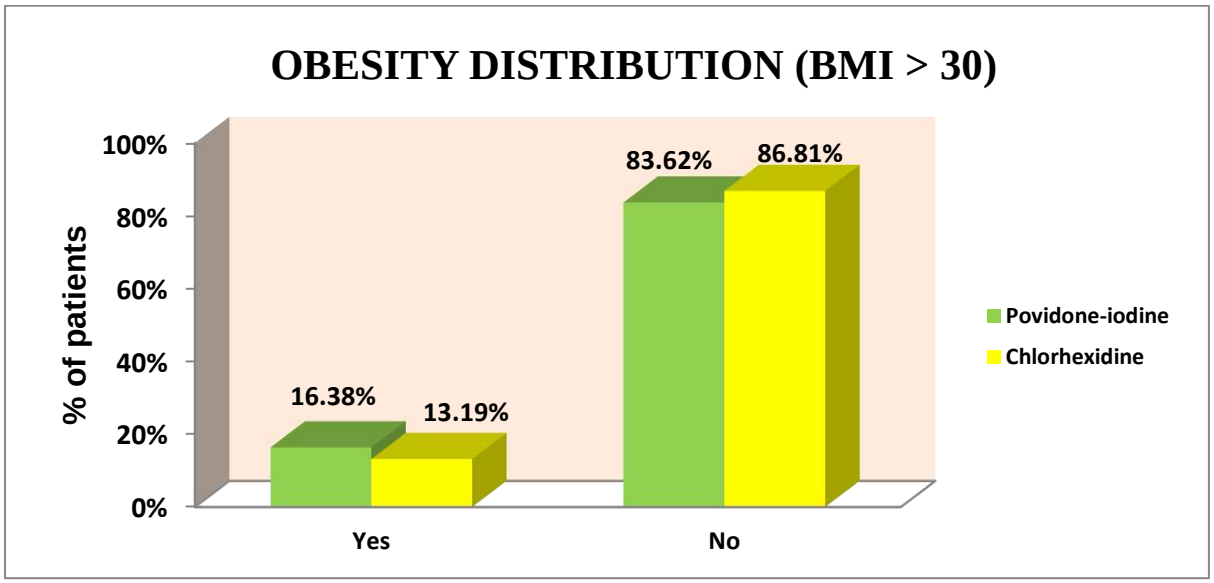

Fig 5.2.1: Distribution of patients with Obesity

2. **Distribution of patients with Pre GDM / GDM:** The table 5.2.2 and the chart (Fig 5.2.2) depict the distribution of Patients with Pre GDM / GDM in the population under study. There is no significant difference between the two groups (Povidone-Iodine & Chlorhexidine) in terms of Pre GDM/GDM distribution.

Table 5.2.2: Distribution of patients with Pre GDM / GDM

PRE GDM/GDM	Povidone-iodine		Chlorhexidine	
	N	%	N	%
Yes	80	17.02%	75	15.96%
No	390	82.98%	395	84.04%
Total	470	100.00%	470	100.00%

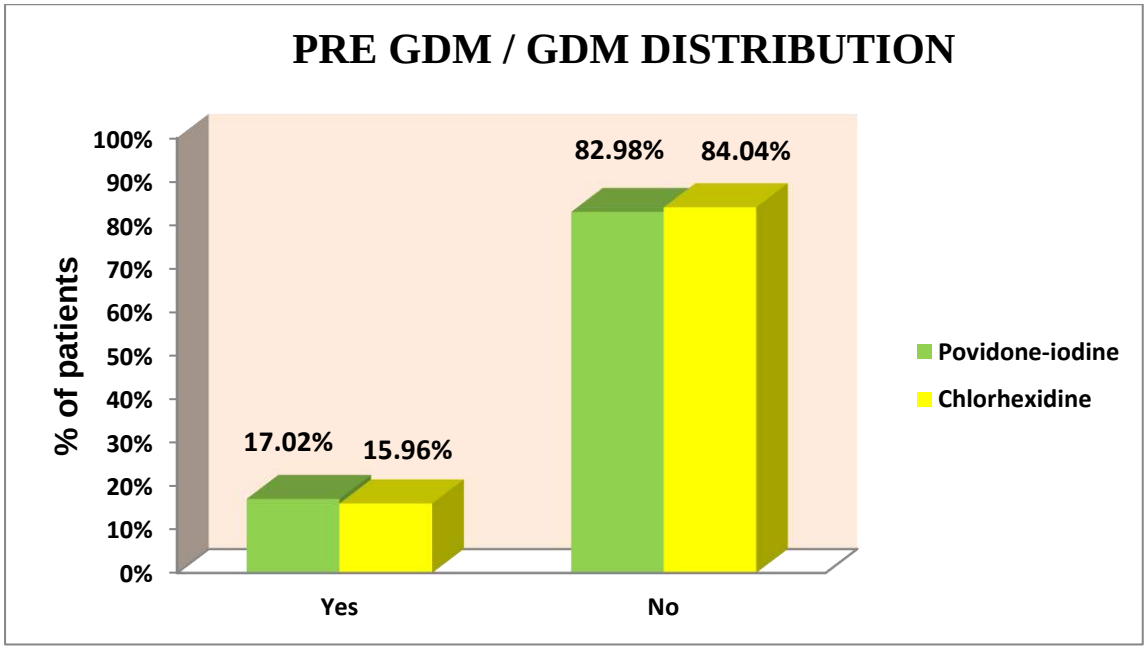

Fig 5.2.2: Distribution of patients with Pre GDM / GDM

3. **Distribution of patients with GHTN/CHRONIC HTN:** The table 5.2.3 and the chart (Fig 5.2.3) depict the distribution of Patients with GHTN/Chronic HTN in the population under study. There is no significant difference in the distribution of Patients with GHTN/Chronic HTN between the two groups (Povidone-Iodine & Chlorhexidine).

Table 5.2.3: Distribution of patients with GHTN/CHRONIC HTN

GHTN/CHRONIC HTN	Povidone-iodine		Chlorhexidine	
	N	%	N	%
Yes	76	16.17%	65	13.83%
No	394	83.83%	405	86.17%
Total	470	100.00%	470	100.00%

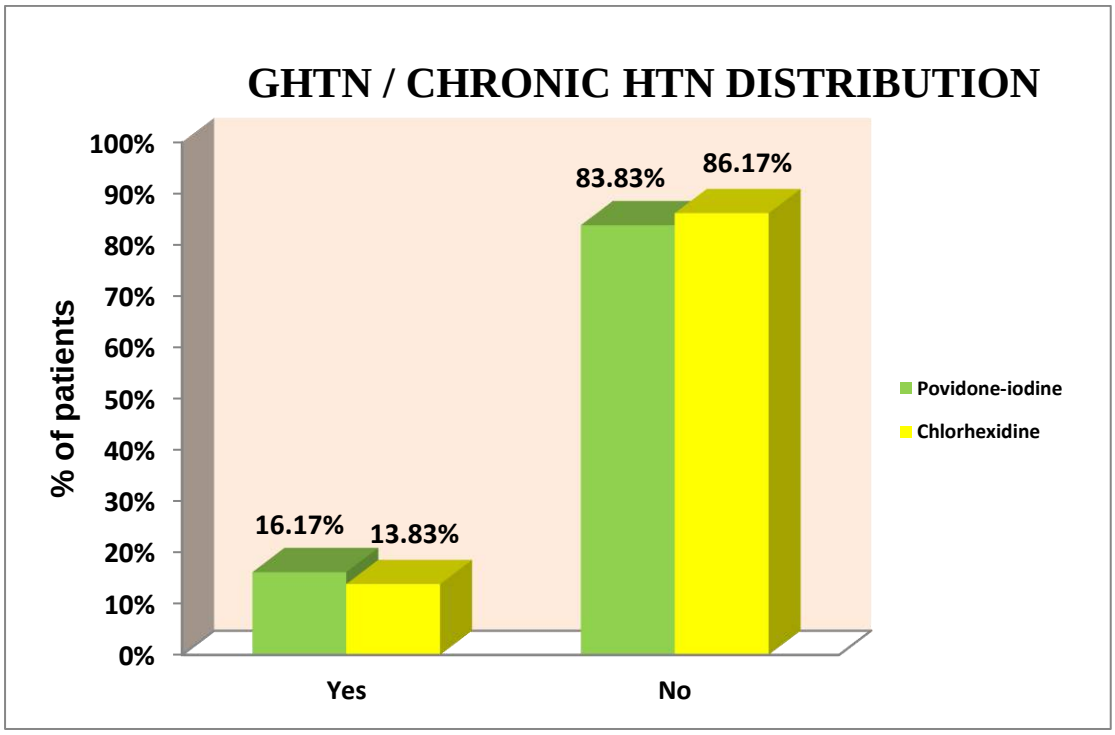

Fig 5.2.3: Distribution of patients with GHTN/CHRONIC HTN

4. **Distribution of patients with Medical Comorbidities:** The table 5.2.4 and the chart (Fig 5.2.4) depict the distribution of patients with different Medical Comorbidities in the population under study. It can be observed that there is a difference in the distribution of patients with Medical Comorbidities between the two groups.

Table 5.2.4: Distribution of patients with Medical Comorbidities

Medical Comorbidities	**Povidone-iodine**		**Chlorhexidine**	
	N	**%**	**N**	**%**
Anemia	34	7.23%	20	4.26%
Anemia and Heart disease	2	0.43%	3	0.64%
Anemia and Renal disorder	2	0.43%	0	0.00%
Anemia and Seizure disorder	2	0.43%	1	0.21%
Bronchial asthma	21	4.47%	14	2.98%
Heart disease	8	1.70%	3	0.64%
Hypothyroid	31	6.60%	17	3.62%
Hypothyroid and Heart disease	1	0.21%	0	0.00%
Hypothyroid and Seizure disorder	5	1.06%	5	1.06%
Renal disorder	6	1.28%	4	0.85%
Seizure disorder	12	2.55%	6	1.28%
None	346	73.62%	397	84.47%
Total	**470**	**100.00%**	**470**	**100.00%**

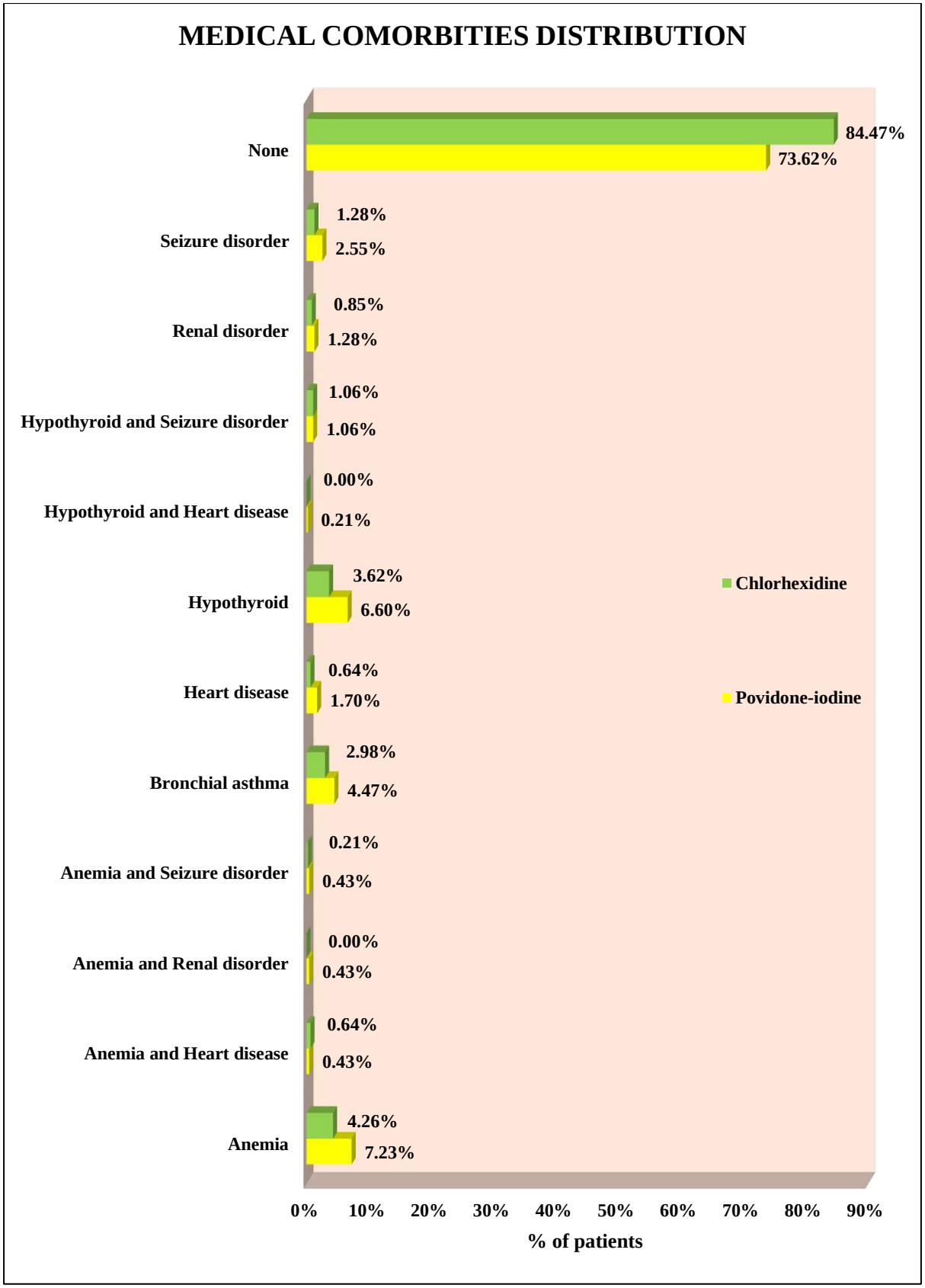

Fig 5.2.4: Distribution of patients with Medical Comorbidities

5. **Distribution of patients with Previous history of Caesarean section:**

The table 5.2.5 and the chart (Fig 5.2.5) depict the distribution of Patients with Previous history of Caesarean section in the population under study. There is a marginal difference between the two groups, with 52.55% of women with Previous LSCS in the Povidone-Iodine group vs 61.28% in the Chlorhexidine group.

Table 5.2.5: Distribution of patients with Previous history of Caesarean section

Previous LSCS	Povidone-iodine		Chlorhexidine	
	N	%	N	%
Yes	247	52.55%	288	61.28%
No	223	47.45%	182	38.72%
Total	470	100.00%	470	100.00%

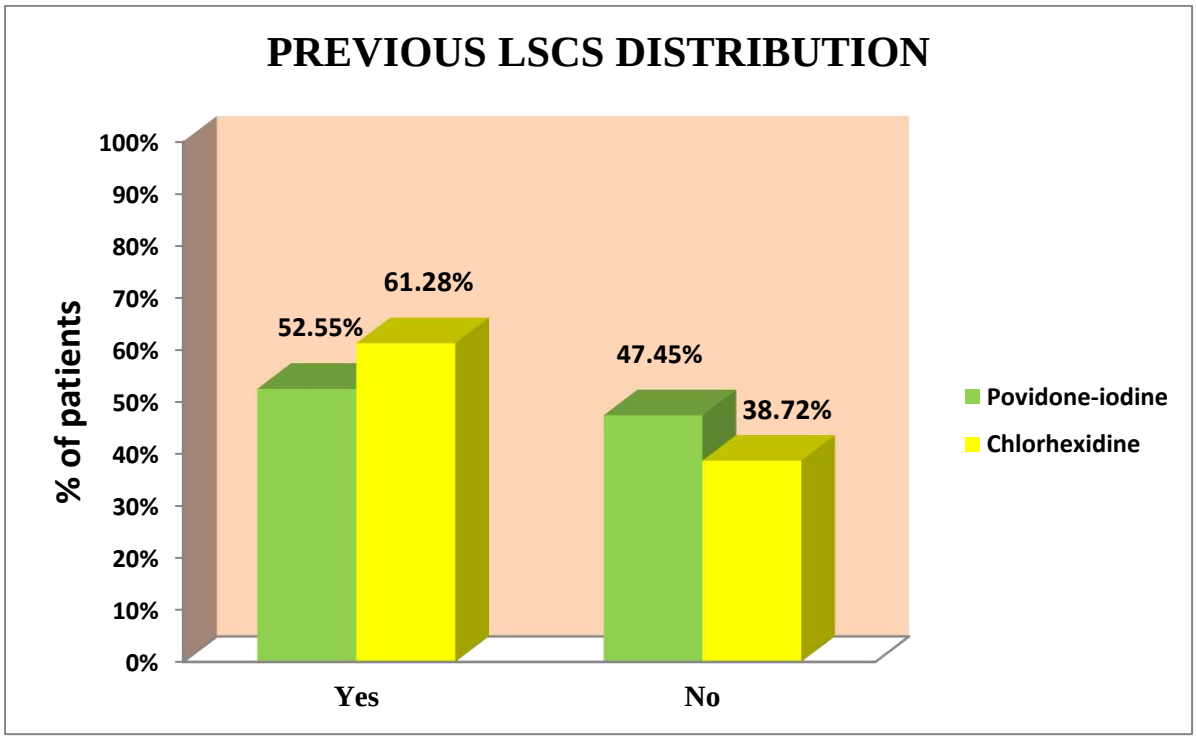

Fig 5.2.5: Distribution of patients with Previous history of Caesarean section

6. Distribution of patients who had Premature Rupture of Membrane:

The table 5.2.6 and the chart (Fig 5.2.6) depict the distribution of Patients with Premature Rupture of Membrane in the population under study. It can be observed that there is a difference in the distribution between the two groups.

Table 5.2.6: Distribution of patients who had Premature Rupture of Membrane

PROM	Povidone-iodine		Chlorhexidine	
	N	%	N	%
Yes	93	19.79%	38	8.09%
No	377	80.21%	432	91.91%
Total	470	100.00%	470	100.00%

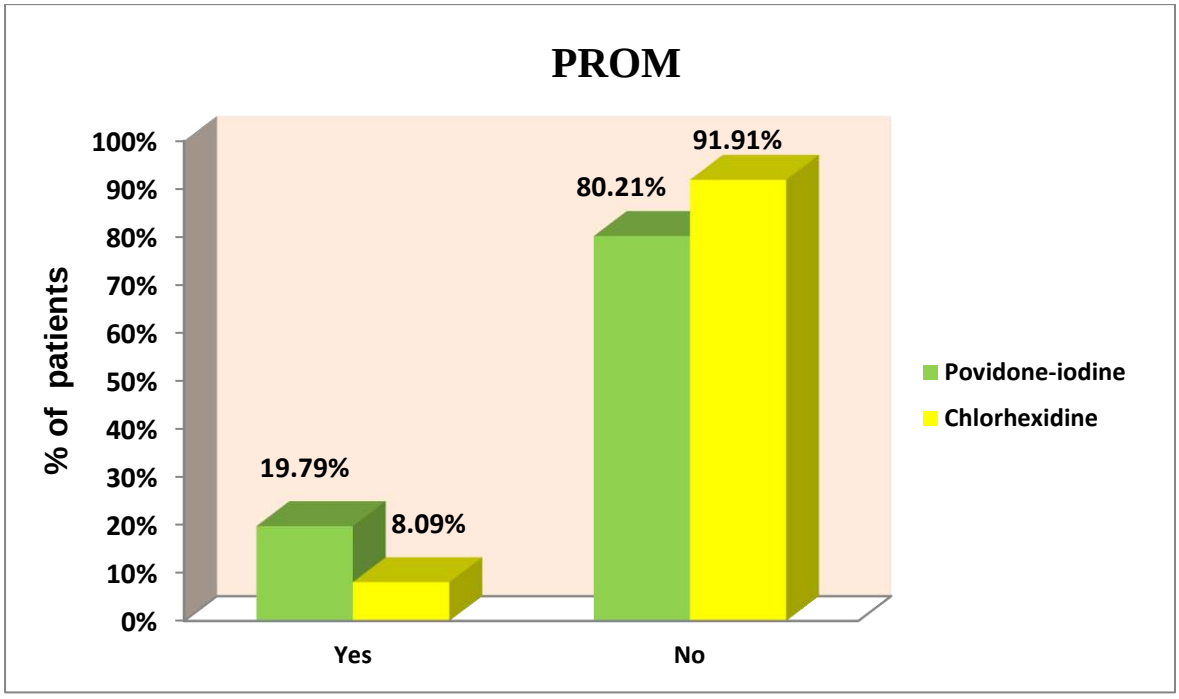

Fig 5.2.6: Distribution of patients who had Premature Rupture of Membrane

7. **Distribution of patients with Chorioamnionitis:** The table 5.2.7 and the chart (Fig 5.2.7) depict the distribution of Patients with Chorioamnionitis in the population under study. There is a marginal difference between the two groups, with 4.68% of women with Chorioamnionitis in the Povidone-Iodine group vs 2.13% in the Chlorhexidine group.

