

A Dissertation On

“RELATION BETWEEN SCURF RIM IN IRIS AND CHRONIC SKIN DISEASE”

Submitted By

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LIST OF ABBREVIATIONS

BMI	Body Mass Index
DBP	Diastolic Blood Pressure
PR	Pulse Rate
SBP	Systolic Blood Pressure
SR	Scurf Rim

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ABSTRACT

Background: The term skin disease refers to diseases affecting only the surface layers of the skin. Iridology is a noninvasive diagnosis in which different signs are analyzed from different parts and sectors of the iris as well as varying discolorations within the iris. This study was designed to observe the presence of scurf rim in the iris of patients with chronic skin diseases.

Methods: 121 subjects in the age group of 11 to 45 years from Arignar Anna Govt. Hospital of Indian Medicine, Yoga and Naturopathy Department, Arumbakkam, were recruited for the study after giving their written informed consent. Evaluation of the appearance of scurf rim in the outer edge of the iris was carried out on both eyes.

Assessments: High-definition Images of the Iris of both the eyes were made using 2017 CE FCC NEW 12.0 MP USB IRISCOPE IRIS ANALYSER Iridology camera. The images are assessed with Pro Iris Software – GH11003 to detect scurf rim in Iris.

Results: Identification of scurf rim using Iridoscope has 94.21% of sensitivity to detect the skin diseases.

Conclusion: Prominent scurf rim is seen in most of the patients with skin disorders. Hereby we conclude that iridology can be taken into consideration for diagnosing skin diseases. It can also help in detecting skin diseases and can be used as a non-invasive diagnostic tool.

1.0 INTRODUCTION

The practice of iridology has been documented since history began. 3000 years ago, there was a great deal of attention paid to the iris and its relation to the human body according to archaeological evidence from Egypt, China and India. It is an alternative diagnostic tool and technique where patterns, colors, and other iris characteristics are analyzed to determine health information about an individual. Iris charts, which divide the iris into zones that correspond to specific parts of the body, are used by practitioners to match their observations. Iridologists believe the eyes reveal much about the state of the body [1]. The iris, or colored part of the eye, is a part of Iridology, a field of science that focuses on the observation and diagnosis of disease and disorders. Various pathological conditions are thought to be associated with certain indications in the iris based on decades of observation and comparative research [2].

A study by Pesek [3] indicates the eyes are continuous with the brain's dura mater, connected directly to the sympathetic nervous system and spinal cord through the fibrous sheath of the optic nerves. The optic tract extends into the thalamus area of the brain. There is a close association between the hypothalamus, pituitary, and pineal glands. The endocrine glands are major processing and control centers for the entire body. Due to this anatomy and physiology, the eyes are directly involved in the body's biochemical, hormonal, structural and metabolic processes. There are many structures within the eye that record this information: the iris, retina, sclera, cornea, pupil and conjunctiva. Thus, the eye can be seen as a reflection of the physical body's bioenergetics or of a person's thoughts and feelings.

Dermatological disorders originate from the superficial layers of the skin exclusively (or predominantly) [4]. The U.S. definition of chronic disease. Disease that persists for a long time, according to the National Center for Health Statistics. A chronic disease is one that lasts 3 months or longer [5]. Most parts of India are hot and humid, with a huge population, poor sanitation, poverty, malnutrition, low literacy levels, and poor public awareness of cleanliness as risk factors. Thus, a majority of people suffer from at least one skin condition [6]. Approximately 19 crore Indians are expected to suffer from skin diseases by 2015. According to Frost & Sullivan. Skin diseases pose a huge psychosocial burden on Indian patients [7]. The growing incidence of skin diseases in India has also been highlighted by the inclusion of skin diseases under the most common non-communicable diseases in India (WHO) [8].

In zone 7, the periphery of the iris is occupied by the integument, including the skin, hair, and nails. The darkened area here is known as a scurf rim, which may only cover a portion of the periphery or it may completely encircle it. It may be a thin, wispy area or it can penetrate deeply into the interior. An underactive, slowly eliminating area of skin appears dark. Biological waste materials and toxic elements accumulate here. The skin is a bidirectional membrane that allows moisture and air to enter and exit the body. Chemicals that are airborne or water borne, such as solvents, fixatives, paints, fertilizers, pesticides, and other pollutants can penetrate the skin easily. Similar to the bowel and lungs, the skin must eliminate toxic materials daily [9]. In the "skin zone", or the border around the perimeter of the iris, there is a thin scurf rim that provides information about the condition of the skin and blood vessels beneath it. The

presence of a scurf rim shows an accumulation of toxic material due to poor elimination from the skin. The scurf rim becomes almost black in those with poor skin elimination, whereas a dense, dark and wide scurf rim indicates an excessively toxic body, overloaded with wastes. Eczema, psoriasis or dry, itchy skin are common conditions that can develop if the scurf rim is present [10]. A scurf rim (acc. Jensen) or ring of skin is present around the eyes on the periphery of the iris, with conditions such as psoriasis [11]. Many investigations have been conducted without a control group in an attempt to assess the diagnostic validity of iridology, and others (with or without a control group) were not evaluator blinded. All of the uncontrolled studies and several of the unblended experiments suggest that iridology is an effective diagnostic tool [12]. It is important to note that conventional medicine does not ignore the eyes as indicators of disease despite the lack of evidence for iridology. There are many systemic diseases that are associated with eye changes (the iris, sclera, and conjunctiva). Jaundice, dilated pupils, and rings around the iris indicate Wilson's disease (an abnormality of copper metabolism), for example. In advanced kidney disease, eye findings indicate that treatment should be initiated or intensified. In conjunctival and corneal precipitation of pyrophosphate, corneal and conjunctival erythema may be observed in uremia. The presence of metastatic calcification in the eyes may be associated with elevated serum calcium or calcium phosphate levels [13]. If proved correct, iridology motivates healthy lifestyles and disease prevention throughout all stages of life, which is consistent with the objectives of pervasive healthcare technologies to extend beyond traditional disease treatment and may contribute significantly to prevention [14].

2.0 LITERATURE REVIEW

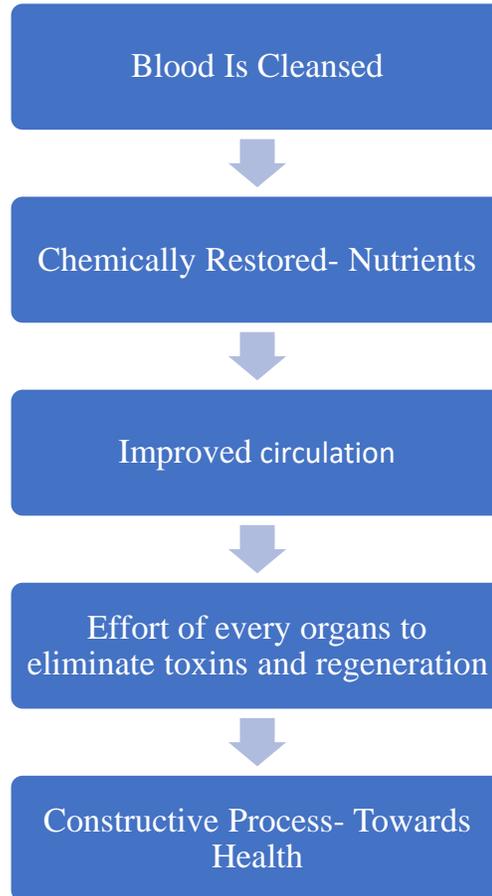
Iridology

Definition – The study of the iris, particularly of its color, markings, and changes associated with the disease. The changing patterns and signs in iris reveal the emerging pathological conditions in every part of the body and reveals any inherited weakness which may lead to physical or emotional diseases [15].

