ABSTRACT

TO EVALUATE EFFICACY OF LOCAL AMIKACIN THERAPY AS AN ADJUVANT TO PARENTRAL ANTIBIOTICS IN CONTROL OF SURGICAL SITE INFECTION COMPARED TO PARENTRAL ANTIBIOTIC ALONE IN A TERTIARY CARE CENTRE

KEYWORDS: Surgical site infection, dirty wound, contaminated wound, topical antibiotic, local application antibiotic, inj.amikacin, laprotomy, appendicectomy, SSI prevention, tertiary care centre, seroma, wound gapping, surgical site microbial colonisation

AIM:

Surgical site infection is a common cause of morbidity for the operated patients. Hence a cost effective and simple method was formulated and studied on cases of laprotomy and appendicectomy patients which can be categorized as dirty and contaminated wounds.

METHOD:

25 cases and adequately matched controls were selected from patients who underwent laprotomy or appendicectomy which can be categorized as dirty or contaminated wounds. Cases were given local application inj.amikacin over the
subcutaneous plane preoperatively and for the subsequent three post operative days through a subcutaneously placed feeding tube along with systemic iv antibiotics. The control patients only received systemic iv antibiotics.

ASEPSIS scoring was used to grade the post operative surgical site infection in the cases and the corresponding controls, at the end of the first and second week after surgery. Various criterions were specifically evaluated such as the isolation of microbe from the wound site or the requirement of change of antibiotic at the end of the 1st or 2nd week and the tendency of prolonged stay in the hospital for more than 2 weeks.

**OBSERVATION:**

It was observed that the cases that received the local amikacin application as an adjuvant to systemic antibiotic showed significantly lesser incidence and/or grading of SSIs in the first week and also lesser, but not statistically significant reduction of SSIs in the second week. The incidence of antibiotic change, hospital stay and isolation of microbe from the wound site was statistically found be to lesser in the study group compared to their controls.

**CONCLUSION:**

It is observed that the local therapy as an adjuvant is cost effective and without any significant local or systemic adverse effects in the prevention of SSIs
in dirty and contaminated patients. But it was also observed that it did not have sustained effect for prolonged period beyond its time of administration (as evidenced by its lesser effect in the second week after surgery). It may be suggested that a further combination of suction drainage of the subcutaneous DT along with local antibiotic treatment may have an added advantage in further preventing SSIs.