Table 5.2.7: Distribution of patients with Chorioamnionitis

Chorioamnionitis	Povidone-iodine		Chlorhexidine	
	N	%	N	%
Yes	22	4.68%	10	2.13%
No	448	95.32%	460	97.87%
Total	470	100.00%	470	100.00%

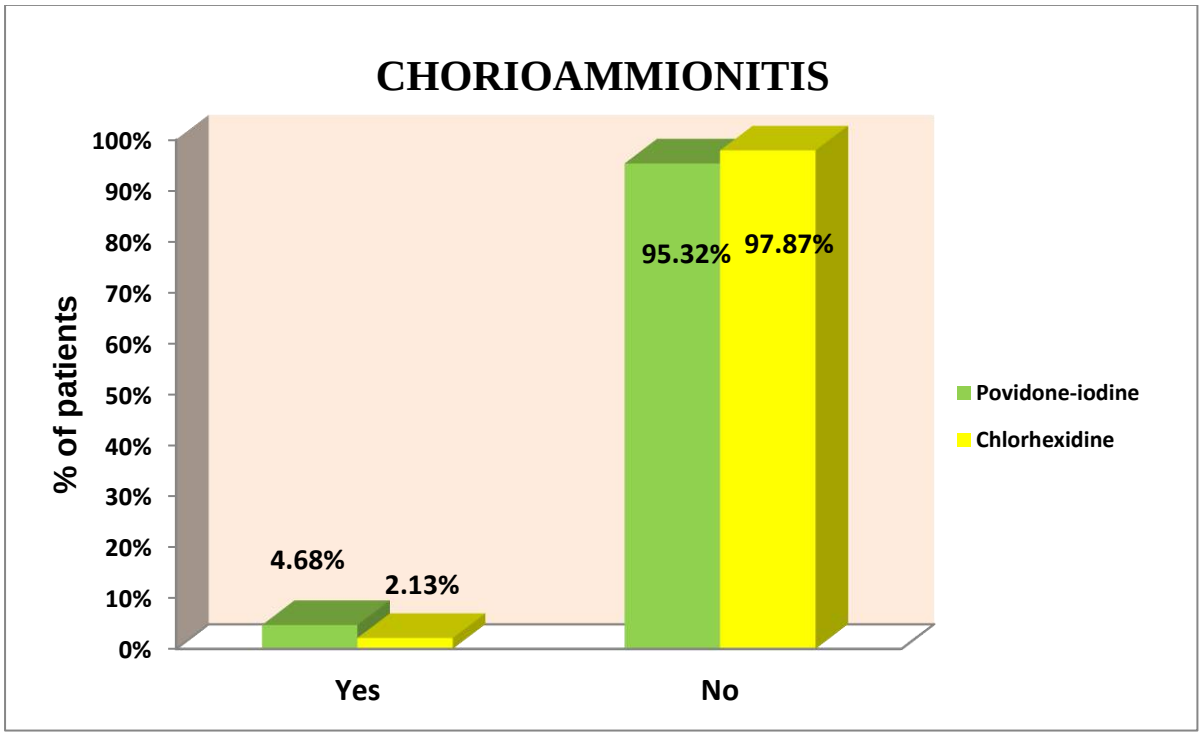

Fig 5.2.7: Distribution of patients with Chorioamnionitis

8. **Distribution of LSCS after Induction of Labour:** The table 5.2.8 and the chart (Fig 5.2.8) depict the distribution of patients who were taken up for LSCS after Induction of Labour. There is a marginal difference between the two groups, with 12.98% of women who had Induced Labour in the Povidone-Iodine group vs 16.81% in the Chlorhexidine group.

Table 5.2.8: Distribution of patients taken up for LSCS after Induction of Labour

Induced Labour	Povidone-iodine		Chlorhexidine	
	N	%	N	%
Yes	61	12.98%	79	16.81%
No	409	87.02%	391	83.19%
Total	470	100.00%	470	100.00%

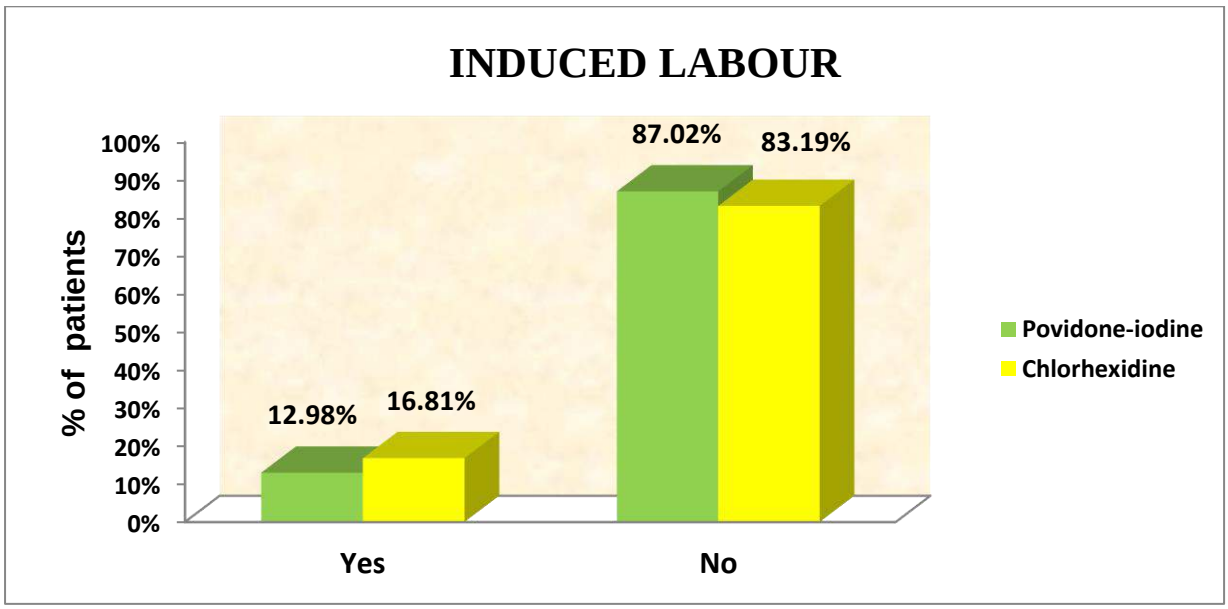

Fig 5.2.8: Distribution of patients taken up for LSCS after Induction of Labour

9. **Distribution of patients taken up for LSCS during Second Stage of Labour:** The table 5.2.9 and the chart (Fig 5.2.9) depict the distribution of patients taken up for LSCS during the Second Stage of Labour in the population under study. There is no significant difference in the distribution of Second Stage Labour between the two groups (Povidone-Iodine & Chlorhexidine).

Table 5.2.9: Distribution of patients taken up for LSCS during Second Stage of Labour

Second Stage Labour	Povidone-iodine		Chlorhexidine	
	N	%	N	%
Yes	25	5.32%	37	7.87%
No	445	94.68%	433	92.13%
Total	470	100.00%	470	100.00%

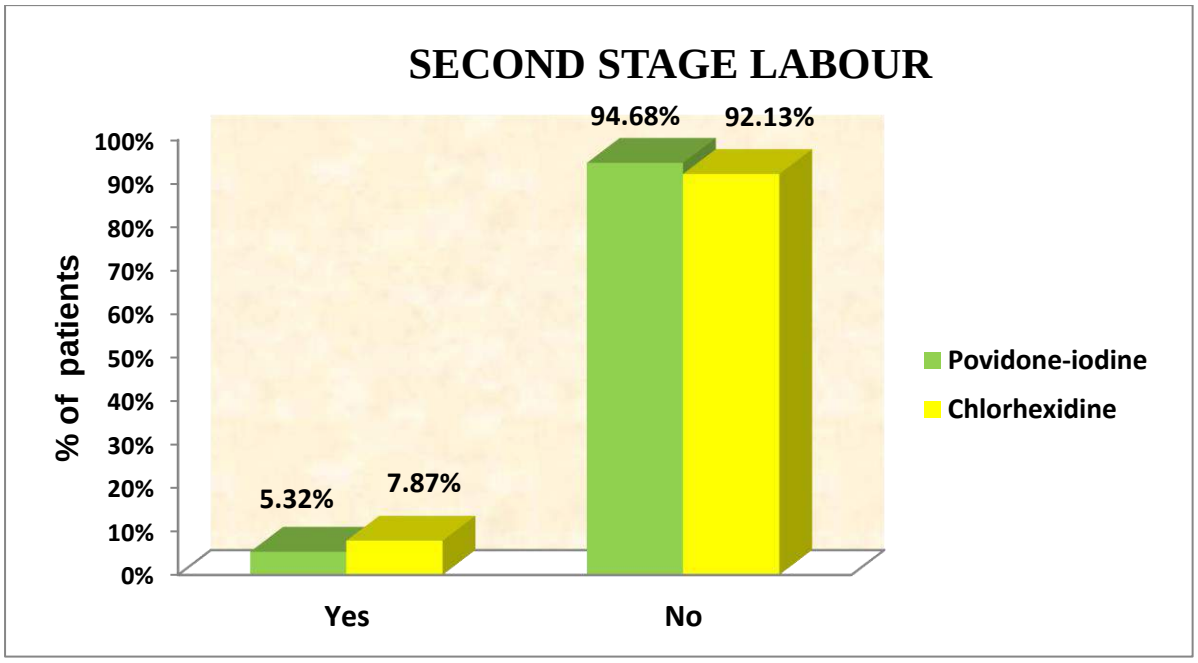

Fig 5.2.9: Distribution of patients taken up for LSCS during Second Stage of Labour

COMPARISON OF POSITIVE SSI CASES BETWEEN THE POVIDONE-IODINE GROUP AND CHLORHEXIDINE GROUP:

A Chi-square test was conducted to compare the Povidone-Iodine Group and Chlorhexidine Groupand determine whether they are similar in terms of the number of positive SSI cases.

Null Hypothesis (H_0): There is no significant difference between the Povidone-iodine group and the Chlorhexidine group in terms of the number of positive SSI cases.

Table 5.3: Comparison of Positive SSI Cases Between the Povidone-Iodine Group and Chlorhexidine Group

SSI Positive/ Negative	Povidone-iodine N (%)	Chlorhexidine N (%)	Total N (%)	Chi-square test
Positive	29 (6.17%)	14 (2.97%)	43 (4.57%)	$\chi 2=5.48$, p=0.019
Negative	441 (93.82%)	456 (97.02%)	897 (95.42%)	
Total	**470**	**470**	**940**	

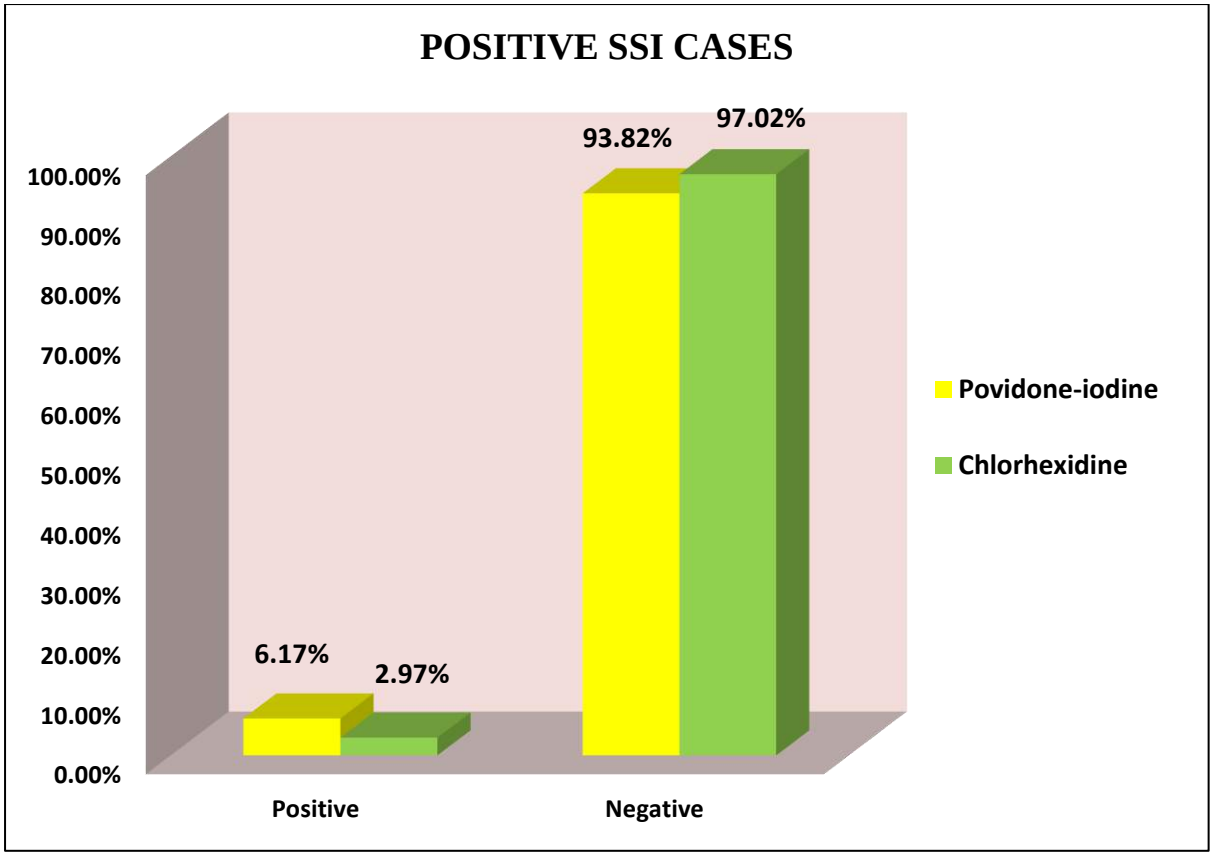

Fig 5.3: Comparison of Positive SSI Cases Between the Povidone-Iodine Group and Chlorhexidine Group

Interpretation: Based on Chi-square test results, since the p-value is less than 0.05, H_0 is rejected. Statistically, there is a significant difference between the Povidone-iodine group and the Chlorhexidine group in terms of the number of positive SSI cases.

SUBGROUP ANALYSIS: COMPARISON OF POSITIVE SSI CASES THAT FALL UNDER VARIOUS HIGH-RISK FACTOR CATEGORIES BETWEEN THE POVIDONE-IODINE GROUP AND CHLORHEXIDINE GROUP:

1. **Patients with Obesity**

   A Chi-square test was conductedto determine whether there is any significant difference between the Povidone-iodine group and the Chlorhexidine group in terms of the number of positive SSI cases, among the patients with obesity.

   Null Hypothesis (H_0): Among the patients with obesity, there is no significant difference between the Povidone-iodine group and the Chlorhexidine groupin terms of the number of positive SSI cases.

Table 5.4.1: Comparison of Positive SSI Cases among patients with Obesity

SSI Positive/Negative	Povidone-iodine N (%)	Chlorhexidine N (%)	Total N (%)	Chi-square test
Positive	7 (9.09%)	3 (4.83%)	9 (6.47%)	$\chi 2=0.93$, p=0.34
Negative	70 (90.9%)	59 (95.16%)	130 (93.53%)	
Total	**77**	**62**	**139**	

Interpretation: Significance or p-value is greater than 0.05, therefore H_0 is accepted, there is no significant difference between the two groups.

2. Patients with Pre GDM/GDM

A Chi-square test was conducted to determine whether there is any significant difference between the Povidone-iodine group and the Chlorhexidine group in terms of the number of positive SSI cases, among the patients with Pre GDM/GDM.

Null Hypothesis (H_0): Among the patients with Pre GDM/GDM, there is no significant difference between the Povidone-iodine group and the Chlorhexidine group in terms of the number of positive SSI cases.

Table 5.4.2: Comparison of Positive SSI Cases among patients with Pre GDM/GDM

SSI Positive/Negative	Povidone-iodine N (%)	Chlorhexidine N (%)	Total N (%)	Chi-square test
Positive	10 (12.5%)	7 (9.3%)	17 (10.97%)	$\chi 2=0.39$, p=0.53
Negative	70 (87.5%)	68 (90.66%)	138 (89.03%)	
Total	**80**	**75**	**155**	

Interpretation: Significance or p-value is greater than 0.05, therefore H_0 is accepted, there is no significant difference between the two groups.

3. Patients with GHTN/CHRONIC HTN

A Chi-square test was conducted to determine whether there is any significant difference between the Povidone-iodine group and the Chlorhexidine group in terms of the number of positive SSI cases, among the patients with GHTN/CHRONIC HTN.

Null Hypothesis (H_0): Among the patients with GHTN/CHRONIC HTN, there is no significant difference between the Povidone-iodine group and the Chlorhexidine group in terms of the number of positive SSI cases.

Table 5.4.3: Comparison of Positive SSI Cases among patients with GHTN/CHRONIC HTN

SSI Positive/Negative	Povidone-iodine N (%)	Chlorhexidine N (%)	Total N (%)	Chi-square test
Positive	11 (14.47%)	4 (6.15%)	15 (10.63%)	$\chi 2=2.55$, p=0.11
Negative	65 (85.52%)	61 (93.84%)	126 (89.36%)	
Total	**76**	**65**	**141**	

Interpretation: Significance or p-value is greater than 0.05, therefore H_0 is accepted, there is no significant difference between the two groups.

4. **Patients with Medical Comorbidities**

A Chi-square test was conductedto determine whether there is any significant difference between the Povidone-iodine group and the Chlorhexidine group in terms of the number of positive SSI cases, among the patients with Medical Comorbidities.

Null Hypothesis (H_0): Among the patients with Medical Comorbidities, there is no significant difference between the Povidone-iodine group and the Chlorhexidine groupin terms of the number of positive SSI cases.