History

Iridology started thousand years ago in the ancient Egypt and in the central Asia. The physicians of those times investigated the iris to find the mode of treatment, but they were not able to elicit as much information like we do. They examined not only the iris of all the patients but also the sclera. Modern iridology started in the mid of 1800s. In the same period Ignatz von Peczely from Hungary and Nils Lijiquist from Sweden were practicing. Ignatz Von Peczely did the organ mapping and Nils Lijiquist observed the color changes due to chemicals and drugs observed in the body. Reverend Nils Lilijequist (from Sweden)- In 1864, he observed changes in his own iris and had a realization that these discolorations are caused by chemicals and drugs. Each chemical or drug ingested resulted in shades of discoloration. Based on Hering's law of cure, the Iris chart shows all cure in the body starts from within out from the head down in reverse order

Hering's law of cure

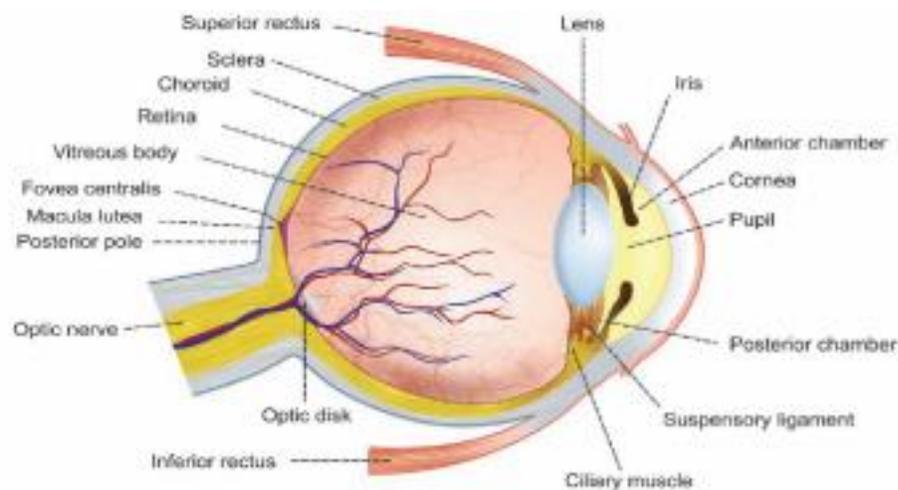


In the late 1800 Pastor Felke from Sweden practiced iridology and there is an institute named after him in Germany. In the same time Henry Edward Lane, an Australian physician who brought iridology to the United States. Henry Lindhlar was a student of Lane and published a lot of articles. In the early 1900s Dr. Kritzer wrote a book called 'The book of Iris diagnosis' and published the first iridology charts in America. During the same time because of poor communication due to war the information stopped coming to United States.

Bernad Jensen started learning Iridology from Lane, Lindlahr and Kritzer. He is known as the American father of Iridology. He also did research on natural healing, Nutrition and Chiropractic. Meanwhile in Europe Josef Deck, Theodore Kriege, Rodolph Schnable and Josef Angerer of Germany worked in the universities, hospitals, autopsies and x-rays to verify their iris findings. In the late 1980s after the end of the war the new findings were learned and translation of books from germen to English as done [15].The new organization called NIRA (National Iridology Research Association) formed to bring up the best information based on research from America and Europe together. The name recently changed to Comprehensive iridology and the organizations name is ‘The International Practitioners Association’ [16]

Iris

Figure 1: Anatomy of eyeball



Source: Chaurasia, B. D. (2010). Human Anatomy Head and Neck. *Brain*, 5, 15-19.

Eyeball- Human eyeball is approximately globe shaped. It is made of two segments and anterior part and posterior part. Centre of the anterior curvature of eyeball is called anterior pole and center of posterior curvature is called posterior pole. The line joining both poles is called optic axis.

Orbital cavity- Except the one sixth of the eyeball the rest are situated in a bony cavity called the orbital cavity or eye socket. A thick layer of areolar tissue is present which serves as a cushion to the eyeball. Eyeballs are attached to the orbital cavity by ocular muscles.

Eye lids- Eyelids protect the eyeball from foreign particles coming in contact with its surface and cutoff the light during sleep. Eyelids are opened and closed voluntarily, as well as by reflex action.

Conjunctiva- it is a thin mucus membrane, which covers the exposed part of eye. After covering the anterior surface, conjunctiva is reflected into the inner surfaces of eyelids. Part of conjunctiva covering the eyeball is called bulbar portion. Part covering the eyelid is called palpebral portion.

Lacrimal gland- It is situated in the shelter of the bone forming upper and outer border of wall of the eye socket. Tears flow from this gland. Tears contain lysozyme that Kills bacteria. Secretions of tears are controlled by parasympathetic fibres of facial nerve.

Wall of the eyeball

1. Outer layer- it consists of sclera and cornea.

Sclera- it is a white fibrous outer layer of eyeball that covers posterior 5 of the eye anteriorly it continuous with cornea.

Cornea- it is a transparent convex outer layer of the eyeball which covers Iris and pupil.

Cornea is formed by five layers:

- i. Layer of stratified epithelium
- ii. Bowman membrane or anterior elastic lamina
- iii. Substantia proper
- iv. Descemet layer or posterior elastic lamina
- v. Layer of endothelial cells.

2. Middle layer- it consists of choroid, ciliary body and Iris.

Choroid- a thin vascular layer of eyeball situated between sclera and retina. It is composed of rich capillary plexus numerous small arteries and veins.

Ciliary body- It is a thickened anterior part of middle layer of the eye that is situated between choroid and Iris.

Iris- it is a thin colored curtain like structure of eyeball located in front of the lens it forms a thin circular diaphragm with a circular opening in the center called pupil. Iris is formed by muscles:

i. **Constrictor pupillae** or **iris sphincter** muscle or pupillary constrictor muscle: It is formed by circular muscle fibers. Contraction of this muscle causes constriction of pupil.

ii. **Dilator pupillae** or **pupillary dilator muscle**: It is formed by radial muscle fibers. Contraction of this muscle causes dilatation of pupil. Activities of these muscles increase or decrease the diameter of pupil and regulate the amount of light entering the eye. Thus, iris acts like the diaphragm of a camera. Iris separates the space between cornea and lens into two chambers, namely **anterior** and **posterior chambers**. Both the chambers communicate with each other through pupil. Lateral border of anterior chamber is angular in shape. It is called **iris angle** or **angle of anterior chamber**.

3. Inner layer- Retina

Retina is a delicate light-sensitive membrane that forms the innermost layer of eyeball. It extends from the margin of **optic disk** to just behind **ciliary body**. Here, it ends abruptly as a dentated border known as ora serrata. Retina has the receptors of vision [17].