Table 5.4.4: Comparison of Positive SSI Cases among patients with Medical Comorbidities

SSI Positive/Negative	Povidone-iodine N (%)	Chlorhexidine N (%)	Total N (%)	Chi-square test
Positive	10 (8.06%)	6 (8.22%)	16 (8.12%)	$\chi 2=0.001$, p=0.97
Negative	114 (91.93%)	67 (91.78%)	181 (91.87%)	
Total	**124**	**73**	**197**	

Interpretation: Significance or p-value is greater than 0.05, therefore H_0 is accepted, there is no significant difference between the two groups.

5. **Patients with Previous history of Caesarean section**

A Chi-square test was conductedto determine whether there is any significant difference between the Povidone-iodine group and the Chlorhexidine group in terms of the number of positive SSI cases, among the patients who already had a caesarean section previously.

Null Hypothesis (H_0): Among the patients who already had a caesarean section previously, there is no significant difference between the Povidone-iodine group and the Chlorhexidine group in terms of the number of positive SSI cases.

Table 5.4.5: Comparison of Positive SSI Cases among patients with previous history of Caesarean section

SSI Positive/Negative	Povidone-iodine N (%)	Chlorhexidine N (%)	Total N (%)	Chi-square test
Positive	8 (3.23%)	8 (2.77%)	16 (2.99%)	$\chi 2$=0.097, p=0.755
Negative	239 (96.76%)	280 (97.22%)	519 (97.01%)	
Total	**247**	**288**	**535**	

Interpretation: Significance or p-value is greater than 0.05, therefore H_0 is accepted, there is no significant difference between the two groups.

6. Patients who had a Premature Rupture of Membrane

A Chi-square test was conducted to determine whether there is any significant difference between the Povidone-iodine group and the Chlorhexidine group in terms of the number of positive SSI cases, among the patients who had a Premature Rupture of Membrane.

Null Hypothesis (H_0): Among the patients who had a Premature Rupture of Membrane, there is no significant difference between the Povidone-iodine group and the Chlorhexidine group in terms of the number of positive SSI cases.

Table 5.4.6: Comparison of Positive SSI Cases among patients who had a Premature Rupture of Membrane

SSI Positive/Negative	Povidone-iodine N (%)	Chlorhexidine N (%)	Total N (%)	Chi-square test
Positive	10 (10.75%)	1 (2.63%)	11 (8.39%)	$\chi 2=2.31$, $p=0.128$
Negative	83 (89.24%)	37(97.37%)	120 (91.60%)	
Total	**93**	**38**	**131**	

Interpretation: Significance or p-value is greater than 0.05, therefore H_0 is accepted, there is no significant difference between the two groups.

7. Patients with Chorioamnionitis

A Chi-square test was conducted to determine whether there is any significant difference between the Povidone-iodine group and the Chlorhexidine group in terms of the number of positive SSI cases, among the patients with Chorioamnionitis.

Null Hypothesis (H_0): Among the patients with Chorioamnionitis, there is no significant difference between the Povidone-iodine group and the Chlorhexidine groupin terms of the number of positive SSI cases.

Table 5.4.7: Comparison of Positive SSI Cases among patients with Chorioamnionitis

SSI Positive/Negative	Povidone-iodine N (%)	Chlorhexidine N (%)	Total N (%)	Chi-square test
Positive	3 (13.63%)	0 (0%)	3 (9.37%)	$\chi 2=1.5$, p=0.220
Negative	19 (86.36%)	10(100%)	29 (90.63%)	
Total	**22**	**10**	**32**	

Interpretation: Significance or p-value is greater than 0.05, therefore H_0 is accepted, there is no significant difference between the two groups.

8. LSCS after Induction of Labour

A Chi-square test was conducted to determine whether there is any significant difference between the Povidone-iodine group and the Chlorhexidine group in terms of the number of positive SSI cases, among the patients who were taken up for LSCS after Induction of labour.

Null Hypothesis (H_0): Among the patients who were taken up for LSCS after Induction of labour, there is no significant difference between the Povidone-iodine group and the Chlorhexidine group in terms of the number of positive SSI cases.

Table 5.4.8: Comparison of Positive SSI Cases among patients taken up for LSCS after Induction of Labour

SSI Positive/Negative	Povidone-iodine N (%)	Chlorhexidine N (%)	Total N (%)	Chi-square test
Positive	6 (9.83%)	4 (5.06%)	10 (7.14%)	$\chi 2=1.18$, $p=0.27$
Negative	55 (90.2%)	75 (94.94%)	130 (92.85%)	
Total	**61**	**79**	**140**	

Interpretation: Significance or p-value is greater than 0.05, therefore H_0 is accepted, there is no significant difference between the two groups.

9. LSCS during Second Stage of Labour

A Chi-square test was conducted to determine whether there is any significant difference between the Povidone-iodine group and the Chlorhexidine group in terms of the number of positive SSI cases, among the patients who were taken up for LSCS during the Second Stage of Labour.

Null Hypothesis (H_0): Among the patients who were taken up for LSCS during the Second Stage of Labour, there is no significant difference between the Povidone-iodine group and the Chlorhexidine group in terms of the number of positive SSI cases.

Table 5.4.9: Comparison of Positive SSI Cases among patients taken up for LSCS during Second Stage of Labour

SSI Positive/Negative	Povidone-iodine N (%)	Chlorhexidine N (%)	Total N (%)	Chi-square test
Positive	2 (8.00%)	1 (2.70%)	3 (4.84%)	$\chi 2=0.91$, p=0.34
Negative	23 (92.00%)	36(97.30%)	59 (95.16%)	
Total	**25**	**37**	**62**	

Interpretation: Significance or p-value is greater than 0.05, therefore H_0 is accepted, there is no significant difference between the two groups.

IDENTIFICATION OF THE MOST COMMON ORGANISM CAUSING WOUND INFECTION IN OUR INSTITUTION; ITS CULTURE AND SENSITIVITY TO ANTIBIOTICS:

For all the Positive SSI cases, the patients' Pus culture was analyzed to identify the organism that caused SSI, and their antibioticSensitivity and Resistance.

Table 5.5.1: Distribution of different Organisms Causing Wound Infection

Organism Causing Wound Infection	**Frequency**	**Percentage**
Candida Albicans	1	2.3%
Coagulase Negative Staphylococci	7	16.3%
Escherichia Coli	12	27.9%
Klebsiella Pneumonia	7	16.3%
No Growth	3	7.0%
Pseudomonas Aeruginosa	9	20.9%
Staphylococcus Aureus	4	9.3%
Total	43	

The Frequency of each organism causing wound infection was calculated, which is depicted in the table above. It was found that **Escherichia Coli** caused the infection in 12 out of 43 patients who were diagnosed with Surgical Site infection after Caesarean section.

The table below shows the distribution of Sensitive and Resistant Antibiotic of each organism that caused Surgical Site infection for all the 43 SSI cases:

Table 5.5.2: Distribution of distribution of Sensitive and Resistant Antibiotic

Organism Causing Wound Infection	**SENSITIVE ANTIBIOTIC**	**RESISTANT ANTIBIOTIC**
Escherichia Coli	Linezolid	Amikacin
Klebsiella Pneumonia	Piperacillin tazobactam	Cefotaxime
Pseudomonas Aeruginosa	Cefaperazone sulbactam	Ampicillin
Escherichia Coli	Piperacillin tazobactam	Ciprofloxacin
No Growth	-	-
Klebsiella Pneumonia	Piperacillin tazobactam	Cefotaxime
Escherichia Coli	Piperacillin tazobactam	Ciprofloxacin
Coagulase Negative Staphylococci	Gentamycin	Ampicillin
Pseudomonas Aeruginosa	Linezolid	Gentamycin
Pseudomonas Aeruginosa	Linezolid	Gentamycin
Escherichia Coli	Piperacillin tazobactam	Ciprofloxacin
Coagulase Negative Staphylococci	Vancomycin	Penicillin
Escherichia Coli	Meropenem	Cefotaxime
Candida Albicans	Clotrimazole	-
No Growth	-	-
Staphylococcus Aureus	Penicillin	Ciprofloxacin
No Growth	-	-
Pseudomonas Aeruginosa	Cefaperazone sulbactam	Ampicillin
Staphylococcus Aureus	Vancomycin	Ciprofloxacin
Klebsiella Pneumonia	Amikacin	Penicillin
Pseudomonas Aeruginosa	Cefaperazone sulbactam	Ampicillin
Escherichia Coli	Gentamycin	Ciprofloxacin
Escherichia Coli	Piperacillin tazobactam	Cotrimoxazole

Escherichia Coli	Gentamycin	Ampicillin
Klebsiella Pneumonia	Cefaperazone sulbactam	Ampicillin
Pseudomonas Aeruginosa	Amikacin	Cotrimoxazole
Coagulase Negative Staphylococci	Vancomycin	Penicillin
Klebsiella Pneumonia	Meropenem	Cefotaxime
Coagulase Negative Staphylococci	Gentamycin	Ampicillin
Coagulase Negative Staphylococci	Vancomycin	Amikacin
Pseudomonas Aeruginosa	Gentamycin	Ciprofloxacin
Staphylococcus Aureus	Vancomycin	Cefotaxime
Pseudomonas Aeruginosa	Linezolid	Gentamycin
Escherichia Coli	Piperacillin tazobactam	Cefotaxime
Pseudomonas Aeruginosa	Gentamycin	Ciprofloxacin
Staphylococcus Aureus	Vancomycin	Cefotaxime
Klebsiella Pneumonia	Amikacin	Penicillin
Escherichia Coli	Piperacillin tazobactam	Ciprofloxacin
Coagulase Negative Staphylococci	Piperacillin tazobactam	Cefotaxime
Escherichia Coli	Piperacillin tazobactam	Ciprofloxacin
Klebsiella Pneumonia	Cefaperazone sulbactam	Ampicillin
Coagulase Negative Staphylococci	Vancomycin	Penicillin
Escherichia Coli	Piperacillin tazobactam	Ciprofloxacin

DISCUSSION

The Institute of Obstetrics and Gynaecology handles around 1200 deliveries every month almost half of which are caesarean sections. The rate of surgical site infections that occurs after caesarean delivery here is around 5-6% which is comparable with the overall SSI rate across the world (3% to 15%). Most of the women who are diagnosed with SSI needs hospitalization for a longer period of time as it takes 3 days to get the pus culture results, after which further treatment with a sensitive antibiotic is required. For most of these cases wound gaping occurs which may require resuturing of the wound which would, in turn, prolong the duration of hospital stay thereby making it more cumbersome to the recovering mother. So, in this study, we have compared the effects of two commonly used pre-operative skin antiseptic solutions, Povidone-iodine and Chlorhexidine. The study involved 940 pregnant women, split into two groups of 470 each. One group received Povidone-iodine and the other group received Chlorhexidine for pre-operative skin preparation. Out of the 940 participants, 43 of them had Surgical Site infection after Caesarean delivery, which comprises about 4.57% of the entire population.

Analysis of Baseline Characteristics

In this study, 345 participants belonged to the age category of 21-30 years (73.4%) each in the Povidone-Iodine group and Chlorhexidine group. 31 (6.6%) participants from the Povidone-Iodine group and 33 (7.02%) participants from

the Chlorhexidine group belonged to the age category of below 21 years. And the remaining 94 (20%) from the Povidone-iodine group and 92 (19.57%) from the Chlorhexidine group belonged to the age category of 31- 40 years. Hence, the age distribution was fairly the same in both groups under study.

The distribution of patients in terms of Primigravida/Multigravida, Term/Preterm, and Singleton/Multiple pregnancies was also analyzed and it was found that there was a marginal difference in the number of cases that come under these three categories between the Povidone-Iodine group and the Chlorhexidine group.

The distribution of patients with high-risk factors such as obesity, Gestational diabetes, Gestational hypertension, previous Caesarean section, Premature Rupture of Membrane, Chorioamnionitis, and Medical comorbidities like Anemia, hypothyroid, heart disease, seizure disorder, bronchial asthma, and renal disorder showed that there was no significant difference in the number of cases between the Povidone-Iodine group and Chlorhexidine group.

Data analysis results

Out of the 43 patients who had surgical site infections, 29 (6.17%) belonged to the Povidone-Iodine group and 14 (2.97%) belonged to the Chlorhexidine group. It is evident that the number of positive cases is lower in

the Chlorhexidine group, compared to the Povidone-Iodine group. The Chi-square test results also confirmed that statistically there is a significant difference in the number of positive SSI cases between the two groups under study.

A subgroup analysis was conducted comparing the number of positive SSI cases that fall under various categories discussed above and it revealed that the number of cases was similar in both groups. It was statistically confirmed using the Chi-square test.

In this study, the most common organism which caused wound infection was identified to be **Escherichia Coli**, which infected 12 out of the 43 patients who had Surgical Site infections. E. Coli was found to be sensitive toPiperacillin tazobactam and resistant to Ciprofloxacin in most of the cases.

Additionally, it was also found that 24 (55.81%) patients out of the 43who had Surgical site infection had Deep SSI and the remaining 19 (44.18%) had a Superficial SSI. 37 (86.04%) patients had Redness, 37 (86.04%) of them had discharge, all 43 of them had induration and 32 (74.41%) of them had gaping. The 74.41% of the patients who had gaping had to undergo resuturing which resulted in prolonged hospitalization and the rest of them were conservatively managed by wound dressing and treatment with a sensitive antibiotic.

CONCLUSION

- Based on the results of the Chi-square test, it was confirmed that statistically there is significant difference between the Povidone-iodine group and Chlorhexidine group in terms of the number of positive SSI cases. Also, the incidence of wound infection was found to be less in the Chlorhexidine group (2.97%) when compared to the Povidone-Iodine group (6.17%). Hence, it can be concluded that the use of Chlorhexidine for preoperative skin preparation significantly reduces the degree of surgical-site infection post caesarean delivery, when compared to Povidone-Iodine.
- The subgroup analysis, which was conducted to compare the effects of Povidone-Iodine and Chlorhexidine in patients that come under high-risk categories, revealed that the number of positive SSI cases was similar in both the study groups for all the high-risk category patients. Hence, based on these results, it can be concluded that the antiseptic characteristics of Povidone-Iodine and Chlorhexidine are not altered by the presence of high-risk factors such as obesity, Gestational diabetes, Gestational hypertension, previous Caesarean section, Premature Rupture of Membrane, Chorioamnionitis, and Medical comorbidities like Anemia, hypothyroid, heart disease, seizure disorder, bronchial asthma, and renal disorder.

- The most common organism causing wound infection in our institution was found to be ‘Escherichia Coli’. In most of the cases, Escherichia Coli was found to be sensitive to ‘Piperacillin tazobactam’ and was the sensitive antibiotic used to treat the SSI.

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ABBREVIATIONS

SSI	Surgical Site Infection
LSCS	Lower Segment Caesarean Sections
CHG	Chlorhexidine Gluconate
PVP-I	Povidone-Iodine
DNA	Deoxyribonucleic
VRE	Vancomycin-Resistant Enterococci
RCT	Randomized Controlled Trials
EMBASE	Excerpta Medica Database
IPA	Isopropyl Alcohol
MI	Myocardial Infarction
NIDDM	Noninsulin-Dependent Diabetes Mellitus
BMI	Body Mass Index
CS	Caesarean Sections
GBS	Group B Streptococcus
CINAHL	Cumulated Index to Nursing and Allied Health Literature
PA	Povidone-Iodine with Alcohol
CA	Chlorhexidine with Alcohol
ICTRP	International Clinical Trials Registry Platform
GDM	Gestational Diabetes Mellitus
HTN	Hypertension
GHTN	Gestational Hypertension
PROM	Premature Rupture of Membrane

PROFORMA

Name: Age: Occupation:

Address: Inpatient number:

Phone number:

Date of admission: Date of surgery: Date of discharge:

Primigravida/Multigravida: Single/Multiple gestation:

Term/Preterm:

Risk factors (yes/no): -

- Obese($\geq$30kg/m^2):
- Pregestational / Gestational Diabetes:
- Chronic / Gestational Hypertension:
- Medical comorbidities:
- Previous caesarean section:
- Premature rupture of membranes:
- Chorioamnionitis:
- Induced labor:
- Second stage labor:
- Previous history of SSI:

Emergency/Elective caesarean:

Indication for caesarean:

Duration of procedure (</> 20 minutes):

Skin closure (Mattress/subcuticular):

Estimated blood loss(ml):

Antibiotic administration 1 hour prior to incision(yes/no):

Day of Suture Removal:

Date of SSI occurrence: SSI POSTOP day:

Superficial/deep SSI: Redness(yes/no):

Induration(yes/no): Discharge(yes/no):

Gaping(yes/no): Pus culture sensitivity report:

Sensitive antibiotic: Resistant antibiotic:

Resutured/Conservative Management: Duration Of SSI:

Date of Cure:

CONSENT FORM

Patient may check **( )** these boxes:

( ) I confirm that I have understood the purpose of procedure for the above study. I have the opportunity to ask questions and all my questions and doubts have been answered to my complete satisfaction.

( ) I understand that my participation in the study is voluntary and that I am free to withdraw at any time without giving reason, without my legal rights being affected.

( ) I understand that sponsor of the clinical study, others working on the sponsor's behalf, the Ethics committee and the regulatory authorities will not need my permission to look at my health records, both in respect of current study and any further research that maybe conducted in relation to it, even if I withdraw from the study I agree to this access.

( ) However, I understand that my identity will not be revealed in any information released to third parties or published, unless as required under the law. I agree not to restrict the use of any data or results that arise from this study.

Study title: “A Comparative Study on the efficacy of Povidone iodine and Chlorhexidine as skin antiseptic agents for reducing surgical site infection following caesarean delivery”

Study Centre: MMC, Chennai

Patient’s Name:

Patient’s Age:

Inpatient Number:

I agree to take part in the above study and to comply with the instructions given during the study and faithfully cooperate with the study team and to immediately in form the study staff if I suffer from any deterioration in my health or well being or any unexpected or unusual symptoms.

I hereby consent to participate in this study.

I hereby give permission to undergo complete clinical examination and diagnostic tests including hematological, biochemical, radiological tests and to undergo treatment.

Signature/Thumb impression of the patient

Patient’s Name and Address:

Signature of Investigator

(Dr.G.RASHMI)

அனுமதியுடனான ஒப்புதல் படிவம்:

( ) இந்த ஆய்விற்கான செயல்முறையின் நோக்கத்தை நான் புரிந்துள்ளேன் என்பதை உறுதிப்படுத்துகிறேன். எனக்கு கேள்விகளை கேட்க வாய்ப்பு உள்ளது. என்னுடைய எல்லா கேள்விகளும் சந்தேகங்களும் என் முழு திருப்திக்கு பதில் அளித்துள்ளன.

( ) ஆய்வில் எனது பங்கேற்பு தன்னார்வமாக இருப்பதையும், என் சட்ட உரிமைகள் பாதிக்கப்படாமல், காரணத்தைத் தெரிவிக்காமல் எப்போது வேண்டுமானாலும் விலக்கிக்கொள்ளலாம் என்பதையும் நான் புரிந்து கொள்கிறேன்.

( ) ஆய்வில் இருந்து நான் விலகி வந்தாலும் கூட, ஆராய்ச்சிக்கு பொருந்தக்கூடிய என் உடல்நல ஆவணங்களைப் பார்க்க என் நெறிமுறைக் குழு மற்றும் ஒழுங்குமுறை அதிகாரிகளுக்கு எனது அனுமதி தேவையில்லை என்பதை நான் புரிந்து கொள்கிறேன். இந்த அணுகலை நான் ஏற்கிறேன்.

( ) இருப்பினும், சட்டத்தின் கீழ் தேவைப்பட்டாலன்றி, மூன்றாம் தரப்பினருக்கு வெளியிடப்பட்ட அல்லது வெளியிட்ட எந்த தகவலிலும் என் அடையாளத்தை வெளிப்படுத்த முடியாது என்பதை நான் புரிந்து கொள்கிறேன். இந்த ஆய்விலிருந்து எழும் எந்தவொரு தரவு அல்லது முடிவுகளின் பயன்பாட்டைக் கட்டுப்படுத்துவதை நான் ஏற்றுக்கொள்கிறேன்.

( ) மேலே உள்ள படிப்பில் கலந்து கொள்ளவும், ஆய்வின் போது கொடுக்கப்பட்ட அறிவுறுத்தல்களுக்கு இணங்கவும், ஆய்வுக் குழுவோடு ஒத்துழைக்கவும், என் உடல்நலம் அல்லது நலம் அல்லது எந்தவொரு எதிர்பாராத அல்லது அசாதாரண அறிகுறிகளிலும் நான் பாதிக்கப்படுகையில் உடனடியாக ஆய்வு ஊழியர்களுக்கு தெரிவிக்கவும், இந்த ஆய்வில் பங்கேற்க ஒப்புக்கொள்கிறேன்.

( ) நான் இதனுடன் முழுமையான மருத்துவ பரிசோதனை மற்றும் நோயறிதல் சோதனைகள் இரத்தம், உயிர்வேதியியல், கதிரியக்க சோதனைகள் உட்பட சிகிச்சைக்கு உட்படுத்த அனுமதிக்கிறேன்.

ஆய்வு தலைப்பு: சிசேரியன் பிரசவத்திற்குப் பிறகு அறுவைசிகிச்சை தளத்தின் தொற்றுநோயைக் குறைப்பதற்கான தோல் கிருமி நாசினிகளாக போவிடோன் அயோடின் மற்றும் குளோரெக்சிடின் ஆகியவற்றின் செயல்திறன் பற்றிய ஒப்பீட்டு ஆய்வு".

ஆய்வு மையம்: எம்.எம்.சி, சென்னை

பங்கேற்பாளரின் பெயர்:

பங்கேற்பாளரின் வயது:

நோயாளி எண்:

நோயாளியின் கையொப்பம்

நோயாளியின் பெயர் மற்றும் முகவரி:

ஆராய்ச்சியாளரின் கையொப்பம்

(டாக்டர் கோ. ரேஷ்மி)

ETHICAL COMMITTEE CERTIFICATE

INSTITUTIONAL ETHICS COMMITTEE
MADRAS MEDICAL COLLEGE, CHENNAI 600 003

EC Reg.No.ECR/270/Inst./TN/2013/RR-16
Telephone No.044 25305301
Fax: 011 25363970

CERTIFICATE OF APPROVAL

To
Dr.G.RASHMI,
Post Graduate-MS (Obstetrics & Gynaecology),
Madras Medical College ,
Chennai-600 003.

Dear Dr. **G.RASHMI**,

The Institutional Ethics Committee has considered your request and approved your study titled **"A COMPARATIVE STUDY ON THE EFFICACY OF POVIDONE IODINE AND CHLORHEXIDINE AS SKIN ANTISEPTIC AGENTS FOR REDUCING SURGICAL SITE INFECTION FOLLOWING CAESAREAN DELIVERY"- NO.21122020.** The following members of Ethics Committee were present in the meeting held on **15.12.2020** conducted at Madras Medical College, Chennai 3.

1. Prof.P.V.Jayashankar :Chairperson
2. Prof.N.Gopalakrishnan,MD.,DM., FRCP, Director, Inst.of Nephrology,MMC,Ch : Member Secretary
3. Prof. K.M.Sudha, Prof. Inst. of Pharmacology,MMC,Ch-3 : Member
4. Prof. Alagarsamy Jamila ,MD, Inst. of Patholoy, Stanley Medical College, Chennai : Member
5. Prof.Rema Chandramohan,Prof.of Paediatrics,ICH,Chennai : Member
6. Prof.S.Lakshmi, Prof. of Paediatrics ICH Chennai :Member
7. Tmt.Arnold Saulina, MA.,MSW., :Social Scientist
8. Thiru S.Govindasamy, BA.,BL,High Court,Chennai : Lawyer
9. Thiru K.Ranjith, Ch- 91 : Lay Person

We approve the proposal to be conducted in its presented form.

The Institutional Ethics Committee expects to be informed about the progress of the study and SAE occurring in the course of the study, any changes in the protocol and patients information/informed consent and asks to be provided a copy of the final report.

Member Secretary – Ethics Committee

MEMBER SECRETARY
TITUTIONAL ETHICS COMMITTEE
RAS MEDICAL COLLEGE
CHENNAI-600 003.

PLAGIARISM CERTIFICATE

This is to certify that this dissertation work titled “A COMPARATIVE STUDY ON THE EFFICACY OF POVIDONE IODINE AND CHLORHEXIDINE AS SKIN ANTISEPTIC AGENTS FOR REDUCING SURGICAL SITE INFECTION FOLLOWING CAESAREAN DELIVERY” of the candidate Dr. G. Rashmi with Registration Number **221916887** for the award of M.S DEGREE in the branch of OBSTETRICS AND GYNAECOLOGY. I personally verified the urkund.com website for the purpose of plagiarism check. I found that the uploaded thesis file contains, all pages from introduction to conclusion including result and shows 13% percentage of plagiarism in the dissertation.

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MASTER CHART

L No.	Skin prep used	SSI Positive/ Negative (1/0)	Age	Primi/ Multi/ Grand Multi Gravida (0/1/2)	Single / Multiple (0/1)	Term / Preterm (0/1)	Obesity (0/1)	Pre GDM / GDM (0/1)	GHTN / Chronic HTN (0/1)	Medical Comorbidities (0/1)	Previous LSCS (0/1)	PROM (0/1)	Chorioamnionitis (0/1)
1	Povidone-Iodine	0	31	1	0	0	0	0	0	0	1	1	0
2	Povidone-Iodine	1	26	0	0	0	0	0	1	0	0	0	0
3	Povidone-Iodine	0	34	1	0	0	1	1	1	1	1	0	0
4	Povidone-Iodine	0	31	1	0	1	0	0	0	0	0	0	0
5	Povidone-Iodine	1	24	0	0	0	0	1	1	0	0	1	1
6	Povidone-Iodine	0	23	1	0	0	0	0	0	0	1	0	0
7	Povidone-Iodine	0	27	2	0	0	0	0	0	1	1	0	0
8	Povidone-Iodine	0	22	0	0	0	0	0	0	0	0	1	0
9	Povidone-Iodine	0	20	0	0	1	0	1	0	0	0	1	1
10	Povidone-Iodine	0	29	0	0	0	0	1	1	0	0	0	0
11	Povidone-Iodine	0	29	1	0	0	1	1	0	0	1	1	0
12	Povidone-Iodine	0	30	1	0	0	0	1	0	1	1	1	0
13	Povidone-Iodine	0	28	1	0	0	0	1	0	0	1	1	0
14	Povidone-Iodine	1	26	0	0	0	0	0	1	0	0	0	0
15	Povidone-Iodine	0	24	0	1	1	1	1	0	0	0	0	0
16	Povidone-Iodine	0	20	0	0	0	0	1	1	1	0	1	0
17	Povidone-Iodine	0	30	1	0	0	0	1	0	0	1	1	0
18	Povidone-Iodine	0	33	0	0	0	0	1	0	0	0	0	0
19	Povidone-Iodine	0	30	1	0	1	0	0	1	0	0	1	1
20	Povidone-Iodine	0	25	1	1	1	1	0	1	0	1	0	0
21	Povidone-Iodine	0	26	1	0	0	1	1	1	1	1	1	0
22	Povidone-Iodine	0	27	1	0	0	1	1	0	1	1	1	0
23	Povidone-Iodine	0	28	1	0	0	1	0	0	0	1	0	0
24	Povidone-Iodine	0	26	1	0	0	1	0	0	0	1	0	0
25	Povidone-Iodine	0	23	0	0	0	0	0	1	1	0	0	0
26	Povidone-Iodine	0	35	0	0	0	0	0	1	1	0	0	0
27	Povidone-Iodine	0	24	1	0	0	0	0	0	1	0	0	0
28	Povidone-Iodine	0	28	0	0	0	0	0	0	1	0	0	0
29	Povidone-Iodine	0	28	1	0	0	0	0	0	0	1	0	0
30	Povidone-Iodine	0	21	1	0	0	0	0	0	0	1	1	1
31	Povidone-Iodine	0	26	0	0	0	0	0	1	0	0	0	0

32	Povidone-Iodine	0	30	0	0	0	0	0	0	0	0	0	0
33	Povidone-Iodine	0	21	2	0	0	1	0	0	0	1	0	0
34	Povidone-Iodine	0	26	1	0	0	1	0	0	0	1	0	0
35	Povidone-Iodine	1	26	0	0	0	0	0	1	0	0	0	0
36	Povidone-Iodine	0	20	0	0	0	0	0	0	0	0	0	0
37	Povidone-Iodine	0	33	1	0	0	1	0	0	0	1	0	0
38	Povidone-Iodine	0	23	1	0	0	0	0	0	1	1	0	0
39	Povidone-Iodine	0	26	0	0	0	1	0	0	0	0	0	0
40	Povidone-Iodine	0	30	0	0	0	0	1	0	0	0	0	0
41	Povidone-Iodine	0	27	0	0	0	0	0	1	1	0	0	0
42	Povidone-Iodine	0	27	0	0	0	1	1	0	0	0	0	0
43	Povidone-Iodine	0	23	1	0	0	1	0	1	0	1	0	0
44	Povidone-Iodine	0	21	0	0	0	1	1	1	0	0	0	0
45	Povidone-Iodine	0	23	0	0	0	1	0	1	1	0	1	0
46	Povidone-Iodine	0	26	1	0	0	1	0	0	0	1	0	0
47	Povidone-Iodine	0	30	1	0	0	1	0	0	0	1	0	0
48	Povidone-Iodine	0	30	1	0	0	0	1	0	0	1	0	0
49	Povidone-Iodine	0	30	2	0	0	0	0	0	1	1	0	0
50	Povidone-Iodine	0	29	1	0	0	0	0	0	0	1	0	0
51	Povidone-Iodine	0	26	1	0	0	0	0	0	0	1	0	0
52	Povidone-Iodine	0	20	0	0	1	0	0	1	0	0	0	0
53	Povidone-Iodine	0	24	1	0	1	0	0	0	1	0	0	0
54	Povidone-Iodine	0	29	1	0	0	0	0	0	0	1	0	0
55	Povidone-Iodine	0	31	0	0	0	0	0	0	0	0	0	0
56	Povidone-Iodine	0	35	1	0	0	0	0	1	0	1	0	0
57	Povidone-Iodine	0	30	1	0	0	0	0	0	1	1	0	0
58	Povidone-Iodine	0	30	1	0	0	0	0	0	0	1	0	0
59	Povidone-Iodine	0	28	1	0	0	1	0	0	0	0	0	0
60	Povidone-Iodine	0	26	0	0	0	0	0	0	0	0	0	1
61	Povidone-Iodine	0	31	1	0	0	0	1	0	0	0	0	0
62	Povidone-Iodine	0	31	1	0	0	0	0	0	0	1	0	0
63	Povidone-Iodine	1	32	1	1	0	0	0	0	1	1	0	0
64	Povidone-Iodine	0	36	1	0	0	0	0	0	1	1	0	0
65	Povidone-Iodine	0	29	1	0	0	0	0	0	0	1	1	1
66	Povidone-Iodine	0	35	1	0	0	0	0	0	0	1	0	0
67	Povidone-Iodine	0	20	0	0	0	0	0	0	0	0	1	1
68	Povidone-	0	20	0	1	1	0	0	0	0	0	0	0

	Iodine												
69	Povidone-Iodine	0	31	2	0	0	0	0	0	0	1	0	0
70	Povidone-Iodine	0	24	1	0	1	0	0	0	0	1	1	1
71	Povidone-Iodine	0	31	1	0	0	0	0	0	0	1	0	0
72	Povidone-Iodine	0	25	0	0	0	0	0	0	0	0	0	0
73	Povidone-Iodine	0	36	2	0	0	0	0	0	0	1	0	0
74	Povidone-Iodine	0	22	1	0	0	0	0	0	0	1	0	0
75	Povidone-Iodine	0	24	0	0	0	0	0	0	0	0	0	0
76	Povidone-Iodine	0	32	1	0	0	0	0	0	0	1	0	0
77	Povidone-Iodine	0	34	0	0	0	0	0	0	0	0	0	0
78	Povidone-Iodine	0	21	1	0	0	0	0	0	0	1	0	0
79	Povidone-Iodine	1	30	0	0	0	0	1	0	0	0	0	0
80	Povidone-Iodine	0	27	1	0	0	0	0	1	0	1	0	0
81	Povidone-Iodine	0	21	0	0	0	0	0	1	0	0	0	0
82	Povidone-Iodine	0	23	0	0	0	1	0	0	0	0	0	0
83	Povidone-Iodine	0	40	1	1	1	0	0	0	0	1	0	0
84	Povidone-Iodine	0	27	1	0	0	0	0	0	0	1	0	0
85	Povidone-Iodine	0	27	1	0	0	0	0	0	1	1	0	0
86	Povidone-Iodine	0	40	0	0	0	0	0	1	0	0	0	0
87	Povidone-Iodine	0	30	1	0	0	1	0	1	0	0	0	0
88	Povidone-Iodine	0	28	1	0	0	0	0	1	0	1	0	0
89	Povidone-Iodine	0	29	0	0	0	0	1	0	0	0	0	0
90	Povidone-Iodine	0	31	1	0	1	0	0	1	0	1	1	0
91	Povidone-Iodine	0	23	1	0	1	0	0	0	0	1	1	0
92	Povidone-Iodine	0	30	0	0	0	1	0	1	0	0	0	0
93	Povidone-Iodine	0	24	1	0	0	0	0	0	0	1	0	0
94	Povidone-Iodine	0	23	1	0	0	0	0	0	0	1	0	0
95	Povidone-Iodine	0	23	0	0	0	0	0	1	0	0	0	0
96	Povidone-Iodine	0	26	1	0	0	0	0	0	0	1	0	0
97	Povidone-Iodine	0	32	0	0	0	0	0	0	0	0	0	0
98	Povidone-Iodine	0	31	0	0	0	0	0	1	0	0	0	0
99	Povidone-Iodine	0	26	1	0	1	1	0	0	0	1	1	1
100	Povidone-Iodine	0	30	1	0	0	0	1	1	0	1	0	0
101	Povidone-Iodine	0	24	1	0	0	0	0	0	1	1	0	0
102	Povidone-Iodine	1	26	1	0	1	1	1	1	0	1	1	1
103	Povidone-Iodine	0	24	1	0	0	0	1	0	0	1	0	0
104	Povidone-Iodine	0	30	0	0	0	0	0	1	0	0	0	0

105	Povidone-Iodine	0	29	1	0	0	0	0	1	0	0	0	0
106	Povidone-Iodine	0	35	0	0	0	0	0	0	1	0	0	0
107	Povidone-Iodine	0	23	0	0	0	0	0	0	0	0	1	0
108	Povidone-Iodine	0	21	0	0	0	0	0	0	0	0	0	0
109	Povidone-Iodine	0	22	2	0	0	0	1	1	1	1	0	0
110	Povidone-Iodine	0	25	0	0	0	0	1	0	0	0	0	0
111	Povidone-Iodine	0	25	1	0	0	0	0	1	0	1	0	0
112	Povidone-Iodine	1	27	0	0	0	1	0	0	1	0	0	0
113	Povidone-Iodine	0	25	1	0	0	0	1	1	0	1	0	0
114	Povidone-Iodine	0	27	0	0	0	0	0	0	1	0	0	0
115	Povidone-Iodine	0	23	1	0	0	1	0	1	0	1	0	0
116	Povidone-Iodine	0	28	0	0	0	1	0	1	0	0	0	0
117	Povidone-Iodine	1	28	1	0	0	0	0	0	0	1	0	0
118	Povidone-Iodine	0	26	0	0	0	0	1	0	0	0	0	0
119	Povidone-Iodine	0	23	0	0	0	0	1	1	0	0	1	0
120	Povidone-Iodine	0	24	0	0	0	0	0	0	0	0	0	0
121	Povidone-Iodine	0	27	0	0	0	1	0	1	1	0	1	0
122	Povidone-Iodine	0	23	0	1	1	1	0	0	0	0	0	0
123	Povidone-Iodine	0	33	0	0	0	0	0	0	0	0	0	0
124	Povidone-Iodine	0	33	1	0	0	0	0	1	0	1	0	0
125	Povidone-Iodine	0	25	0	0	0	0	0	0	1	0	0	0
126	Povidone-Iodine	0	29	1	0	0	0	0	0	0	1	0	0
127	Povidone-Iodine	0	24	0	0	1	0	0	1	0	0	0	1
128	Povidone-Iodine	0	21	0	0	0	0	0	0	0	0	0	0
129	Povidone-Iodine	0	38	1	0	1	0	0	0	0	1	0	0
130	Povidone-Iodine	0	26	1	0	1	0	0	0	0	1	1	0
131	Povidone-Iodine	0	29	1	0	0	0	0	1	0	1	0	0
132	Povidone-Iodine	0	31	0	0	0	0	1	0	1	0	0	0
133	Povidone-Iodine	0	36	1	0	0	0	0	1	0	1	0	0
134	Povidone-Iodine	0	30	1	0	0	0	0	1	0	1	0	0
135	Povidone-Iodine	0	23	0	0	0	0	0	0	0	0	0	0
136	Povidone-Iodine	0	24	0	0	0	0	0	0	1	0	0	0
137	Povidone-Iodine	0	23	0	1	1	0	0	0	0	0	0	0
138	Povidone-Iodine	0	22	0	1	1	0	0	1	0	0	0	0
139	Povidone-Iodine	0	23	0	0	0	0	0	1	0	0	0	0
140	Povidone-Iodine	0	24	0	1	0	1	0	1	1	0	1	0
141	Povidone-	0	35	0	0	0	0	0	0	0	0	0	0