The Signs in the Iris of Acute, Subacute and Chronic Disease Processes:

Series I represent the signs of acute inflammatory processes in various stages and degrees of intensity. Acute disease in the stages of greatest intensity--aggravation and destruction--shows in the corresponding organ areas. As the inflammatory process declines under

natural treatment, during the stages of absorption and reconstruction, the protruding fibers which cause the white signs fall back into their normal positions and the white lines or clouds gradually disappear, closed lesion in process of formation. We observe such lesions after pneumonia, pleurisy, nephritis, or any other acute disease has been suppressed by ice or drugs. They stand for scar tissue. Under adverse conditions they may become acute again in a destructive way. Under natural living and treatment, they may become acute (in healing crises) in a constructive way. Closed lesions of long standing and of a chronic nature show as represented in Series.

Series II represent inflammatory processes in the subacute stages. These are transitory between the acute and chronic stages, Disease in the sub-acute stage yields readily to natural methods of living and of treatment. The figures from a to f portray lesions of increasing severity.

Series III represents the signs of chronic catarrhal conditions. The preponderance of black over the white indicates increasing destruction and sloughing of tissues.

Series IV represent the chronic inflammatory processes in the last destructive stages, entailing loss of substance. We meet with such signs only in people endowed with exceptionally robust constitutions.

Constitution of iris

It is the first information observed from seeing the iris the complete appearance the color, the muscle folds; texture etc. The overall impressions give us the character of the iris constitution. The integrity of muscle fibers and the uniform pattern indicates the constitution strength. People with such iris rarely get ill and recovers quickly also responds to correct treatment. The weak and loose fibers with irregular pattern indicate the weakness of the body and reduced vitality.

A stronger constitution of iris shows the greater ability to hold the nutrients and carry away the metabolic wastes. The weaker the constitutions cannot maintain the nutrient levels; metabolic process is slower and toxic accumulation happens. Constitutional quality is measured on a scale from 1 to 10, with 5 being average, 1 highest.

There are 3 major constitution of iris

1. Blue Iris- Lymphatic constitution
2. Grey Iris- Rheumatic- Catarrhal Constitution
3. Brown Iris- Gastric Bilious Carcinomatous Constitution

Blue Iris- Lymphatic- Rheumatic-Tubercular constitution

It is the expression of thinner blood. It is also called the lymphatic constitution. Von Paltauf has written- Enlargement of tonsils, lymph nodes, and extended lymph node complex of the follicles at the base of the tongue, enlargement of the spleen and the presence of an abnormally large thymus gland.

- This type is particularly showing the respiratory system that is asthenic pulmonary states, pleuritic and bronchitis condition, hemoptysis and tuberculosis.
- There is also greater tendency to reabsorption of uric acid with accumulation in blood and body fluids which leads to rheumatic and neuralgic disturbance.
- Heart disease and kidney disease are more susceptible

Grey Iris- Rheumatic- Catarrhal constitution

- The color is due to reinforcement of the connective tissue fibers of the vascular layer.

The constitutional arrangement is similar to blue iris.

A special tendency to show the septic skin condition such as acne, furunculosis, obstinate skin eruptions.

Insufficiency of the renal secretions and quality of urine there arise unrecognized and difficult diseases of obscure origin.

Brown Iris - Gastric-Bilious-Carcinomatous constitution.

It is formed by the large concentration of pigment cells and greater concentration of blood and body fluids.

- The deficient digestion of this type is a characteristic feature of diseases of the digestive system.
- The diseases along the gastro- intestinal canal like dyspepsia, constipation, with their secondary states of flatulence, stomach pains, and gastric and duodenal ulcers.
- They are more prone to liver disorders so there is slight disturbance of bile secretion arise from dietetic errors such as jaundice, hepatic eclampsia and inflammation of the gall bladder.

Patterns of the iris

Ideal Iris- A fine textured iris with an unbroken surface, without crypts or contraction rings (nerve rings) and are emotionally strong. These are rarely seen.

First Grade Iris - an iris texture with little trophic change affecting the anterior layer, although small crypts are evident, especially in the area of the iris-wreath. People with such an iris are in general extremely resistant of constitution, and mostly enjoy untroubled health.

Normal Iris - Partial atrophic change of the anterior layer, revealing larger portions of the deeper vascular layer, a greater prominence of the iris-wreath, and disproportionate distribution of pigment.

Degenerative Iris- almost complete atrophy of the anterior layer, honeycomb-like network of the connective tissues of the vascular sheath, a star-shaped distortion of the iris-wreath, indicating a deep degeneration of the vital state, and at the same time suggesting the detrimental effects upon the organism of hereditary influences.

Density of iris

The density of iris depends upon the individual's vitality, tone, power of resistance. There are two types of density they are normal density and defective density

Normal density- when all the layers of iris are arranged properly with its blood supply and nerve supply. There should be a beautiful glassy appearance.

Defective density- When the layers are not arranged properly some swelling and some shrunken areas. Some area fibers are messed into bundles and displaced. There is an appearance of dark shading and black spot.

Four degree of density

1. Acute- Acute condition and healing is seen. Few straight lines and whitish lines are seen.

2. Sub-acute- White lies are increased and few black spots are seen. 3. Chronic- White lines are not prominent and darker lines are seen more and denotes chronic stage when treated can be brought back to normal.

4. Degenerative- There is appearance of red spot where the circulation is seen behind the iris which is irreversible. There are no healing signs.

The diagnosis is based on signs, zones and divisions.

Iris signs- the color, structure and special markings are interpreted by the signs in different areas in the iris that shows abnormality of the organ.

Colors of iris signs

1. White sign- it shows inflammation or over stimulation. It shows the acute conditions, inflammatory and painful conditions. As the condition progress the white changes to bluish white to dirty white to yellow or brown.

White sign in the different constitution

- Blue and Grey constitution- Brightly white
- Brown constitution- there is lightening of the brown iris tissue.

2. Dark Iris- it denotes the under stimulation, diminished function and enervation. These signs are seen in the superficial layers of the iris. The dark Iris sign shows a chronic disease state of the tissue. This sign shows the deposition of morbid and metabolic waste.

3. Black Iris- A sign that indicate loss of substances they appear on destruction of second layer of iris because if which the third layer is exposed.

4. Colored Iris signs- it is also called the toxic flakes appearance they can appear in yellowish red, rust Red, Brown- black, Brown or in any other shades.

Divisions of iris

The division of the iris into one-half, quarter, eighth, and sixteenth. The Iris is divided into four equal quadrants by a vertical line and a horizontal line.

- Face and neck lie in the upper nasal quadrant
- Chest and abdomen in the lower temporal quadrant
- Occiput and clavicle in the upper temporal quadrant
- The back in the lower quadrant.

The divisions are

1. **The Vertex Foot Line-** also called equilibrium line it is the vertical line which runs from top to bottom dividing the iris into two halves. The vertex lies in the upper part of the Iris and the foot lies in the lower part of the Iris and that is why it is called vertex foot line this imaginary line appears when there is a disturbance in the equilibrium hence it is called equilibrium line.

2. **The Throat- Neckline-** also called disharmony line which divides the Iris into upper and lower half. The upper half of the Iris has organs such as head, heart, lungs and other respiratory organs the upper half of the Iris also have special sense organs, larynx, trachea, esophagus etc. The lower part of the Iris has neck and feet, chest, back, abdomen, pelvic viscera and extremities. The line appears when there is a disharmony between the head and the rest of the body.

3. **The Nose Diagram line-** it lies in the middle of the upper medial quadrant and the lower lateral quadrant from the root of nose to the spleen area in the left Iris and the liver area in the right Iris. It is also called the pain line. When the line seen in right iris represents pain due to physical exertion and when represented in left Iris suggest pain due to febrile conditions or inner fever like splenic enlargement. It is presented through white lines.

4. **The Ear Bladder line-** it is drawn from the middle of the upper lateral quadrant to the lower medial quadrant of the iris. It is also called infection line or hereditary line. There is a dark registration in the right Iris which suggest the severe chronic bladder disease ever sign is seen in the left Iris it suggests general disease.

5. **The Mouth- Hand line-** the line drawn between the nose and throat line in the upper medial quadrant continued towards the outer margin of the Iris between the neck and diaphragm lines in the lower letter quadrant of the iris. It is also called the nutrition line. When this imaginary line appears, it represents nutritional defects when the line is seen in

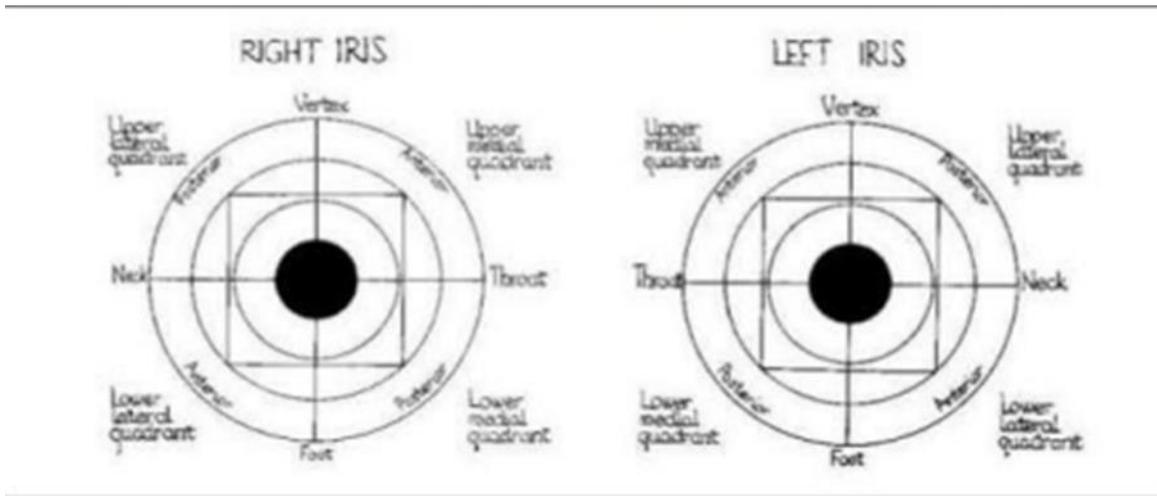
the right Iris it suggests that the ancestors suffered from diseases of the stomach if the line is present in the left Iris it indicates the inefficiency of the digestion.

6. **The Forehead- Ovary line-** It starts from the upper medial quadrant between the vertex and nose line which follows towards the lower lateral quadrant between the foot and diaphragm line. Appearance of this line indicates disturbance of sex life. 32

7. **The Cerebellum Uterus Line/ Cerebellum Rectum Line-** a line drawn from the margin between the vertex and the airline through the upper lateral quadrant towards the lower medial quadrant between food and bladder lines. When present in right iris it indicates the patient is noisy and incline to hysteria, in left iris incline to get hypochondria.

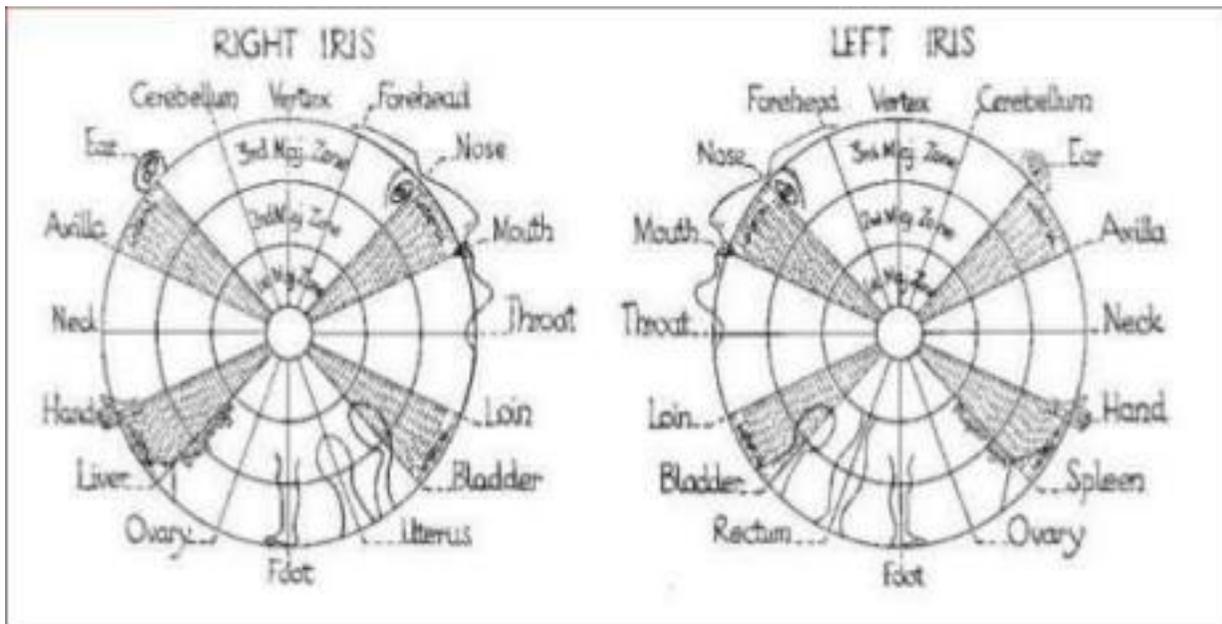
8. **The Axilla loin line-** the line drawn midway between ear and neck line in the upper lateral quadrant to the lower medial quadrant between bladder and throat line. It is also called the endurance line. The line appears in patients who are very sensitive. These patients cannot neither bear not endure much.

Figure 2: Quadrants of iris



Source: Jensen, B. (1992). Visions of health: understanding iridology. Penguin.

Figure 3: Fold chart of iris



Source: Jensen, B. (1992). Visions of health: understanding iridology. Penguin.