	Iodine												
142	Povidone-Iodine	0	40	1	0	0	0	1	0	0	1	0	0
143	Povidone-Iodine	0	32	1	0	0	0	1	0	1	1	0	0
144	Povidone-Iodine	0	33	1	0	0	0	1	0	0	1	0	0
145	Povidone-Iodine	0	30	0	0	0	0	0	0	0	0	0	0
146	Povidone-Iodine	0	38	0	0	0	0	0	0	0	0	0	0
147	Povidone-Iodine	0	27	0	0	0	0	0	0	0	0	1	0
148	Povidone-Iodine	0	30	1	0	0	1	1	0	0	1	0	0
149	Povidone-Iodine	0	23	0	0	0	0	1	0	1	0	0	0
150	Povidone-Iodine	0	29	1	0	0	0	1	0	0	1	0	0
151	Povidone-Iodine	0	32	1	0	0	0	1	0	0	1	0	0
152	Povidone-Iodine	0	24	1	0	0	0	0	0	0	0	0	0
153	Povidone-Iodine	1	26	1	0	0	0	0	0	0	1	0	0
154	Povidone-Iodine	0	20	0	0	0	0	0	0	0	0	0	0
155	Povidone-Iodine	0	30	1	0	0	0	1	0	0	1	0	0
156	Povidone-Iodine	0	28	1	0	0	0	1	0	0	0	0	0
157	Povidone-Iodine	0	22	1	0	0	0	0	0	0	1	1	0
158	Povidone-Iodine	0	30	1	0	0	0	1	0	0	1	0	0
159	Povidone-Iodine	0	30	1	0	0	0	0	0	0	1	0	0
160	Povidone-Iodine	0	32	0	0	0	0	1	0	0	0	0	0
161	Povidone-Iodine	0	24	1	0	0	0	0	0	0	1	0	0
162	Povidone-Iodine	0	27	1	0	0	0	0	0	0	1	1	0
163	Povidone-Iodine	0	30	0	0	0	0	0	0	0	0	0	0
164	Povidone-Iodine	0	39	1	0	0	0	1	0	0	1	0	0
165	Povidone-Iodine	0	25	0	0	0	0	0	0	1	0	0	0
166	Povidone-Iodine	0	24	0	0	0	0	0	0	0	0	0	0
167	Povidone-Iodine	0	30	1	0	0	0	1	0	0	1	1	0
168	Povidone-Iodine	0	21	0	0	0	0	0	1	0	0	0	0
169	Povidone-Iodine	0	28	1	0	0	0	1	0	0	1	1	0
170	Povidone-Iodine	0	24	1	0	0	0	0	1	1	0	0	0
171	Povidone-Iodine	0	30	1	0	0	1	0	0	1	1	0	0
172	Povidone-Iodine	0	24	1	0	0	1	0	0	1	1	0	1
173	Povidone-Iodine	0	36	1	0	0	0	0	0	1	1	1	0
174	Povidone-Iodine	0	34	1	0	0	1	0	0	1	1	1	0
175	Povidone-Iodine	0	31	0	0	0	0	0	0	0	0	0	0
176	Povidone-Iodine	0	20	0	0	0	0	0	1	0	0	0	0
177	Povidone-Iodine	0	19	0	0	0	0	0	1	0	0	0	0

178	Povidone-Iodine	0	28	0	0	0	0	0	1	1	0	0	0
179	Povidone-Iodine	0	28	1	0	0	0	0	1	1	1	1	0
180	Povidone-Iodine	0	34	1	0	0	0	1	1	0	0	0	0
181	Povidone-Iodine	0	26	1	0	0	0	0	1	0	1	1	0
182	Povidone-Iodine	0	27	1	0	0	0	0	0	0	1	1	0
183	Povidone-Iodine	1	28	1	0	0	1	1	0	0	1	1	0
184	Povidone-Iodine	0	24	1	0	0	0	0	0	0	1	1	0
185	Povidone-Iodine	0	27	1	0	0	0	0	0	0	1	0	0
186	Povidone-Iodine	0	24	1	0	0	1	0	0	0	1	1	0
187	Povidone-Iodine	0	31	1	0	0	0	0	0	0	1	1	0
188	Povidone-Iodine	0	28	1	0	0	0	1	0	1	0	0	0
189	Povidone-Iodine	0	38	0	0	0	0	1	0	1	0	0	0
190	Povidone-Iodine	0	31	1	0	0	0	1	0	0	1	1	1
191	Povidone-Iodine	0	29	1	0	0	1	0	0	0	1	1	0
192	Povidone-Iodine	0	21	0	0	0	0	0	0	0	0	0	0
193	Povidone-Iodine	0	23	0	0	0	0	0	0	1	0	0	0
194	Povidone-Iodine	0	30	1	0	0	0	0	0	0	0	0	0
195	Povidone-Iodine	0	28	1	0	0	1	0	0	0	1	1	0
196	Povidone-Iodine	0	24	1	0	0	0	0	0	0	1	1	0
197	Povidone-Iodine	0	29	1	0	0	0	0	0	0	1	1	0
198	Povidone-Iodine	0	33	1	0	0	0	0	0	1	0	0	0
199	Povidone-Iodine	0	30	1	0	0	0	0	0	1	1	1	0
200	Povidone-Iodine	0	29	1	0	0	1	0	0	0	1	0	0
201	Povidone-Iodine	0	22	1	0	0	0	0	0	0	1	1	0
202	Povidone-Iodine	0	24	1	0	0	0	0	0	0	1	1	0
203	Povidone-Iodine	0	26	1	0	0	0	0	0	0	1	1	0
204	Povidone-Iodine	0	27	1	0	0	0	0	0	0	1	0	0
205	Povidone-Iodine	0	26	0	0	0	1	0	0	0	0	0	0
206	Povidone-Iodine	0	34	0	0	0	0	0	1	0	0	0	0
207	Povidone-Iodine	0	23	1	0	0	1	0	1	0	1	0	0
208	Povidone-Iodine	0	30	1	0	0	0	0	0	0	1	0	0
209	Povidone-Iodine	0	29	1	0	0	0	0	0	0	1	0	0
210	Povidone-Iodine	0	25	1	0	0	1	0	0	0	1	0	0
211	Povidone-Iodine	0	30	1	0	0	0	1	0	1	1	0	0
212	Povidone-Iodine	0	24	1	0	0	1	0	0	1	1	0	0
213	Povidone-Iodine	0	22	0	0	0	0	0	0	1	0	0	0
214	Povidone-	0	31	1	0	0	0	0	0	1	1	0	0

	Iodine												
215	Povidone-Iodine	0	22	0	0	0	0	0	0	0	0	1	1
216	Povidone-Iodine	0	32	1	0	0	0	0	0	1	1	0	0
217	Povidone-Iodine	0	27	0	0	1	0	0	1	0	0	1	1
218	Povidone-Iodine	1	29	1	1	0	0	0	0	1	0	0	0
219	Povidone-Iodine	0	27	1	0	0	0	0	0	1	1	0	0
220	Povidone-Iodine	0	31	0	0	0	1	1	0	0	0	0	0
221	Povidone-Iodine	0	19	0	0	0	0	0	0	0	0	1	0
222	Povidone-Iodine	0	27	1	0	0	0	1	0	1	1	0	0
223	Povidone-Iodine	0	26	0	0	0	0	0	0	0	0	0	0
224	Povidone-Iodine	0	28	1	0	0	0	1	0	1	1	0	0
225	Povidone-Iodine	0	23	1	0	0	0	1	0	0	1	0	0
226	Povidone-Iodine	0	23	1	0	0	0	1	1	0	1	0	0
227	Povidone-Iodine	0	29	1	0	0	0	1	0	0	1	0	0
228	Povidone-Iodine	0	20	0	0	0	1	0	0	0	0	0	0
229	Povidone-Iodine	0	25	0	0	0	0	0	0	0	0	0	0
230	Povidone-Iodine	0	23	0	0	0	0	0	0	0	0	0	0
231	Povidone-Iodine	0	22	0	0	0	0	0	0	0	0	0	0
232	Povidone-Iodine	0	31	1	0	0	0	1	0	0	1	0	0
233	Povidone-Iodine	0	22	1	0	0	0	1	0	0	1	0	0
234	Povidone-Iodine	0	21	0	0	0	0	1	0	1	0	0	0
235	Povidone-Iodine	0	27	0	0	0	0	0	0	0	0	0	0
236	Povidone-Iodine	0	29	1	0	0	0	1	0	0	1	0	0
237	Povidone-Iodine	0	35	1	0	0	0	0	0	1	1	0	0
238	Povidone-Iodine	0	24	0	0	0	0	0	0	0	0	0	0
239	Povidone-Iodine	0	32	1	0	0	1	0	0	0	1	0	0
240	Povidone-Iodine	0	22	1	0	0	1	0	0	0	1	0	0
241	Povidone-Iodine	0	21	0	0	0	1	1	1	0	0	0	0
242	Povidone-Iodine	0	28	1	0	0	1	1	0	0	1	1	0
243	Povidone-Iodine	0	35	1	0	0	1	1	0	0	1	0	0
244	Povidone-Iodine	0	24	1	0	0	1	0	0	0	1	0	0
245	Povidone-Iodine	1	31	0	0	0	0	0	1	0	0	1	0
246	Povidone-Iodine	0	27	0	0	0	0	0	0	0	0	0	0
247	Povidone-Iodine	0	33	1	0	0	1	0	0	0	1	1	0
248	Povidone-Iodine	0	27	0	0	0	0	0	0	0	0	0	1
249	Povidone-Iodine	0	30	1	0	0	0	0	0	0	1	0	0
250	Povidone-Iodine	0	27	0	0	0	0	0	0	1	0	0	0

251	Povidone-Iodine	0	24	0	0	0	0	0	0	0	0	0	0
252	Povidone-Iodine	0	22	0	0	0	0	0	0	1	0	0	0
253	Povidone-Iodine	0	21	1	0	0	0	0	0	0	1	0	0
254	Povidone-Iodine	0	25	1	0	0	0	0	0	0	1	1	0
255	Povidone-Iodine	0	34	1	1	1	0	0	1	0	1	0	0
256	Povidone-Iodine	0	25	1	0	0	0	0	0	0	1	0	0
257	Povidone-Iodine	0	33	0	0	0	0	0	0	0	0	0	0
258	Povidone-Iodine	0	32	1	0	1	0	1	0	0	0	0	0
259	Povidone-Iodine	0	30	1	0	0	0	0	0	0	1	1	0
260	Povidone-Iodine	0	29	1	0	0	0	0	0	0	1	0	0
261	Povidone-Iodine	1	30	0	0	0	1	0	1	1	0	0	0
262	Povidone-Iodine	0	25	0	0	0	0	0	0	0	0	0	0
263	Povidone-Iodine	0	27	1	0	0	0	0	0	0	1	1	0
264	Povidone-Iodine	0	23	1	0	0	0	0	0	0	1	0	0
265	Povidone-Iodine	0	22	1	0	0	0	0	0	0	1	0	0
266	Povidone-Iodine	0	26	1	0	0	0	0	0	0	1	1	0
267	Povidone-Iodine	0	29	0	0	0	1	0	0	0	0	0	0
268	Povidone-Iodine	0	24	0	0	0	0	0	0	0	0	0	0
269	Povidone-Iodine	0	19	0	0	0	0	0	0	0	0	0	0
270	Povidone-Iodine	0	26	0	0	0	0	0	0	0	0	0	0
271	Povidone-Iodine	0	37	1	0	0	1	0	0	0	1	0	0
272	Povidone-Iodine	0	27	0	0	0	0	0	1	1	0	0	0
273	Povidone-Iodine	0	19	0	0	0	0	0	0	0	0	0	0
274	Povidone-Iodine	0	33	1	0	0	1	1	0	0	1	0	0
275	Povidone-Iodine	0	29	0	0	0	0	0	0	0	0	0	0
276	Povidone-Iodine	0	32	1	0	0	1	0	0	0	1	0	0
277	Povidone-Iodine	0	25	1	0	0	1	0	0	0	1	1	0
278	Povidone-Iodine	0	25	1	0	0	1	0	0	0	1	0	0
279	Povidone-Iodine	0	29	1	0	0	0	0	0	1	1	0	0
280	Povidone-Iodine	0	26	1	0	0	0	0	0	0	1	0	0
281	Povidone-Iodine	0	25	1	0	0	0	0	0	0	0	1	1
282	Povidone-Iodine	0	27	0	1	1	0	0	0	0	0	0	0
283	Povidone-Iodine	0	29	0	0	0	0	0	0	0	0	0	0
284	Povidone-Iodine	0	33	1	0	0	0	0	0	0	1	0	0
285	Povidone-Iodine	0	20	1	0	0	1	0	0	0	1	0	0
286	Povidone-Iodine	0	30	1	0	0	1	0	0	0	1	0	0
287	Povidone-	0	24	0	0	0	0	0	0	0	0	1	0

	Iodine												
288	Povidone-Iodine	0	25	0	0	0	0	0	0	1	0	0	0
289	Povidone-Iodine	1	27	0	0	0	0	0	0	0	0	0	0
290	Povidone-Iodine	0	26	0	0	0	0	0	0	0	0	0	0
291	Povidone-Iodine	0	31	1	0	0	1	0	1	0	1	0	0
292	Povidone-Iodine	0	20	1	0	0	1	0	0	0	1	0	0
293	Povidone-Iodine	0	23	0	0	0	0	0	0	0	0	0	0
294	Povidone-Iodine	0	32	1	0	0	1	0	0	0	0	0	0
295	Povidone-Iodine	0	23	0	0	0	0	1	0	0	0	1	0
296	Povidone-Iodine	0	21	0	0	1	1	0	0	0	0	0	0
297	Povidone-Iodine	0	28	0	0	0	0	0	0	1	0	0	0
298	Povidone-Iodine	0	26	1	0	0	0	0	0	0	1	0	0
299	Povidone-Iodine	0	21	0	0	0	0	0	0	1	0	0	0
300	Povidone-Iodine	0	33	1	0	0	0	0	0	0	1	0	0
301	Povidone-Iodine	0	30	1	0	0	0	0	0	0	1	0	0
302	Povidone-Iodine	0	23	0	0	0	0	0	0	1	0	0	1
303	Povidone-Iodine	0	20	0	0	0	0	0	0	0	0	0	0
304	Povidone-Iodine	0	25	1	0	0	0	0	0	0	1	0	0
305	Povidone-Iodine	0	30	1	0	0	0	0	0	1	1	1	0
306	Povidone-Iodine	0	22	0	0	0	0	0	0	1	0	1	0
307	Povidone-Iodine	0	23	0	0	0	0	0	0	0	0	0	0
308	Povidone-Iodine	0	21	1	0	0	0	0	0	1	1	0	0
309	Povidone-Iodine	0	22	1	0	0	0	0	0	1	1	0	0
310	Povidone-Iodine	0	32	1	0	0	0	0	0	0	1	0	0
311	Povidone-Iodine	1	25	0	0	0	0	1	1	1	0	1	0
312	Povidone-Iodine	0	36	1	0	0	0	0	0	0	1	0	0
313	Povidone-Iodine	0	26	0	0	0	0	1	0	0	0	0	0
314	Povidone-Iodine	0	30	1	0	0	0	0	0	0	1	0	0
315	Povidone-Iodine	0	21	1	0	0	0	0	0	1	1	0	0
316	Povidone-Iodine	0	38	1	0	0	0	0	0	1	1	0	0
317	Povidone-Iodine	0	21	1	1	0	0	0	0	1	0	0	0
318	Povidone-Iodine	0	23	0	0	0	0	0	0	0	0	1	0
319	Povidone-Iodine	0	28	0	0	0	0	1	0	1	0	0	0
320	Povidone-Iodine	0	24	1	1	1	0	0	0	0	1	0	0
321	Povidone-Iodine	0	24	0	0	0	0	0	0	0	0	1	0
322	Povidone-Iodine	0	31	1	0	0	0	0	0	1	1	0	0
323	Povidone-Iodine	0	25	0	0	0	0	0	0	0	0	1	0

324	Povidone-Iodine	0	27	0	0	0	0	0	0	0	0	0	0
325	Povidone-Iodine	0	35	1	0	0	0	0	0	0	1	1	0
326	Povidone-Iodine	0	27	1	0	0	0	0	0	1	1	0	0
327	Povidone-Iodine	0	23	0	0	0	1	0	0	1	0	0	0
328	Povidone-Iodine	0	23	0	0	1	0	0	0	0	0	1	0
329	Povidone-Iodine	1	27	0	0	0	0	1	0	0	0	0	0
330	Povidone-Iodine	0	32	0	0	0	0	0	0	0	0	1	0
331	Povidone-Iodine	0	24	1	0	0	0	0	0	1	1	0	0
332	Povidone-Iodine	0	25	0	0	0	0	1	0	1	0	0	0
333	Povidone-Iodine	0	23	0	0	0	0	0	0	0	0	0	0
334	Povidone-Iodine	0	21	0	1	1	0	0	0	0	0	0	0
335	Povidone-Iodine	0	31	1	0	0	0	0	0	0	1	0	0
336	Povidone-Iodine	0	21	0	0	0	0	0	0	0	0	0	0
337	Povidone-Iodine	0	25	1	0	0	0	0	0	0	1	0	0
338	Povidone-Iodine	0	27	1	0	1	0	0	0	0	1	1	1
339	Povidone-Iodine	0	23	1	0	0	0	0	0	0	1	0	0
340	Povidone-Iodine	0	22	0	1	1	0	0	0	0	0	0	0
341	Povidone-Iodine	0	27	1	0	0	0	0	0	0	1	0	0
342	Povidone-Iodine	0	24	1	0	0	0	0	0	1	1	1	0
343	Povidone-Iodine	0	21	0	0	0	0	0	0	1	0	0	0
344	Povidone-Iodine	0	24	1	0	0	0	0	0	1	1	0	0
345	Povidone-Iodine	0	27	1	0	1	0	0	0	0	1	1	0
346	Povidone-Iodine	0	22	0	0	0	0	0	0	1	0	0	0
347	Povidone-Iodine	0	25	1	0	0	0	0	0	0	1	0	0
348	Povidone-Iodine	0	29	0	0	0	1	0	0	1	0	0	0
349	Povidone-Iodine	0	27	0	1	1	0	0	0	1	0	0	0
350	Povidone-Iodine	0	32	1	0	0	0	0	0	1	1	0	0
351	Povidone-Iodine	1	32	1	0	0	0	0	0	1	1	0	0
352	Povidone-Iodine	0	21	1	0	0	0	0	0	0	1	0	0
353	Povidone-Iodine	0	34	1	0	0	0	0	0	0	1	0	0
354	Povidone-Iodine	0	26	0	0	0	0	0	0	0	0	0	0
355	Povidone-Iodine	0	31	1	0	0	0	1	0	1	1	1	0
356	Povidone-Iodine	0	24	0	0	0	0	0	0	0	0	1	0
357	Povidone-Iodine	0	25	1	0	0	0	0	1	0	1	0	0
358	Povidone-Iodine	0	19	0	0	0	0	0	0	0	0	0	0
359	Povidone-Iodine	0	28	1	0	0	0	0	0	0	1	0	0
360	Povidone-	0	23	1	0	0	0	0	0	1	0	0	0