Representation of 16 sectors

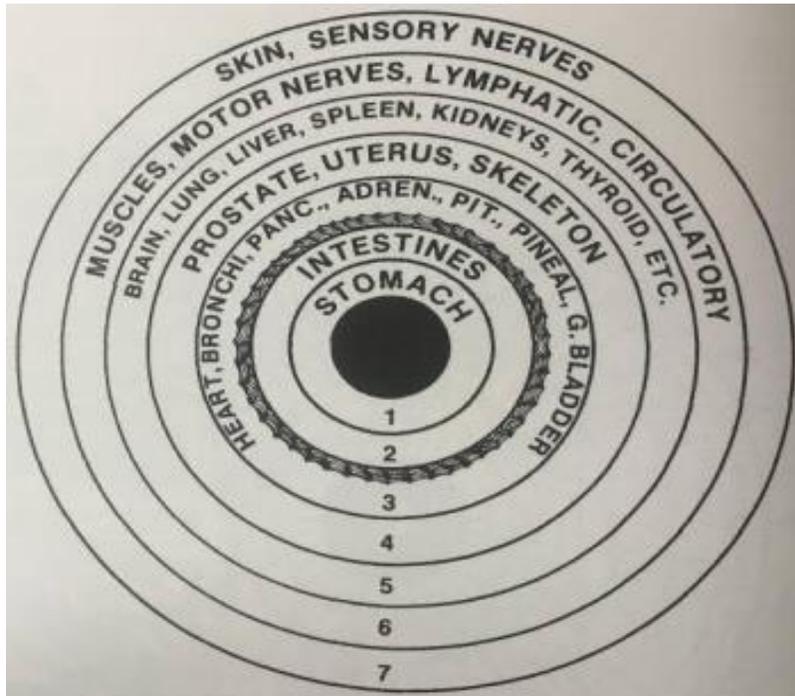
- Vertex / Foot line = Equilibrium line
- Throat / neckline = Change-over line, also Disharmony line
- Nose / Diaphragm line = Acute inflammation & pain line
- Ear / Bladder line = Infection line
- Forehead / ovary line = Sex line
- Mouth / Hand line = Nutrition line
- Cerebellum / Uterus line (rt) = Sex line
- Cerebellum / Rectum line (lt) = Sex line
- Axilla / loin line = Endurance line

Zones of iris- they are the concentric circles in the Iris that represents various organs and systems. There are 7 zones as mentioned by Bernard Jensen.

- There are 3 major zones
- 1st major zone has two minor zones stomach and intestine
- 2nd major zone has two minor blood and mucus zone

- 3rd major zone has two minor bones and skin.

Figure 4: Zones of Iris



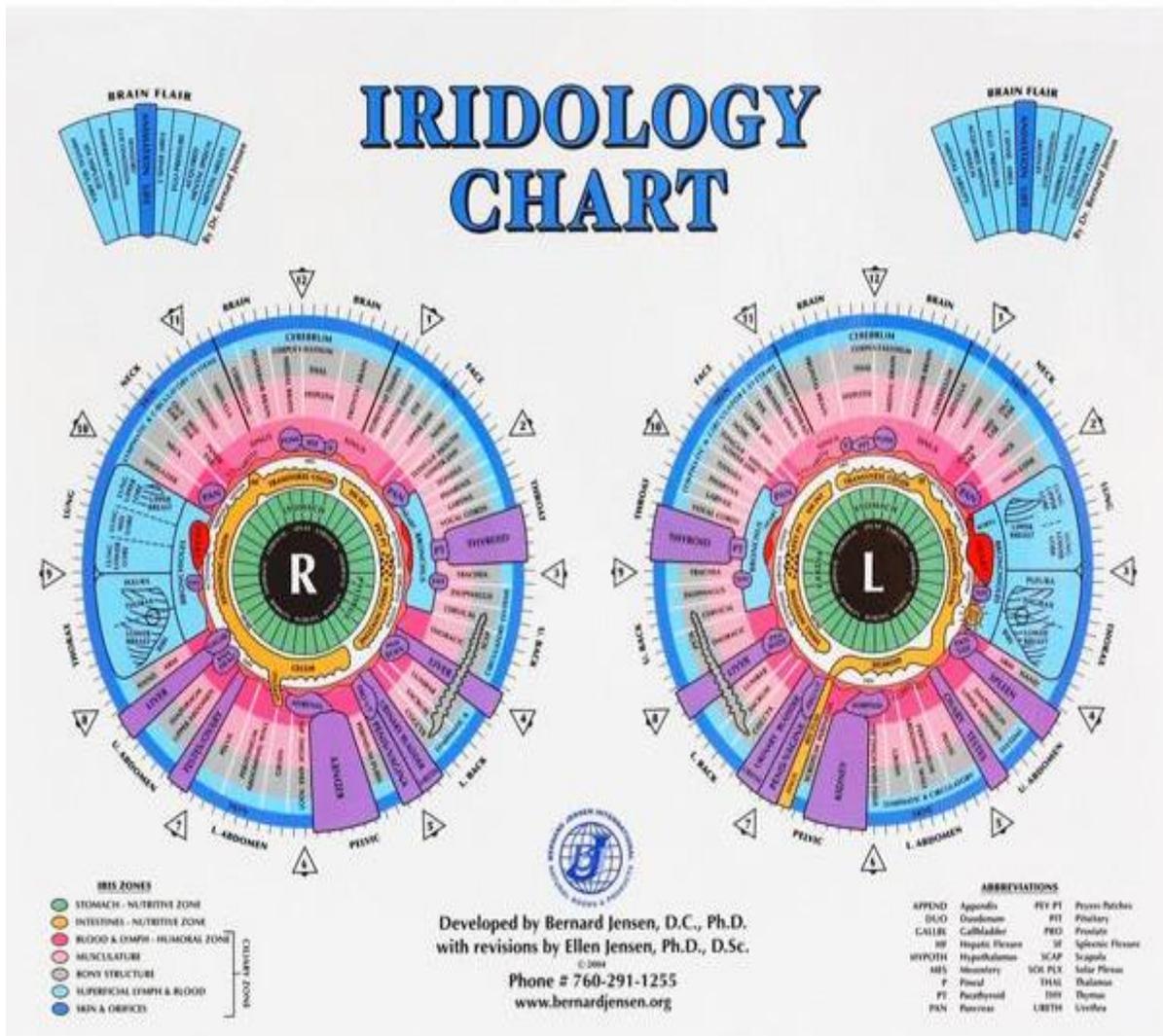
Source: Dr. Bernard Jensen. Iridology simplified.

Minor zones

1. Zone 1- Stomach- it is present just above and around the pupil
2. Zone 2- Intestine-present just below the iris wreath and just above zone 1
3. Zone 3- Heart, Bronchus, Pancreas, Adrenal gland, Pituitary gland, Pineal gland and Gall bladder. It is present above and around the wreath.
4. Zone 4- Prostrate, Uterus and skeleton- the zone is present above and around zone 3.

- 5. Zone 5- Brain, Lungs, Liver, Spleen, Kidney, Thyroid. It is just above zone 4.
- 6. Zone 6- Muscles, Motor Neurons and nerves, Lymphatic system and Circulatory system. It is below the iris border.
- 7. Zone 7- Skin and Sensory system. It is present above the zone 6 around the iris [15].

Figure: 5 Bernard Jensens Chart



Source: <http://healingwaysresearch.blogspot.com/2012/04/iridology-charts.html>

Table 1: 12 Sectors

Sector 12	Right Iris Animation life	Left Iris Animation life
1-2	Face <ul style="list-style-type: none"> ● Forehead, temple ● Eye ● Upper jaw ● Nose ● Tongue, Mouth and lower jaw 	Neck <ul style="list-style-type: none"> ● Mastoid ● Ear ● Neck ● Shoulder
2-3	Throat <ul style="list-style-type: none"> ● Thyroid ● Vocal cords, trachea ● Tonsils, larynx and pharynx ● Bronchus ● Parathyroid 	Lung <ul style="list-style-type: none"> ● Upper lung ● Lower lung ● Bronchials ● Heart
3-4	Upper Back <ul style="list-style-type: none"> ● Esophagus ● Scapula ● Upper back 	Thorax <ul style="list-style-type: none"> ● Pleura ● Thorax ● Ribs

	<ul style="list-style-type: none"> ● Upper portion of middle back 	<ul style="list-style-type: none"> ● Solar plexus ● Bronchials
4-5	<p>Lower back</p> <ul style="list-style-type: none"> ● Lower portion of middle back ● Lower back ● Bladder 	<p>Upper abdomen</p> <ul style="list-style-type: none"> ● Arm and hand ● Spleen ● Diaphragm, upper abdomen ● Ovary/ testes
5-6	<p>Pelvic</p> <ul style="list-style-type: none"> ● Uterus, vagina and prostrate ● Perineum, pubis ● Kidney ● Adrenal ● Thigh, knee and foot 	<p>Lower abdomen</p> <ul style="list-style-type: none"> ● Pelvis ● Peritoneum and abdominal wall ● Groin ● Thigh, knee, foot
6-7	<p>Lower abdomen</p> <ul style="list-style-type: none"> ● Groin ● Peritoneum, appendix ● Abdominal wall ● Pelvis 	<p>Pelvic</p> <ul style="list-style-type: none"> ● Kidney, adrenal ● Scrotum, perineum ● Anus, rectum ● Vagina, prostrate, uterus
7-8	<p>Upper abdomen</p> <ul style="list-style-type: none"> ● Testes/ ovary, Pancreas ● Diaphragm, abdominal wall and 	<p>Lower back</p> <ul style="list-style-type: none"> ● Bladder ● Lower back

	<p>upper abdomen</p> <ul style="list-style-type: none"> ● Liver and gall bladder ● Hand and arm 	<ul style="list-style-type: none"> ● Lower portion of middle Back
8-9	<p>Thorax</p> <ul style="list-style-type: none"> ● Ribs ● Thorax ● Pleura ● Bronchus 	<p>Upper back</p> <ul style="list-style-type: none"> ● Upper portion of middle back ● Upper back ● Scapula ● Esophagus ● Bronchus
9-10	<p>Lungs</p> <ul style="list-style-type: none"> ● Upper lung ● Middle lung ● Lower lung ● Bronchus 	<p>Throat</p> <ul style="list-style-type: none"> ● Trachea, vocal cords ● Thyroid ● Pharynx, larynx, tonsils ● Bronchus, parathyroid
10-11	<p>Neck</p> <ul style="list-style-type: none"> ● Shoulder ● Neck ● Ear ● Mastoid 	<p>Face</p> <ul style="list-style-type: none"> ● Lower jaw, tongue and mouth ● Nose ● Upper jaw ● Eye ● Temple, forehead
11-12	Cerebellum, sensory and physiological	Cerebrum – motor psychological

	brain <ul style="list-style-type: none"> ● Medulla ● Sex impulse, mental sex area ● Inherent mental ● Sensory location 	brain <ul style="list-style-type: none"> ● Mental ability ● Acquired mental speech ● Ego pressure ● 5 sense area ● Pituitary and pineal gland
12-1	Cerebrum motor area, Psychological brain <ul style="list-style-type: none"> ● 5 sense area ● Ego, pressure ● Acquired mental speech ● Mental ability ● Pituitary gland ● Pineal gland 	Cerebellum- Sensory psychological brain <ul style="list-style-type: none"> ● Sensory location ● Inherent mental ● Equilibrium, dizziness center ● Medulla

Excretory organs in naturopathy

An excretory organ is responsible for filtering out metabolic waste from the blood. Therefore, they are not just "doors" that can be opened to allow the passage of toxins, but they are organs that actively cleanse the blood for the purpose of purification. They include the liver (which releases waste to the bile), the intestines (stool), the kidneys (urinary discharge), the lungs (exhalation), sweat glands (perspiration), and the

sebaceous glands (sebum). When they are functioning properly, the excretory organs eliminate all the wastes that are ingested or produced by a normal lifestyle. Their capacities can be exceeded by an excess production of wastes, which happens, for example, when a sedentary lifestyle is combined with overeating: toxins are not evacuated, the biological terrain deteriorates, and the disease appears.

Naturopaths have traditionally advocated detoxification to manage a variety of ailments, including kidney, liver, endocrine and skin diseases. Benedict Lust writes in his seminal text that 'the origin of everything is again readily explainable by accumulations of foreign matter in the organs that are responsible for the transit of waste from the body: the kidney and the skin.

The Liver

The liver filters waste out of the blood and expels them from the body with the bile. It has an excretory function in addition to its digestive role, inasmuch as it permits the emulsification of fats, an important stage in the digestive process. Bile insufficiency reveals its presence by overall digestive troubles, abdominal pain, nausea, fermentation, bloating, and coating on the tongue, bad breath, and headaches after meals. Another common reaction is feelings of disgust at the mere thought of eating fatty foods such as eggs, fried foods, fat-laden sauces and gravies, and rich pastries; individuals will be incapable of consuming these foods.

The consistency and color of the stool can also reveal this insufficiency. In the absence of bile, the individual is generally constipated and has hard, dry stools that resemble goat

dung more than human excrement. The brownish-yellow color of stool is due to the presence of bile pigments. The skin and eyes become yellow when bile is not eliminated properly, because the pigments remain stagnant in the region of the liver, from whence they can easily travel into the bloodstream. A few other revealing symptoms include greasy skin, the propensity to have pimples, and the tendency to suffer inflammation in the respiratory tract.

But even if we are not suffering from any of the problems mentioned above, there is still always the possibility that our liver may be in the midst of becoming deficient because the entire anti-natural lifestyle that is prevalent today contributes to this condition (overeating, chemical poisoning, stress, vaccinations, and so on).

The Intestines

When the intestines are functioning properly, they empty themselves once or twice a day (not necessarily at a set time), and the stools are firm, eliminated easily without straining, and do not have a very strong odor. After one has passed a stool, there should be a feeling of having thoroughly emptied oneself. These individuals often have great trouble evacuating and never have the feeling following a bowel movement that they've emptied themselves completely. This impression is quite accurate—matter is continuing to collect in the intestines, distending and deforming them. Moreover, by fermenting and putrefying while still inside their bodies, this non-eliminated fecal matter starts attacking the mucous membranes of the intestines, which become porous as a result. Instead of being

evacuated, some of the wastes are reabsorbed by the Damaged mucous membranes and spread throughout the body via the bloodstream.

The Kidneys

The kidneys excrete the wastes they filter out of the blood by diluting them with water. The quantity and characteristics of our urine reveal much about the state of the renal excretory organ. Normally an average 1.5 liters (about 6.5 cups) of urine should be eliminated daily, which means around five to six urinations a day. Because it is carrying waste, urine is colored (golden yellow) and has a distinctive odor.

An individual is suffering from renal insufficiency when the quantity of urine falls below the norm, if she urinates only two to three times a day, or if the urine is too clear and resembles water. In this case the kidneys are certainly eliminating fluid from the body, but not enough waste to give the urine its characteristic yellow color. This observation about color is obviously not valid for people who drink a lot of water—three liters (more than three quarts) a day, for example, as this dilutes the urine and causes it to lose its color.