	Iodine												
361	Povidone-Iodine	0	36	1	0	0	0	0	0	1	1	0	0
362	Povidone-Iodine	0	26	1	0	0	0	0	0	0	1	0	0
363	Povidone-Iodine	0	30	0	0	0	0	0	0	0	0	0	0
364	Povidone-Iodine	0	25	1	0	0	0	0	0	0	1	0	0
365	Povidone-Iodine	0	30	1	0	0	0	0	0	0	1	1	0
366	Povidone-Iodine	0	40	1	0	0	1	0	0	0	0	0	0
367	Povidone-Iodine	1	26	0	0	0	0	0	1	0	0	0	0
368	Povidone-Iodine	0	34	1	0	0	0	0	0	1	1	0	0
369	Povidone-Iodine	0	26	1	0	0	0	0	0	0	1	0	0
370	Povidone-Iodine	0	29	1	0	0	0	0	0	1	1	0	0
371	Povidone-Iodine	0	23	0	0	0	0	0	0	0	0	0	0
372	Povidone-Iodine	0	24	0	0	0	0	0	0	0	0	0	0
373	Povidone-Iodine	0	21	1	0	0	0	0	1	1	1	0	0
374	Povidone-Iodine	0	32	1	0	0	0	0	0	0	1	0	0
375	Povidone-Iodine	1	28	1	0	0	1	0	0	0	0	0	0
376	Povidone-Iodine	0	37	0	0	0	0	0	1	0	0	0	0
377	Povidone-Iodine	0	20	0	0	0	0	0	0	0	0	0	0
378	Povidone-Iodine	0	27	1	0	0	0	0	0	0	1	0	0
379	Povidone-Iodine	0	37	1	0	0	0	0	0	0	0	0	0
380	Povidone-Iodine	0	29	1	0	0	0	0	1	0	1	0	0
381	Povidone-Iodine	0	25	0	0	0	0	0	0	0	0	0	0
382	Povidone-Iodine	0	27	1	0	0	0	0	0	0	1	0	0
383	Povidone-Iodine	0	22	1	0	0	0	0	0	0	1	0	0
384	Povidone-Iodine	0	30	1	0	0	0	0	0	0	1	0	0
385	Povidone-Iodine	1	28	0	0	0	0	1	0	0	0	1	0
386	Povidone-Iodine	0	25	1	0	0	0	0	0	0	1	0	0
387	Povidone-Iodine	0	24	0	0	0	0	0	0	1	0	0	0
388	Povidone-Iodine	0	22	1	0	0	0	0	0	0	0	0	0
389	Povidone-Iodine	0	23	1	0	0	0	1	0	0	1	0	0
390	Povidone-Iodine	0	31	1	0	0	0	0	0	0	1	0	0
391	Povidone-Iodine	0	21	1	0	0	0	0	0	0	1	0	0
392	Povidone-Iodine	0	26	0	0	0	0	0	0	1	0	0	0
393	Povidone-Iodine	0	32	1	0	0	0	0	0	0	1	0	0
394	Povidone-Iodine	0	21	0	0	0	0	0	0	0	0	0	0
395	Povidone-Iodine	0	25	0	0	0	0	0	0	1	0	0	0
396	Povidone-Iodine	1	38	1	0	0	1	0	1	1	1	0	0

397	Povidone-Iodine	0	23	1	0	0	0	0	1	0	1	0	0
398	Povidone-Iodine	0	30	1	0	0	0	0	0	0	1	0	0
399	Povidone-Iodine	0	34	1	0	0	0	0	0	0	1	0	0
400	Povidone-Iodine	0	23	1	0	0	0	0	0	1	1	0	0
401	Povidone-Iodine	0	19	0	0	0	0	0	0	0	0	0	0
402	Povidone-Iodine	0	20	0	0	0	0	0	0	0	0	0	0
403	Povidone-Iodine	0	30	1	0	0	0	0	0	0	1	0	0
404	Povidone-Iodine	0	35	1	0	0	0	0	0	0	1	0	0
405	Povidone-Iodine	0	32	1	0	0	0	0	0	0	1	0	0
406	Povidone-Iodine	0	28	1	0	0	0	0	0	1	1	0	0
407	Povidone-Iodine	0	28	1	0	0	0	0	0	0	1	0	0
408	Povidone-Iodine	0	23	0	0	0	0	0	0	0	0	0	0
409	Povidone-Iodine	1	29	1	0	0	0	0	0	1	1	1	0
410	Povidone-Iodine	0	28	0	0	0	0	1	0	0	0	0	0
411	Povidone-Iodine	0	29	1	0	0	0	0	0	1	1	0	0
412	Povidone-Iodine	0	28	1	0	0	0	0	0	1	1	0	0
413	Povidone-Iodine	1	27	0	0	0	0	1	0	0	0	0	0
414	Povidone-Iodine	0	30	0	0	0	1	0	0	0	0	0	0
415	Povidone-Iodine	0	20	1	0	0	1	0	0	1	1	1	0
416	Povidone-Iodine	0	18	0	0	0	0	0	0	1	0	0	0
417	Povidone-Iodine	0	23	1	0	0	0	0	0	0	1	1	0
418	Povidone-Iodine	0	22	0	0	1	0	0	0	0	0	0	0
419	Povidone-Iodine	0	24	0	0	0	0	0	0	0	0	0	0
420	Povidone-Iodine	0	23	1	0	0	0	0	0	0	1	0	0
421	Povidone-Iodine	0	30	1	0	1	0	0	0	1	1	1	1
422	Povidone-Iodine	0	29	1	0	0	0	0	0	1	1	0	0
423	Povidone-Iodine	0	23	0	0	0	0	0	0	0	0	0	0
424	Povidone-Iodine	1	20	0	0	0	0	0	0	1	0	1	0
425	Povidone-Iodine	0	24	1	0	0	0	0	0	1	1	0	0
426	Povidone-Iodine	0	32	1	0	0	1	0	0	1	0	0	0
427	Povidone-Iodine	0	27	1	0	0	0	1	0	1	0	0	0
428	Povidone-Iodine	0	25	1	0	0	0	0	0	1	1	0	0
429	Povidone-Iodine	0	20	1	0	0	0	0	0	1	1	0	0
430	Povidone-Iodine	0	21	1	0	1	0	0	0	0	1	0	0
431	Povidone-Iodine	0	20	0	0	0	0	0	0	0	0	0	0
432	Povidone-Iodine	0	19	1	0	0	0	0	0	1	1	0	0
433	Povidone-	0	18	0	0	0	0	0	0	0	0	0	0

	Iodine												
434	Povidone-Iodine	0	17	0	0	0	0	0	0	1	0	0	0
435	Povidone-Iodine	0	20	1	0	0	0	0	1	0	1	0	0
436	Povidone-Iodine	0	29	1	0	0	0	0	0	0	1	0	0
437	Povidone-Iodine	0	22	0	0	0	0	0	0	1	0	0	0
438	Povidone-Iodine	0	22	0	0	0	1	0	0	0	0	0	0
439	Povidone-Iodine	0	22	1	0	0	0	0	0	0	1	0	0
440	Povidone-Iodine	0	21	1	0	0	0	0	0	0	1	0	0
441	Povidone-Iodine	0	22	1	0	0	0	0	0	0	1	0	0
442	Povidone-Iodine	0	32	1	0	0	0	0	0	1	1	0	0
443	Povidone-Iodine	0	32	1	0	0	0	0	0	0	0	0	0
444	Povidone-Iodine	0	34	0	0	0	0	0	0	1	0	0	0
445	Povidone-Iodine	0	21	0	0	0	0	0	0	0	0	1	0
446	Povidone-Iodine	0	24	0	0	0	0	0	0	0	0	0	0
447	Povidone-Iodine	0	26	1	1	0	0	0	0	1	1	0	0
448	Povidone-Iodine	0	21	1	0	0	0	0	0	0	1	0	0
449	Povidone-Iodine	0	37	1	0	0	0	0	0	0	1	0	0
450	Povidone-Iodine	0	26	1	0	1	0	0	0	1	1	1	1
451	Povidone-Iodine	1	26	0	0	0	0	1	0	0	0	0	0
452	Povidone-Iodine	0	30	1	0	0	0	0	0	0	1	0	0
453	Povidone-Iodine	1	26	0	1	0	1	0	0	1	0	0	0
454	Povidone-Iodine	0	27	0	0	0	0	0	0	0	0	1	0
455	Povidone-Iodine	0	27	1	0	0	0	1	0	1	1	0	0
456	Povidone-Iodine	0	27	0	0	0	0	0	0	0	0	1	0
457	Povidone-Iodine	0	27	0	0	0	0	0	0	0	0	1	0
458	Povidone-Iodine	0	27	1	0	0	1	0	0	0	1	0	0
459	Povidone-Iodine	0	29	1	0	0	1	0	0	0	1	1	0
460	Povidone-Iodine	0	33	1	0	1	0	0	0	0	1	0	0
461	Povidone-Iodine	0	28	0	0	0	0	0	1	0	0	0	0
462	Povidone-Iodine	1	20	0	0	0	0	0	1	0	0	1	1
463	Povidone-Iodine	0	22	0	0	0	0	0	0	1	0	0	0
464	Povidone-Iodine	0	20	0	0	0	0	1	0	0	0	0	0
465	Povidone-Iodine	0	28	1	0	0	0	0	0	1	1	0	0
466	Povidone-Iodine	0	26	0	0	0	0	0	0	0	0	1	0
467	Povidone-Iodine	0	30	1	0	0	0	0	0	1	1	0	0
468	Povidone-Iodine	1	24	0	0	0	0	1	0	0	0	1	0
469	Povidone-Iodine	0	24	1	0	0	0	0	0	1	0	0	0

470	Povidone-Iodine	0	22	0	0	0	0	0	0	0	0	0	0
471	Chlorhexidine	0	31	1	0	0	0	0	1	1	1	0	0
472	Chlorhexidine	0	22	0	0	0	0	0	0	0	0	0	0
473	Chlorhexidine	0	32	1	0	0	0	0	0	1	1	0	0
474	Chlorhexidine	0	22	0	0	0	0	0	1	0	0	0	0
475	Chlorhexidine	0	28	1	0	0	0	1	1	1	1	0	0
476	Chlorhexidine	0	26	1	0	0	1	0	0	1	0	0	0
477	Chlorhexidine	0	27	1	0	0	0	0	0	1	1	0	0
478	Chlorhexidine	0	31	0	0	0	1	0	0	0	0	0	0
479	Chlorhexidine	0	19	0	0	0	0	1	0	1	0	0	0
480	Chlorhexidine	0	27	1	0	0	0	0	1	1	1	0	0
481	Chlorhexidine	0	26	0	0	0	0	0	0	0	0	0	0
482	Chlorhexidine	0	28	1	0	0	0	0	0	0	1	0	1
483	Chlorhexidine	0	23	1	0	0	0	0	0	1	1	0	0
484	Chlorhexidine	0	23	1	0	0	0	0	0	1	1	0	0
485	Chlorhexidine	0	29	1	0	0	0	0	1	1	1	0	0
486	Chlorhexidine	0	20	0	0	0	1	0	0	0	0	0	0
487	Chlorhexidine	0	25	0	0	0	0	0	1	0	0	0	0
488	Chlorhexidine	0	29	0	0	0	0	1	0	0	0	0	0
489	Chlorhexidine	0	22	0	0	0	0	1	0	0	0	1	0
490	Chlorhexidine	0	31	1	0	0	0	0	0	0	1	0	0
491	Chlorhexidine	0	22	1	0	0	1	0	0	0	1	0	0
492	Chlorhexidine	0	21	0	0	0	0	0	0	0	0	0	0
493	Chlorhexidine	0	27	0	0	0	0	1	0	0	0	0	0
494	Chlorhexidine	0	29	1	0	0	0	0	0	0	1	1	0
495	Chlorhexidine	0	35	1	0	0	0	0	0	1	1	0	0
496	Chlorhexidine	0	24	0	0	1	1	0	1	0	0	0	0
497	Chlorhexidine	0	32	1	0	0	0	0	0	1	1	0	0
498	Chlorhexidine	0	23	2	0	0	0	0	0	0	1	0	0
499	Chlorhexidine	0	21	0	0	0	0	0	0	0	0	0	0
500	Chlorhexidine	0	28	1	0	0	0	1	0	0	1	0	0
501	Chlorhexidine	0	35	1	0	1	0	0	0	1	1	0	0
502	Chlorhexidine	0	24	1	0	0	1	0	1	0	1	0	0
503	Chlorhexidine	0	31	1	0	0	0	0	0	0	1	0	0
504	Chlorhexidine	0	27	0	0	0	0	0	0	1	0	0	0
505	Chlorhexidine	0	33	1	0	0	0	0	1	1	1	0	0
506	Chlorhexi	0	27	0	0	0	0	0	0	0	0	0	0

	dine												
507	Chlorhexidine	0	30	2	0	0	1	0	0	0	1	0	0
508	Chlorhexidine	0	27	0	0	0	0	0	0	1	0	0	0
509	Chlorhexidine	0	24	0	0	0	0	0	0	1	0	0	0
510	Chlorhexidine	0	22	0	0	0	0	0	0	0	0	0	0
511	Chlorhexidine	0	21	0	0	0	1	0	0	0	0	0	0
512	Chlorhexidine	0	25	1	0	0	0	0	0	1	1	0	0
513	Chlorhexidine	0	19	1	1	0	0	1	0	0	1	0	0
514	Chlorhexidine	0	22	1	0	0	0	0	0	1	1	0	0
515	Chlorhexidine	0	25	1	0	0	0	0	1	0	1	0	0
516	Chlorhexidine	0	23	2	0	0	0	0	0	1	1	0	0
517	Chlorhexidine	0	33	1	0	0	0	0	0	1	1	0	0
518	Chlorhexidine	0	32	0	0	0	0	0	0	0	0	0	0
519	Chlorhexidine	1	32	1	0	0	0	1	0	1	1	0	0
520	Chlorhexidine	0	29	1	0	0	0	0	0	1	1	0	0
521	Chlorhexidine	0	25	1	0	0	0	0	0	0	1	0	0
522	Chlorhexidine	0	25	1	0	0	0	0	0	0	1	1	0
523	Chlorhexidine	0	27	1	0	0	0	0	1	0	1	0	0
524	Chlorhexidine	0	33	1	0	0	0	0	0	0	1	0	0
525	Chlorhexidine	0	29	1	0	0	0	0	0	0	1	0	0
526	Chlorhexidine	0	24	0	0	0	0	0	1	0	0	0	0
527	Chlorhexidine	0	19	0	0	0	0	0	0	0	0	0	0
528	Chlorhexidine	0	26	1	0	0	1	0	1	0	1	0	0
529	Chlorhexidine	0	27	1	0	0	0	1	0	0	1	0	0
530	Chlorhexidine	0	27	1	0	0	0	0	1	1	1	0	0
531	Chlorhexidine	0	19	1	0	0	0	0	1	0	1	1	0
532	Chlorhexidine	0	33	1	1	0	0	0	1	0	1	0	0
533	Chlorhexidine	0	29	0	0	0	0	0	0	0	0	0	0
534	Chlorhexidine	0	30	1	0	0	0	0	0	0	1	0	0
535	Chlorhexidine	0	25	1	0	0	0	0	1	0	1	0	0
536	Chlorhexidine	0	24	1	0	0	0	0	1	0	1	0	0
537	Chlorhexidine	0	22	1	0	0	0	0	0	0	1	1	0
538	Chlorhexidine	0	26	1	0	0	0	0	0	0	1	0	0
539	Chlorhexidine	0	25	1	0	0	0	0	1	0	1	0	0
540	Chlorhexidine	0	27	0	0	0	0	0	0	0	0	0	0
541	Chlorhexidine	0	29	0	0	0	1	0	0	0	0	1	0
542	Chlorhexidine	0	33	1	0	0	0	0	0	0	1	1	0

543	Chlorhexidine	0	30	1	0	0	0	0	1	0	1	0	0
544	Chlorhexidine	0	32	1	0	0	0	0	0	1	1	0	0
545	Chlorhexidine	0	24	1	0	0	0	0	0	1	1	0	0
546	Chlorhexidine	0	25	1	0	0	0	0	1	1	1	0	0
547	Chlorhexidine	0	28	0	0	0	0	0	0	0	0	0	0
548	Chlorhexidine	0	26	1	0	0	0	0	0	0	1	0	0
549	Chlorhexidine	0	31	0	0	0	1	0	0	0	0	0	0
550	Chlorhexidine	0	20	1	0	0	0	0	0	0	1	0	0
551	Chlorhexidine	0	23	1	0	0	0	0	1	0	0	0	0
552	Chlorhexidine	0	32	1	0	0	0	0	1	0	1	0	0
553	Chlorhexidine	0	29	1	0	0	0	0	0	0	1	0	0
554	Chlorhexidine	0	21	1	0	0	0	1	1	0	1	1	0
555	Chlorhexidine	0	23	1	0	0	1	1	0	1	1	0	0
556	Chlorhexidine	0	26	1	0	0	0	1	0	0	1	0	0
557	Chlorhexidine	0	21	1	0	0	0	1	0	0	1	0	0
558	Chlorhexidine	0	33	0	0	0	0	1	0	0	0	0	0
559	Chlorhexidine	0	30	1	0	0	0	1	0	0	1	1	0
560	Chlorhexidine	0	33	1	0	0	0	1	0	0	1	0	0
561	Chlorhexidine	0	20	1	0	0	0	1	1	0	1	0	0
562	Chlorhexidine	0	25	1	0	0	0	1	1	0	1	0	0
563	Chlorhexidine	0	30	1	0	0	0	1	1	0	1	1	0
564	Chlorhexidine	0	22	1	0	0	1	0	0	1	1	0	0
565	Chlorhexidine	0	27	1	0	0	0	0	1	0	1	0	0
566	Chlorhexidine	0	21	1	0	0	0	0	0	0	1	0	0
567	Chlorhexidine	1	24	0	0	0	0	0	0	0	0	0	0
568	Chlorhexidine	0	32	1	0	0	0	0	1	1	0	0	0
569	Chlorhexidine	1	25	1	0	0	0	0	1	1	1	1	0
570	Chlorhexidine	0	21	1	0	0	0	0	0	0	1	0	0
571	Chlorhexidine	0	37	1	0	0	0	0	1	0	1	1	0
572	Chlorhexidine	0	26	1	0	0	1	0	0	0	1	0	0
573	Chlorhexidine	0	22	1	0	0	0	0	0	0	1	0	0
574	Chlorhexidine	0	30	0	0	0	0	0	0	0	0	0	0
575	Chlorhexidine	0	26	1	0	0	0	0	0	0	1	1	0
576	Chlorhexidine	0	27	1	0	0	0	0	0	1	1	1	0
577	Chlorhexidine	0	27	0	0	0	1	0	0	1	0	0	0
578	Chlorhexidine	0	27	0	0	0	0	0	0	0	0	0	0
579	Chlorhexi	0	27	1	0	0	0	0	0	1	1	1	0