The Skin

With its sebaceous glands that secrete sebum and its sudoriferous (sweat) glands that secrete perspiration, the skin has a dual elimination system at its disposal. These various glands are quite tiny but numerous. Consequently, they are able to eliminate substantial quantities of waste. During a fever, for example, the skin can perspire quarts of sweat loaded with urea, uric acid, and salt. Skin that is functioning properly will perspire during times of exertion and when temperatures are high. A person

who never perspires or who perspires only from specific locales of the body has an excretory organ that has been practically sealed shut. Because it is incapable of performing the eliminatory duties expected of it, the other excretory organs are forced to work harder. Another sign of poor function is overly dry skin, or, conversely, skin that is too oily or has acne.

The appearance of a pimple or a case of eczema is certainly a defensive reaction of the excretory system, but it is also a sign that eliminations must not be functioning well, because wastes are stagnating in the region of this excretory organ.

The Lungs

Wastes that are eliminated by way of the respiratory tract should first and foremost be of a gaseous nature—carbon dioxide and water vapor. Solid wastes should be extremely rare and primarily consist of dust that has been inhaled and trapped in the filters of the upper respiratory tract. It is not normal to have a constantly runny nose or to be coughing and expectorating. People prone to inflammation in the mucous membranes of the respiratory tract (colds, sinusitis, Bronchitis) are showing evidence of congestion of the biological terrain and overworked excretory organs.

Signs of excretory organ weakness

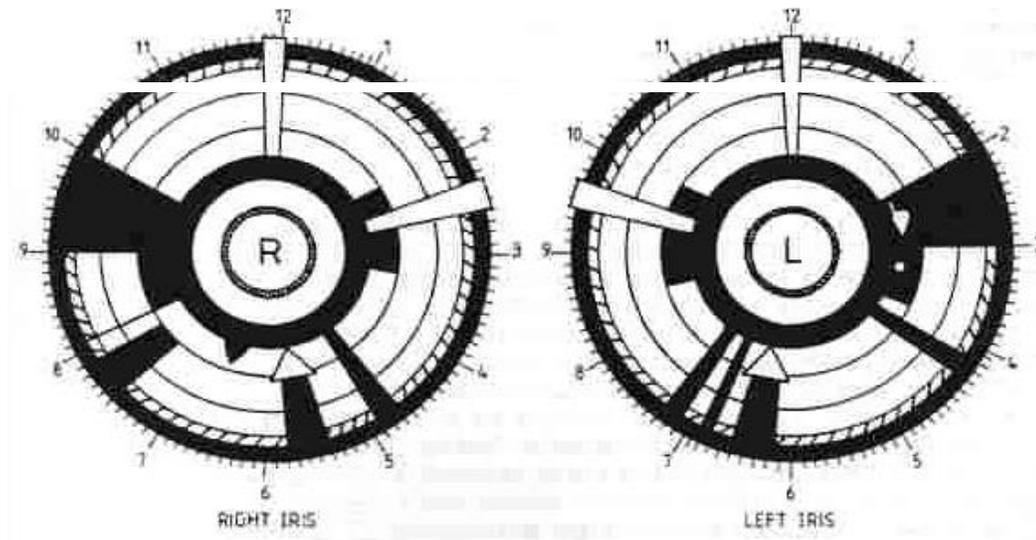
The inhalation and exhalation of air should be regular, deep, and easily adapted to a change in rhythm during intense periods of exertion. Someone who runs out of breath too easily, even during slight exertion, or who is often gasping for air or frequently needs to spit out colloidal waste, has an overloaded pulmonary excretory organ wherein gaseous exchanges are not taking place properly.

Expulsion of waste from the body is not the sole task performed by the excretory organs. They must first filter and extract these wastes from the bloodstream, then prepare them in a way that allows them to leave the body without injuring the tissues.

Each excretory organ filters and eliminates specific wastes. When one of these organs can no longer manage to eliminate all the wastes presented by the body, another excretory organ steps in and eases its workload. For example, colloidal wastes that the liver is incapable of filtering can be expelled through the sebaceous glands or respiratory tract. It is easy to see that the deficiency of one excretory organ does not lead directly to serious illness. But the chronic insufficiency of one or several of these organs will certainly lead to a state of poor health eventually, because of the progressive saturation of the biological terrain with wastes. Those suffering from serious or big illnesses are all “small eliminators” [18].

Eliminative system in iridology

Figure 6: Representation of eliminative system in the iris



Source : Sharan, F. (1989). Iridology: A complete guide to diagnosing through the iris and to related forms of treatment. Harper Thorsons.

Understanding the eliminative channels of the body—the bowels, kidneys, lungs, skin and lymph is the first step to visualizing our transparent body. Unless wastes are allowed free and unhindered passage out of our body, toxins accumulate and obstruct natural functions. Disease begins with degenerative processes.

The air we breathe, moisture we absorb and nutrients we ingest are incorporated into our bodies. The waste products must be eliminated after they have been discriminated, digested, and assimilated. The body is required to get rid of wastes in order to function normally, so if there is more intake than outflow; wastes are retained

causing fermentation and toxins to spread. This results in toxicity, degeneration, and imbalances of bodily processes. When there is more outflow than intake, the person soon becomes depleted and weak.

Since people have a difficult time understanding their own eliminative channels, the iridologist serves as a teacher. The iridologist examines the condition of each eliminative channel and determines if it is functioning adequately, or if another channel is compensating for it. The elimination of waste products is a basic function of almost every person in their life. In effect, this accelerates the ageing process and diminishes vitality.

Our eliminative channels are a reflection of forces within our bodies that are striving to preserve our health. Our wellbeing depends on our understanding and working with these forces. These physiological forces are also a reflection of our mental, emotional, and spiritual states.

A sacred aspect of religious or spiritual initiations and ceremonies has always been purification. Herring's Law of Cure explains that healing forces originate from within and move outward. As a first manifestation of this healing power, it will be cleared of all obstructions to elimination and opened to its flow. Our bodies are made to perform efficiently, so if we cleanse, support, activate, and strengthen our natural functions, we will be assisting our bodies in their function. In addition to excretions through the regular elimination channels, the body can also eliminate through secretions and discharges from openings such as the eyes, ears, nose, vagina, penis, breast nipples and mouth.

The iris helps us better approach treatment to minimize aggravations, except in cases of severe chronic illnesses. The body cannot be seen as a container for the skin if we see it as transparent. Our bodies' inner world of pulsing muscles, vibrant fluids, digestive chemistry, cell metabolism, and digestive enzymes can be seen.

These skills of visualization may also be applied to stimulate the healing process. If we have become identified with a disease and its painful symptoms, we often feed that process with fear as we surround the area with negative thoughts and tensions. If we can mentally surround the area with loving thoughts, covering any darkness or disease with light and energy the forces of healing will be manifested by the increased levels of blood, lymph and pranic energy.

Molecular particles spread a few inches from the body in the molecular aura, including keratin (skin) particles, salt crystals, ammonia, and other organic elements.