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580	Chlorhexidine	0	27	1	0	0	0	0	0	0	1	1	0
581	Chlorhexidine	0	28	1	0	0	0	0	0	0	1	0	0
582	Chlorhexidine	0	24	1	0	0	0	0	0	0	1	0	0
583	Chlorhexidine	0	32	1	0	0	0	0	0	1	1	0	0
584	Chlorhexidine	0	27	0	0	0	0	1	1	0	0	0	0
585	Chlorhexidine	0	25	0	0	0	1	0	1	1	0	0	0
586	Chlorhexidine	0	20	1	0	0	0	0	0	0	1	0	0
587	Chlorhexidine	0	21	0	0	0	0	0	0	0	0	0	0
588	Chlorhexidine	1	29	0	0	0	0	0	0	1	0	0	0
589	Chlorhexidine	0	20	1	0	0	1	0	0	0	0	0	0
590	Chlorhexidine	0	19	0	0	0	0	1	0	0	0	0	0
591	Chlorhexidine	0	17	1	0	0	0	0	0	0	1	0	0
592	Chlorhexidine	0	33	1	0	0	0	0	0	0	1	0	0
593	Chlorhexidine	0	22	1	0	0	0	1	1	0	0	1	0
594	Chlorhexidine	0	21	1	0	0	0	1	0	0	1	0	0
595	Chlorhexidine	0	21	1	0	0	0	0	0	1	1	0	0
596	Chlorhexidine	0	22	1	0	0	0	0	0	0	1	0	0
597	Chlorhexidine	0	24	1	0	0	0	0	0	1	1	0	0
598	Chlorhexidine	0	26	1	0	0	0	0	1	1	1	0	0
599	Chlorhexidine	0	32	1	0	0	0	0	0	0	1	0	0
600	Chlorhexidine	0	22	0	0	0	0	0	0	0	0	0	0
601	Chlorhexidine	0	30	1	0	0	0	0	0	0	1	0	0
602	Chlorhexidine	0	32	1	0	0	0	0	0	0	1	0	0
603	Chlorhexidine	0	32	1	0	0	0	0	0	0	1	0	0
604	Chlorhexidine	0	34	1	0	0	0	0	0	0	1	0	0
605	Chlorhexidine	0	21	0	0	0	0	0	0	0	0	0	0
606	Chlorhexidine	0	24	0	0	0	0	0	0	0	0	0	0
607	Chlorhexidine	0	26	0	0	0	0	0	0	1	0	0	0
608	Chlorhexidine	0	21	0	0	0	1	0	1	0	0	0	0
609	Chlorhexidine	0	37	1	0	0	0	0	0	0	0	0	0
610	Chlorhexidine	0	26	1	0	0	0	0	0	0	1	0	0
611	Chlorhexidine	0	32	1	0	0	0	0	0	0	1	0	1
612	Chlorhexidine	0	30	0	0	0	0	1	0	0	0	1	0
613	Chlorhexidine	0	29	0	0	0	1	0	0	0	0	0	0
614	Chlorhexidine	0	25	1	0	0	0	0	0	0	1	0	0
615	Chlorhexidine	0	25	1	0	0	0	0	0	0	1	0	0

616	Chlorhexidine	0	27	1	0	0	0	0	0	0	1	0	0
617	Chlorhexidine	0	23	1	0	1	0	0	0	0	1	0	0
618	Chlorhexidine	0	27	1	0	0	0	0	0	0	1	0	0
619	Chlorhexidine	1	31	1	0	0	0	0	0	1	1	0	0
620	Chlorhexidine	0	28	0	0	0	0	0	0	0	0	0	0
621	Chlorhexidine	0	23	1	0	0	0	1	0	1	1	0	0
622	Chlorhexidine	0	23	0	0	0	0	0	0	0	0	1	0
623	Chlorhexidine	0	29	1	0	0	0	0	0	0	1	0	0
624	Chlorhexidine	0	20	0	0	0	0	0	0	0	0	0	0
625	Chlorhexidine	0	32	1	0	0	0	0	0	0	1	0	0
626	Chlorhexidine	0	27	1	0	0	1	0	1	0	0	1	0
627	Chlorhexidine	0	28	0	0	0	0	0	0	0	0	0	0
628	Chlorhexidine	0	22	0	0	0	0	0	0	0	0	0	0
629	Chlorhexidine	0	32	1	0	0	0	0	1	0	1	0	0
630	Chlorhexidine	0	27	0	0	0	0	0	0	0	0	0	0
631	Chlorhexidine	0	28	1	0	0	0	0	0	1	1	0	0
632	Chlorhexidine	0	27	1	0	0	0	0	0	0	0	0	0
633	Chlorhexidine	0	31	1	0	0	0	1	0	1	0	0	0
634	Chlorhexidine	0	19	1	0	0	1	0	0	1	1	0	0
635	Chlorhexidine	0	27	0	0	0	0	0	0	0	0	0	0
636	Chlorhexidine	0	23	0	0	0	0	0	0	0	0	1	0
637	Chlorhexidine	0	29	0	0	0	0	0	0	0	0	0	0
638	Chlorhexidine	0	20	0	0	0	0	0	0	0	0	0	0
639	Chlorhexidine	0	25	1	0	0	0	0	0	0	1	0	0
640	Chlorhexidine	0	23	1	0	0	0	0	0	0	1	0	0
641	Chlorhexidine	0	22	0	0	0	0	0	1	0	0	0	0
642	Chlorhexidine	0	31	0	0	0	0	0	0	1	0	0	0
643	Chlorhexidine	0	22	1	0	0	0	0	0	0	1	0	0
644	Chlorhexidine	0	21	1	0	0	0	0	0	0	1	0	0
645	Chlorhexidine	0	27	0	0	0	0	1	0	0	0	0	0
646	Chlorhexidine	0	26	1	0	0	1	1	1	0	0	0	0
647	Chlorhexidine	0	28	1	0	0	0	0	0	0	0	0	0
648	Chlorhexidine	0	29	0	0	0	0	0	0	0	0	0	0
649	Chlorhexidine	0	28	1	0	0	0	0	0	0	1	0	0
650	Chlorhexidine	0	33	1	0	0	0	0	0	0	1	0	0
651	Chlorhexidine	0	30	1	0	0	0	0	0	0	1	0	0
652	Chlorhexi	0	20	1	0	0	1	0	0	0	1	0	0

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653	Chlorhexidine	0	18	0	0	0	1	0	0	0	0	1	0
654	Chlorhexidine	0	23	1	0	0	0	0	0	0	0	0	0
655	Chlorhexidine	0	22	0	0	0	0	0	0	0	0	0	0
656	Chlorhexidine	0	29	1	0	0	0	0	0	1	1	0	0
657	Chlorhexidine	0	23	0	0	0	0	0	1	0	0	0	0
658	Chlorhexidine	0	28	0	0	0	0	0	0	1	0	0	0
659	Chlorhexidine	0	24	0	0	0	0	0	0	1	0	0	0
660	Chlorhexidine	0	32	0	0	0	0	0	0	0	0	0	0
661	Chlorhexidine	0	27	1	0	0	0	1	1	0	0	0	0
662	Chlorhexidine	0	25	1	1	0	0	0	0	0	1	0	0
663	Chlorhexidine	0	20	1	0	0	1	0	0	0	1	0	0
664	Chlorhexidine	0	21	0	0	0	0	1	0	0	0	0	0
665	Chlorhexidine	0	20	1	0	0	1	0	0	0	1	0	0
666	Chlorhexidine	0	19	1	0	0	0	0	0	0	1	0	0
667	Chlorhexidine	0	22	1	0	0	0	0	0	1	1	0	0
668	Chlorhexidine	0	24	1	0	0	0	0	0	1	1	0	0
669	Chlorhexidine	1	26	1	0	0	0	1	0	0	0	0	0
670	Chlorhexidine	0	30	0	0	0	1	0	1	1	0	0	0
671	Chlorhexidine	0	29	1	0	0	1	0	0	0	0	0	0
672	Chlorhexidine	0	23	0	0	0	0	0	0	0	0	0	0
673	Chlorhexidine	0	28	1	0	0	0	0	0	0	0	0	0
674	Chlorhexidine	0	21	0	0	0	0	0	0	0	0	0	0
675	Chlorhexidine	0	26	1	0	0	0	0	0	0	0	0	0
676	Chlorhexidine	0	30	0	0	0	0	1	0	0	0	0	0
677	Chlorhexidine	0	21	1	0	1	1	0	0	0	1	0	0
678	Chlorhexidine	0	26	1	0	0	0	0	0	0	1	0	0
679	Chlorhexidine	0	26	1	0	0	1	0	0	0	1	0	0
680	Chlorhexidine	0	20	0	0	0	0	0	0	0	0	0	0
681	Chlorhexidine	0	33	0	0	0	0	0	0	0	0	0	0
682	Chlorhexidine	0	23	1	0	0	0	0	0	0	0	0	0
683	Chlorhexidine	0	26	0	0	0	0	0	1	0	0	0	0
684	Chlorhexidine	0	30	1	0	0	0	0	0	0	0	0	0
685	Chlorhexidine	0	27	1	0	0	1	0	0	0	0	0	0
686	Chlorhexidine	1	30	1	0	0	0	0	1	1	0	0	0
687	Chlorhexidine	0	23	1	0	0	0	0	0	0	0	0	0
688	Chlorhexidine	0	26	0	0	0	0	0	0	0	0	0	1

689	Chlorhexidine	0	30	0	0	0	0	0	0	0	0	0	0
690	Chlorhexidine	0	30	0	0	1	0	0	0	0	0	0	0
691	Chlorhexidine	0	30	0	0	0	0	0	0	0	0	0	0
692	Chlorhexidine	0	29	1	0	0	1	0	0	1	1	0	0
693	Chlorhexidine	0	26	1	0	0	1	1	0	0	1	0	0
694	Chlorhexidine	0	20	0	0	0	0	1	1	0	0	0	0
695	Chlorhexidine	0	24	0	0	0	0	0	0	1	0	1	0
696	Chlorhexidine	0	29	2	0	0	0	0	0	0	0	0	0
697	Chlorhexidine	0	31	1	0	0	0	0	0	0	1	0	0
698	Chlorhexidine	0	35	0	0	1	0	0	0	0	0	0	0
699	Chlorhexidine	0	30	1	0	0	1	0	0	1	1	0	0
700	Chlorhexidine	0	30	1	0	0	1	0	1	0	1	0	0
701	Chlorhexidine	0	28	0	0	0	0	0	0	0	0	0	0
702	Chlorhexidine	0	26	1	0	0	0	0	0	1	0	0	0
703	Chlorhexidine	0	31	1	0	0	0	0	0	0	1	0	0
704	Chlorhexidine	0	31	1	0	0	0	0	0	0	0	0	0
705	Chlorhexidine	0	32	0	0	0	0	0	0	0	0	0	0
706	Chlorhexidine	0	20	0	0	1	0	0	0	0	0	0	0
707	Chlorhexidine	0	20	1	0	0	0	0	0	1	1	0	0
708	Chlorhexidine	0	31	1	0	0	1	0	0	0	1	0	0
709	Chlorhexidine	0	24	0	0	0	0	0	0	0	0	0	0
710	Chlorhexidine	0	31	1	0	0	0	0	0	0	1	0	0
711	Chlorhexidine	0	25	1	0	0	0	0	0	0	1	0	0
712	Chlorhexidine	0	36	0	0	0	0	1	0	0	0	0	0
713	Chlorhexidine	0	22	1	0	0	1	0	0	0	1	0	0
714	Chlorhexidine	0	24	1	0	1	0	1	0	0	1	0	0
715	Chlorhexidine	0	32	1	0	0	1	0	0	0	1	0	0
716	Chlorhexidine	0	34	0	0	0	1	0	0	0	0	0	0
717	Chlorhexidine	0	21	0	0	0	0	0	1	0	0	0	0
718	Chlorhexidine	0	29	1	0	0	0	0	0	0	1	0	0
719	Chlorhexidine	1	27	1	0	0	1	1	0	0	1	0	0
720	Chlorhexidine	0	21	0	0	0	0	0	0	0	0	1	0
721	Chlorhexidine	0	23	1	0	0	1	0	0	0	1	0	0
722	Chlorhexidine	0	40	1	0	1	0	0	0	0	1	0	0
723	Chlorhexidine	0	27	0	0	0	0	0	0	0	0	0	0
724	Chlorhexidine	0	27	1	0	0	0	1	0	0	1	0	0
725	Chlorhexi	0	40	1	0	0	0	0	0	0	1	0	0

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726	Chlorhexidine	0	30	1	0	0	0	1	0	0	1	0	0
727	Chlorhexidine	0	28	0	0	0	0	0	0	1	0	0	0
728	Chlorhexidine	0	29	0	0	0	0	0	0	0	0	1	0
729	Chlorhexidine	0	31	1	0	0	1	1	0	0	1	0	0
730	Chlorhexidine	0	23	1	0	1	1	1	0	0	1	0	0
731	Chlorhexidine	0	29	1	0	0	1	1	0	0	1	0	0
732	Chlorhexidine	0	35	1	0	0	0	1	0	0	1	0	0
733	Chlorhexidine	0	23	1	0	0	0	0	0	0	1	0	0
734	Chlorhexidine	0	21	0	0	0	0	0	0	0	0	0	0
735	Chlorhexidine	0	22	1	0	0	0	0	0	0	1	0	0
736	Chlorhexidine	0	25	1	0	0	0	0	0	0	1	0	0
737	Chlorhexidine	0	25	1	0	0	1	0	0	0	1	0	0
738	Chlorhexidine	0	27	0	0	1	0	1	1	0	0	0	0
739	Chlorhexidine	0	23	0	0	0	0	0	0	0	0	0	0
740	Chlorhexidine	0	28	2	0	0	0	0	0	0	1	0	0
741	Chlorhexidine	0	30	1	0	0	0	0	0	0	1	1	0
742	Chlorhexidine	0	26	1	0	0	1	0	0	0	1	0	0
743	Chlorhexidine	0	23	0	0	0	0	0	0	0	0	0	0
744	Chlorhexidine	0	24	0	0	0	0	0	0	0	0	0	0
745	Chlorhexidine	0	27	1	0	0	0	1	0	0	1	0	0
746	Chlorhexidine	0	23	1	0	1	0	1	0	0	1	0	0
747	Chlorhexidine	0	33	0	0	0	0	0	0	0	0	0	0
748	Chlorhexidine	0	33	1	0	0	0	1	0	0	1	0	0
749	Chlorhexidine	0	25	1	0	0	0	1	0	0	1	0	0
750	Chlorhexidine	0	29	0	0	0	0	0	0	0	0	0	0
751	Chlorhexidine	0	24	1	0	0	0	0	0	0	1	0	0
752	Chlorhexidine	0	21	1	0	0	0	0	0	0	1	0	0
753	Chlorhexidine	0	38	1	0	0	0	1	0	0	1	0	0
754	Chlorhexidine	0	26	0	0	1	0	0	0	0	0	0	1
755	Chlorhexidine	0	29	0	0	0	0	0	0	0	0	0	0
756	Chlorhexidine	0	31	1	0	0	0	1	0	0	1	0	0
757	Chlorhexidine	0	36	1	0	0	0	1	0	0	1	0	0
758	Chlorhexidine	0	30	0	0	0	0	0	0	0	0	0	0
759	Chlorhexidine	0	23	1	0	0	0	0	0	0	1	0	0
760	Chlorhexidine	0	24	1	0	0	1	0	0	0	0	0	0
761	Chlorhexidine	0	23	0	0	0	1	0	0	1	0	0	0

762	Chlorhexidine	0	24	1	0	0	0	0	0	0	0	0	0
763	Chlorhexidine	0	35	1	0	0	0	0	0	0	1	0	0
764	Chlorhexidine	0	32	1	0	0	0	1	0	0	1	0	0
765	Chlorhexidine	0	33	0	0	0	0	0	0	0	0	1	0
766	Chlorhexidine	0	30	0	0	0	0	0	0	0	0	0	0
767	Chlorhexidine	0	20	1	0	0	0	1	0	0	1	0	0
768	Chlorhexidine	0	30	2	0	0	0	0	1	0	1	0	0
769	Chlorhexidine	0	28	0	0	0	0	0	1	0	0	0	0
770	Chlorhexidine	1	24	1	0	0	0	1	1	0	1	0	0
771	Chlorhexidine	0	30	1	0	0	0	0	1	0	1	0	1
772	Chlorhexidine	0	30	0	0	0	0	1	0	0	0	0	0
773	Chlorhexidine	0	32	1	0	0	0	1	0	0	1	0	0
774	Chlorhexidine	0	24	1	0	0	0	0	0	0	1	0	0
775	Chlorhexidine	0	27	1	0	0	0	0	0	0	1	0	0
776	Chlorhexidine	0	35	1	0	1	0	1	0	0	1	0	0
777	Chlorhexidine	0	31	1	0	0	0	0	0	0	1	0	0
778	Chlorhexidine	0	22	2	0	0	0	0	0	1	1	0	0
779	Chlorhexidine	0	32	1	0	0	0	0	0	0	1	0	0
780	Chlorhexidine	0	22	1	0	0	0	0	0	0	0	0	0
781	Chlorhexidine	0	28	1	0	0	0	1	0	0	1	0	0
782	Chlorhexidine	0	26	1	0	0	0	1	0	0	1	0	0
783	Chlorhexidine	0	27	1	0	0	0	0	0	0	1	0	0
784	Chlorhexidine	0	33	1	0	0	0	0	0	0	0	0	0
785	Chlorhexidine	0	40	1	0	0	1	0	0	0	1	0	0
786	Chlorhexidine	0	27	1	0	0	0	0	0	0	1	0	0
787	Chlorhexidine	0	26	1	0	0	0	0	0	0	1	1	0
788	Chlorhexidine	0	28	1	0	0	0	0	0	0	1	0	0
789	Chlorhexidine	0	23	1	0	0	0	0	0	0	1	0	0
790	Chlorhexidine	0	23	0	0	0	0	0	0	0	0	0	0
791	Chlorhexidine	0	29	0	0	0	0	0	0	0	0	0	0
792	Chlorhexidine	0	20	0	0	0	0	0	0	0	0	1	0
793	Chlorhexidine	1	22	0	0	0	1	1	0	0	0	0	0
794	Chlorhexidine	0	29	0	0	0	0	0	0	0	0	0	0
795	Chlorhexidine	0	22	0	0	0	0	1	0	1	0	0	0
796	Chlorhexidine	0	22	0	0	0	0	0	0	0	0	0	0
797	Chlorhexidine	0	21	1	1	1	1	0	0	1	1	0	0
798	Chlorhexi	0	22	0	0	0	0	0	1	0	0	0	0

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799	Chlorhexidine	0	21	0	0	0	0	0	1	0	0	0	0
800	Chlorhexidine	0	25	1	0	0	0	0	0	0	1	0	0
801	Chlorhexidine	0	34	1	0	0	0	0	0	0	0	0	0
802	Chlorhexidine	0	25	1	0	0	0	0	0	0	1	0	1
803	Chlorhexidine	0	33	1	0	0	0	0	0	0	1	0	0
804	Chlorhexidine	0	32	1	0	0	0	0	0	0	1	0	0
805	Chlorhexidine	0	30	1	0	0	1	0	0	0	1	1	0
806	Chlorhexidine	0	29	1	0	0	1	0	0	0	1	0	0
807	Chlorhexidine	0	25	1	0	0	0	0	0	0	1	0	0
808	Chlorhexidine	0	25	1	0	0	0	0	0	0	1	0	0
809	Chlorhexidine	0	27	1	0	0	0	1	0	0	1	0	0
810	Chlorhexidine	0	23	0	0	0	0	0	0	1	0	0	0
811	Chlorhexidine	0	22	0	0	0	0	0	0	0	0	0	0
812	Chlorhexidine	0	26	0	0	0	0	0	0	0	0	1	0
813	Chlorhexidine	0	29	0	0	0	0	0	0	0	0	0	0
814	Chlorhexidine	0	24	0	0	0	0	0	0	0	0	0	0
815	Chlorhexidine	0	19	0	0	0	0	0	0	0	0	0	0
816	Chlorhexidine	0	26	0	0	0	0	0	0	0	0	0	0
817	Chlorhexidine	0	37	0	0	0	0	0	0	0	0	0	0
818	Chlorhexidine	0	27	0	0	0	0	0	0	0	0	0	0
819	Chlorhexidine	1	34	0	0	0	0	0	0	0	0	0	0
820	Chlorhexidine	0	27	0	1	0	0	0	1	0	0	0	0
821	Chlorhexidine	0	29	0	0	0	0	0	0	0	0	0	0
822	Chlorhexidine	0	33	0	0	0	0	0	0	0	0	0	0
823	Chlorhexidine	0	20	0	0	0	0	0	0	1	0	0	0
824	Chlorhexidine	0	30	0	1	0	0	1	0	0	0	0	0
825	Chlorhexidine	0	24	0	0	0	0	0	0	0	0	1	0
826	Chlorhexidine	0	25	0	0	0	0	0	0	0	0	0	0
827	Chlorhexidine	0	28	0	0	0	0	0	0	0	0	0	0
828	Chlorhexidine	0	26	0	0	0	0	1	0	0	0	1	0
829	Chlorhexidine	0	21	0	0	0	0	0	0	0	0	0	0
830	Chlorhexidine	0	28	0	0	0	0	0	0	0	0	0	0
831	Chlorhexidine	0	26	0	0	0	0	0	0	0	0	0	0
832	Chlorhexidine	0	21	0	0	0	0	0	0	0	0	0	0
833	Chlorhexidine	0	33	0	0	0	0	0	0	0	0	0	0
834	Chlorhexidine	0	30	0	0	0	0	0	1	0	0	0	0

835	Chlorhexidine	0	23	0	0	0	0	0	0	0	0	0	0
836	Chlorhexidine	0	20	0	0	0	0	0	0	0	0	0	0
837	Chlorhexidine	0	25	0	0	0	0	0	0	1	0	1	0
838	Chlorhexidine	0	30	0	0	0	0	0	0	0	0	0	0
839	Chlorhexidine	0	22	0	0	0	0	0	0	0	0	0	0
840	Chlorhexidine	0	23	0	0	0	0	0	0	0	0	0	0
841	Chlorhexidine	0	21	1	0	0	0	0	0	0	1	0	0
842	Chlorhexidine	0	22	1	0	0	0	1	0	0	1	0	0
843	Chlorhexidine	0	32	1	0	0	0	0	0	0	1	0	0
844	Chlorhexidine	0	29	1	0	0	0	0	0	0	1	0	0
845	Chlorhexidine	0	36	1	0	0	1	0	0	0	1	0	0
846	Chlorhexidine	0	26	1	0	0	0	0	0	0	1	0	0
847	Chlorhexidine	0	30	1	0	0	1	0	0	0	1	0	0
848	Chlorhexidine	0	21	1	0	0	1	0	0	1	1	0	0
849	Chlorhexidine	0	38	1	0	0	0	0	0	0	1	0	1
850	Chlorhexidine	0	21	1	0	0	0	1	0	0	1	0	0
851	Chlorhexidine	0	23	1	0	0	0	0	0	0	1	0	0
852	Chlorhexidine	0	28	0	0	0	0	0	0	0	0	0	0
853	Chlorhexidine	0	24	1	0	1	0	0	0	0	1	0	0
854	Chlorhexidine	0	24	1	0	0	0	0	0	0	1	0	0
855	Chlorhexidine	0	31	1	0	1	0	0	0	0	1	0	0
856	Chlorhexidine	0	25	1	0	0	0	0	0	0	1	0	0
857	Chlorhexidine	0	27	1	0	0	0	0	0	0	1	0	0
858	Chlorhexidine	0	35	1	0	0	0	0	0	0	1	0	0
859	Chlorhexidine	0	27	1	0	0	0	0	0	0	1	0	0
860	Chlorhexidine	0	23	1	0	0	0	0	0	0	1	0	0
861	Chlorhexidine	0	26	1	0	0	0	0	0	0	1	0	0
862	Chlorhexidine	0	23	1	0	0	0	0	0	0	1	0	0
863	Chlorhexidine	0	29	1	0	0	0	0	0	0	1	0	0
864	Chlorhexidine	0	32	1	0	0	1	1	1	1	1	0	0
865	Chlorhexidine	0	37	1	0	0	0	0	0	0	1	0	0
866	Chlorhexidine	0	24	1	0	0	0	0	0	0	1	1	0
867	Chlorhexidine	0	25	1	0	0	0	0	0	0	1	0	0
868	Chlorhexidine	0	23	1	0	0	0	0	0	0	1	0	0
869	Chlorhexidine	1	23	1	1	0	1	1	1	0	1	0	0
870	Chlorhexidine	0	31	1	0	0	0	0	1	0	1	0	0
871	Chlorhexi	0	21	1	0	0	0	0	0	0	1	0	0

	dine												
872	Chlorhexidine	0	25	2	0	0	0	0	0	0	1	0	0
873	Chlorhexidine	0	27	1	0	0	0	0	0	0	1	0	0
874	Chlorhexidine	0	23	1	0	0	0	0	0	0	1	0	0
875	Chlorhexidine	0	22	1	0	0	0	0	0	0	1	0	0
876	Chlorhexidine	0	27	1	0	0	0	0	0	0	1	0	0
877	Chlorhexidine	0	24	1	0	0	0	0	0	0	1	0	0
878	Chlorhexidine	0	21	0	0	0	0	0	0	0	0	0	0
879	Chlorhexidine	0	24	1	0	0	0	0	0	0	1	0	0
880	Chlorhexidine	0	27	1	0	0	0	0	0	0	1	0	0
881	Chlorhexidine	0	22	1	0	0	0	1	0	0	1	0	0
882	Chlorhexidine	0	25	1	0	0	0	0	0	0	1	0	0
883	Chlorhexidine	0	29	1	0	0	0	0	0	0	1	0	0
884	Chlorhexidine	0	27	1	0	0	0	0	0	0	1	0	0
885	Chlorhexidine	0	32	1	0	0	0	0	0	0	1	0	0
886	Chlorhexidine	0	26	0	0	0	0	0	0	0	0	0	1
887	Chlorhexidine	0	21	1	0	0	0	0	0	0	1	0	0
888	Chlorhexidine	0	34	1	0	0	0	1	0	0	1	0	0
889	Chlorhexidine	0	24	1	1	0	0	0	1	0	1	0	0
890	Chlorhexidine	0	31	1	0	0	0	0	1	0	1	0	0
891	Chlorhexidine	0	24	1	0	0	0	0	0	0	1	0	0
892	Chlorhexidine	0	25	1	0	0	0	0	0	1	1	0	0
893	Chlorhexidine	0	19	1	0	0	0	0	0	0	1	0	0
894	Chlorhexidine	0	28	1	0	0	1	0	0	0	1	0	0
895	Chlorhexidine	0	23	1	0	0	0	0	0	0	1	0	0
896	Chlorhexidine	0	36	1	0	0	0	0	0	0	1	0	0
897	Chlorhexidine	0	26	1	0	0	0	0	0	0	1	0	0
898	Chlorhexidine	0	30	1	0	0	0	0	0	0	1	0	0
899	Chlorhexidine	0	25	1	0	0	0	0	0	0	1	0	0
900	Chlorhexidine	0	30	1	0	0	0	0	0	0	1	0	0
901	Chlorhexidine	0	40	1	0	0	0	0	0	0	1	0	0
902	Chlorhexidine	0	30	1	0	0	0	1	0	0	0	1	0
903	Chlorhexidine	0	34	1	0	0	0	0	0	0	1	0	0
904	Chlorhexidine	0	26	1	0	0	0	0	0	0	1	0	0
905	Chlorhexidine	0	29	1	0	0	0	0	0	0	1	0	0
906	Chlorhexidine	0	23	1	0	0	0	0	0	0	1	0	0
907	Chlorhexidine	0	24	1	0	0	1	0	0	1	1	0	0

908	Chlorhexidine	0	21	1	0	0	0	0	0	0	1	0	0
909	Chlorhexidine	0	32	1	0	0	0	0	0	0	1	0	0
910	Chlorhexidine	0	22	1	0	0	0	0	0	0	1	0	0
911	Chlorhexidine	0	28	1	0	0	0	0	0	0	0	0	0
912	Chlorhexidine	0	20	1	0	0	0	0	0	0	1	0	0
913	Chlorhexidine	0	27	1	0	0	0	0	0	0	1	0	0
914	Chlorhexidine	0	37	1	0	0	0	0	0	0	1	0	0
915	Chlorhexidine	0	29	1	0	0	0	0	0	0	0	0	1
916	Chlorhexidine	0	25	1	0	0	0	0	0	0	1	0	0
917	Chlorhexidine	0	27	1	0	0	0	0	0	0	1	0	0
918	Chlorhexidine	0	22	1	0	0	0	1	0	0	1	0	0
919	Chlorhexidine	0	29	1	0	0	1	1	1	0	1	0	0
920	Chlorhexidine	0	20	1	0	0	1	0	0	0	1	1	0
921	Chlorhexidine	0	25	1	0	0	0	0	0	0	1	0	0
922	Chlorhexidine	0	24	1	0	0	0	0	0	0	1	0	0
923	Chlorhexidine	0	22	1	0	0	0	0	0	0	1	0	0
924	Chlorhexidine	0	23	1	0	0	0	0	0	0	1	0	0
925	Chlorhexidine	0	31	1	0	0	0	0	0	0	1	0	0
926	Chlorhexidine	0	21	1	0	0	0	0	1	0	0	0	0
927	Chlorhexidine	0	26	1	0	0	0	0	0	0	1	0	0
928	Chlorhexidine	0	32	1	0	0	0	0	0	0	1	0	0
929	Chlorhexidine	1	21	1	0	0	0	0	0	0	1	0	0
930	Chlorhexidine	0	25	1	0	0	0	0	0	0	1	0	0
931	Chlorhexidine	0	24	1	0	0	0	0	0	0	1	0	0
932	Chlorhexidine	0	23	1	0	0	0	0	0	0	1	0	0
933	Chlorhexidine	0	30	1	0	0	0	0	0	0	1	0	0
934	Chlorhexidine	0	34	1	0	0	0	1	1	0	1	0	0
935	Chlorhexidine	0	23	1	0	0	0	0	0	0	1	0	1
936	Chlorhexidine	0	19	1	0	0	0	0	0	0	1	0	0
937	Chlorhexidine	0	20	1	1	0	0	0	0	0	1	1	0
938	Chlorhexidine	0	30	1	0	0	0	0	0	0	1	0	0
939	Chlorhexidine	0	26	1	0	0	0	0	0	1	1	0	0
940	Chlorhexidine	1	28	1	0	0	0	1	0	1	1	0	0

SL No.	Induced Labour (0/1)	Second Stage Labour (0/1)	Previous H/O SSI (0/1)	Superficial/Deep SSI	Redness (0/1)	Induration (0/1)	Discharge (0/1)	Gaping (0/1)	Pus C/S	Sensitive Antibiotic	Resistant Antibiotic
1	0	0	0								
2	1	1	0	Deep	1	1	1	1	Escherichia Coli	Linezolid	Amikacin
3	0	0	0								
4	0	0	0								
5	0	0	0	Deep	0	1	1	1	Klebsiella Pneumonia	Piperacillin tazobactam	Cefotaxime
6	0	0	1								
7	0	0	0								
8	1	1	0								
9	0	0	0								
10	1	1	0								
11	0	0	1								
12	0	0	0								
13	0	0	0								
14	1	0	0	Deep	1	1	1	1	Pseudomonas Aeruginosa	Cefaperazone sulbactam	Ampicillin
15	0	0	0								
16	1	0	0								
17	0	0	0								
18	1	0	0								
19	1	0	0								
20	0	0	0								
21	0	0	0								
22	0	0	1								
23	0	0	0								
24	0	0	0								
25	0	0	0								
26	0	0	0								
27	0	1	0								
28	0	0	0								
29	0	0	0								
30	0	0	0								
31	1	0	0								
32	0	0	0								
33	0	0	0								
34	0	0	0								
35	1	0	0	Superficial	1	1	1	0	Escherichia Coli	Piptaz	Ciprofloxacin
36	0	0	0								
37	0	0	0								
38	0	0	0								
39	1	0	0								
40	1	0	0								

41	1	0	0								
42	1	0	0								
43	0	0	0								
44	0	0	0								
45	0	0	0								
46	0	0	1								
47	0	0	0								
48	0	0	0								
49	0	0	0								
50	0	0	0								
51	0	0	0								
52	0	0	0								
53	0	0	0								
54	0	0	1								
55	1	1	0								
56	0	0	0								
57	0	0	0								
58	0	0	0								
59	0	0	0								
60	1	0	0								
61	0	0	0								
62	0	0	1								
63	0	0	0	Deep	0	1	1	1	No Growth	-	-
64	0	0	0								
65	0	0	0								
66	0	0	0								
67	1	0	0								
68	0	0	0								
69	0	0	0								
70	0	0	1								
71	0	0	0								
72	0	0	0								
73	0	0	0								
74	0	0	0								
75	0	0	0								
76	0	0	0								
77	0	0	0								
78	0	0	0								
79	1	0	0	Superficial	1	1	1	1	Klebsiella Pneumonia	Piperacillin tazobactam	Cefotaxime
80	0	0	0								
81	0	0	0								
82	1	0	0								
83	0	0	0								
84	0	0	0								
85	0	0	0								
86	0	0	0								
87	1	0	0								
88	0	0	0								

89	0	0	0								
90	0	0	0								
91	0	0	0								
92	0	0	0								
93	0	0	0								
94	0	0	0								
95	0	0	0								
96	0	0	0								
97	0	0	0								
98	0	0	0								
99	0	0	0								
100	0	0	0								
101	0	0	0								
102	0	0	0	Superficial	1	1	0	0	Escherichia Coli	Piptaz	Ciprofloxacin
103	0	0	0								
104	1	1	0								
105	1	0	0								
106	0	0	0								
107	0	1	0								
108	1	0	0								
109	0	0	0								
110	1	0	0								
111	0	0	0								
112	0	0	0	Superficial	1	1	0	1	Coagulase Negative Staphylococci	Gentamycin	Ampicillin
113	0	0	0								
114	1	0	0								
115	0	0	0								
116	1	1	0								
117	0	0	0	Deep	1	1	1	1	Pseudomonas Aeruginosa	Linezolid	Gentamycin
118	1	0	0								
119	0	0	0								
120	1	0	0								
121	0	0	0								
122	0	0	0								
123	1	0	0								
124	0	0	0								
125	0	0	0								
126	0	0	0								
127	0	0	0								
128	0	0	0								
129	0	0	0								
130	0	0	0								
131	0	0	0								
132	0	0	0								
133	0	0	0								
134	0	0	0								

135	0	0	0								
136	1	1	0								
137	0	0	0								
138	0	0	0								
139	0	0	0								
140	0	0	0								
141	0	0	0								
142	0	0	0								
143	0	0	0								
144	0	0	0								
145	0	1	0								
146	1	1	0								
147	0	0	0								
148	0	0	0								
149	1	1	0								
150	0	0	0								
151	0	0	0								
152	0	0	0								
153	0	0	0	Deep	1	1	1	1	Pseudomonas Aeruginosa	Linezolid	Gentamycin
154	0	0	0								
155	0	0	0								
156	1	0	0								
157	0	0	0								
158	0	0	0								
159	0	0	0								
160	0	0	0								
161	0	0	0								
162	0	0	0								
163	0	0	0								
164	0	0	1								
165	0	0	0								
166	0	0	0								
167	0	0	0								
168	1	0	0								
169	0	0	0								
170	1	0	0								
171	0	0	0								
172	0	0	0								
173	0	0	0								
174	0	0	0								
175	1	0	0								
176	0	0	0								
177	0	0	0								
178	1	0	0								
179	0	0	0								
180	1	0	0								
181	0	0	1								
182	0	0	0								

183	0	0	0	Superficial	1	1	1	1	Escherichia Coli	Piperacillin tazobactam	Ciprofloxacin
184	0	0	0								
185	0	0	0								
186	0	0	0								
187	0	0	0								
188	1	0	0								
189	0	0	0								
190	0	0	0								
191	0	0	0								
192	1	0	0								
193	1	0	0								
194	0	0	0								
195	0	0	0								
196	0	0	0								
197	0	0	0								
198	1	0	0								
199	0	0	0								
200	0	0	0								
201	0	0	0								
202	0	0	0								
203	0	0	0								
204	0	0	0								
205	0	0	0								
206	0	0	0								
207	0	0	1								
208	0	0	0								
209	0	0	0								
210	0	0	0								
211	0	0	0								
212	0	0	0								
213	0	0	0								
214	0	0	0								
215	0	0	0								
216	0	0	0								
217	0	0	0								
218	0	0	0	Deep	1	1	1	1	Coagulase Negative Staphylococci	Gentamycin	Ampicillin
219	0	0	0								
220	0	0	0								
221	0	0	0								
222	0	0	0								
223	1	1	0								
224	0	0	0								
225	0	0	0								
226	0	0	0								
227	0	0	0								
228	0	0	0								

229	0	0	0								
230	0	0	0								
231	0	0	0								
232	0	0	0								
233	0	0	0								
234	0	0	0								
235	0	0	0								
236	0	0	0								
237	0	0	0								
238	0	0	0								
239	0	0	0								
240	0	0	0								
241	0	0	0								
242	0	0	0								
243	0	0	0								
244	0	0	0								
245	0	0	0	Deep	1	1	1	1	Coagulase Negative Staphylococci	Vancomycin	Penicillin
246	0	0	0								
247	0	0	0								
248	0	0	0								
249	0	0	0								
250	1	1	0								
251	1	0	0								
252	1	0	0								
253	0	0	0								
254	0	0	0								
255	0	0	0								
256	0	0	0								
257	0	0	0								
258	0	0	0								
259	0	0	0								
260	0	0	0								
261	0	0	0	Superficial	1	1	1	0	Escherichia Coli	Meropenem	Cefotaxime
262	0	0	0								
263	0	0	0								
264	0	0	0								
265	0	0	0								
266	0	0	0								
267	0	0	0								
268	0	0	0								
269	0	0	0								
270	0	0	0								
271	0	0	0								
272	0	0	0								
273	0	0	0								
274	0	0	0								
275	0	0	0								

276	0	0	1								
277	0	0	0								
278	0	0	0								
279	0	0	0								
280	0	0	0								
281	0	0	0								
282	0	0	0								
283	1	0	0								
284	0	0	0								
285	0	0	0								
286	0	0	0								
287	0	1	0								
288	1	1	0								
289	0	0	0	Superficial	1	1	1	1	Candida Albicans	Clotrimazole	-
290	0	0	0								
291	0	0	0								
292	0	0	0								
293	0	0	0								
294	0	0	0								
295	0	0	0								
296	0	0	0								
297	0	0	0								
298	0	0	0								
299	1	1	0								
300	0	0	0								
301	0	0	0								
302	0	0	0								
303	0	0	0								
304	0	0	0								
305	0	0	0								
306	0	0	0								
307	0	0	0								
308	0	0	0								
309	0	0	0								
310	0	0	0								
311	0	1	0	Deep	1	1	1	1	No Growth	-	-
312	0	0	0								
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869	0	0	0	Deep	1	1	1	1	Klebsiella Pneumonia	Cefaperazone sulbactam	Ampicillin
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939	0	0	0								
940	0	0	0	Superficial	1	1	1	0	Escherichia Coli	Piptaz	Ciprofloxacin