In addition to electromagnetic energy composed of heat or infrared radiation, these fields seem to be interwoven. Heat patterns reveal information about the state of different organs and body regions. Potential fields with no disturbance reflect physical and psychological changes, revealing current conditions as well as potential problems. During his research, Harold Burr discovered that electromagnetic variations in the sun can be correlated with magnetic storms, sun spots, and changes in the sun's distance from the Earth. Ovulation also involves changes in electrical potential.

Similar to the lungs, the skin also functions as a respiratory and eliminative organ. In the event of a deficit in either of these functions, the whole body suffers. The skin on our body would die if sealed or painted, by wearing synthetic fibers, by using

synthetic bedclothes, by using deodorants, and cosmetics. The act of scrubbing the skin to remove dead skin is not always included in bathing habits. In the skin, millions of pores discharge gases and toxins continuously. The body secretes moisture to regulate its temperature. In the event of a blocked skin pore, toxins collect under the skin and return to the bloodstream.

The skin is often referred to as the third kidney, and any decline in skin function burdens the kidneys. Active skin elimination will also relieve the kidneys when they are weak for centuries; researchers have examined the lines on the hands.

As toxins are eliminated from the body, the skin often rebels with rashes and pimples. Often, severe skin diseases reflect chronic, complex and functional imbalances. Skin markings and discolorations caused by the liver, warts, even freckles, become lighter, and in many cases disappear during purification regimens. Markings and discolorations on the skin caused by the liver, warts, even freckles, become lighter during purification regimens, and many times disappear. The condition of the skin reflects the health of the organs and systems.

The skin in the iris

At the ciliary edge of the iris is the skin zone. Inactive, sluggish or contaminated, it appears grey, brown, black, or other shades. The darker and thicker the zone, the more toxic and inactive the skin is. It becomes even more serious when this zone manifests small dark spots. The amount of inherited toxins is measured by the severity of scurf rims in infants. They deepen as a result of incorrect dietary and lifestyle habits. The body throws off inherited toxins through childhood diseases, leaving a scurf rim behind.

Elimination through skin:

When the body excretes toxins through the skin, it may cause rashes, lice, pimples, eczema, and psoriasis. Symptoms of toxicity in the body and a malfunctioning eliminative system result in these unhealthy conditions. It should not be suppressed in any way. Hence, each body system is seen in relation to every other system and affects and is affected by every other system. There is constant movement, change, and interaction in the interior ecological processes. Hyperactive systems may drain resources from other systems; underperforming systems may have to work harder to compensate.

Scurf rim nerve rings:

Inhibition of capillary and lymphatic fluid movement induced by nerve rings has been shown to affect a person's social and family relationships as well as interaction with the environment. Scurf rim interaction can be interpreted both physically and psychologically.

Skin respiration

The skin is the largest organ of the body, and it performs two dual functions, respiration and excretion, that are essential for good health. In its absence, the kidneys, liver and lymph must compensate. The skin is an organ of respiration and excretion. It absorbs oxygen (and water) and exhales poisonous gases. In addition, the skin absorbs whatever lotions, creams, and oils we apply to it.

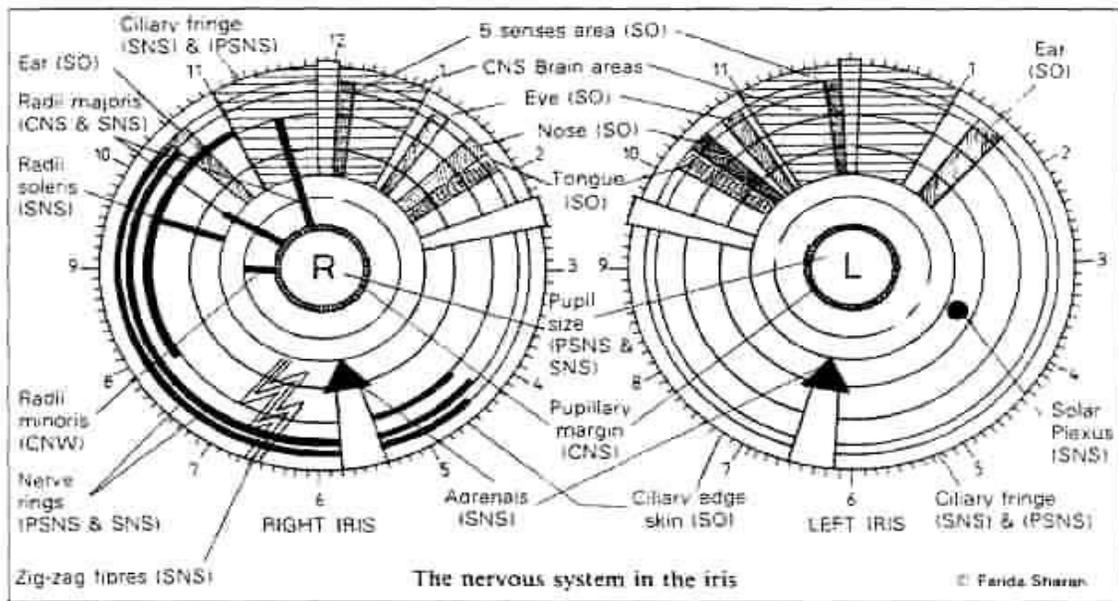
Body temperature is also regulated by the skin. Normally, the layer of skin is non-conductive and dense and prevents heat from escaping, but under extreme heat or fevers, the layer can sweat and let heat escape. Cooling the body with water and a bath will aid in this process. As the skin is also the organ of touch, closely connected to all the great nerve centers, water surrounds the body and influences the nervous system through the skin.

The mucous membranes that line the openings of the body are also similar to the skin in structure. Additionally, these membranes secrete and excrete. The skin also helps us by storing large amounts of water and salt, resisting the invasion of germs, and absorbing gases and fatty substances. Vascularization is abundant in this area. The sebaceous glands produce a greasy substance that keeps the skin supple.

This is significant since skin diseases are often an indication of problems with total body function, including bowel toxins, inactive skin elimination, poor liver function, inactivated eliminative channels, inadequate respiration, improper lifestyle choices, and reduced nerve function.

The skin forms a triad with the respiratory and urinary systems. Each affects the other very closely in its function. [19]

Figure 7: Representation of nervous system in the iris



Source: Sharan, F. (1989). Iridology: A complete guide to diagnosing through the iris and to related forms of treatment. Harper Thorsons.

Scurf rim

Iridologists described the dark ring often visible in the outer iris of the eye as Scurf Rim, because it appears and intensifies after suppressing milk crust, scurf, sycotic eruptions, and other childhood eczematous eruptions. The iris' outer rim is the cutaneous surface of the body, the skin, where the iris color joins the white part of the eyeball (sclera). A normal, healthy, and active skin shows no abnormal discolorations at the edge of the iris. Those with vulnerable skin, who are enervated, anemic, or in atrophic conditions, experience the appearance of dark scurf rings around the iris.

Sometimes this dark ring is complete around the entire iris, sometimes it appears only in certain segments or portions of it. Suppression of skin eruptions,

mercurial inunctions, hot baths, heavy clothing and coddling tend to intensify the scurf rim. The iris of newborns shows signs of hereditary disease by darkening generally. A scurf rim will also sometimes appear shortly after birth in children of scrofulous and psoriatic parents.

In nature, the tender, plastic body is kept clean of hereditary taints and acquired morbid burdens by the natural channels of elimination and also by acute infantile diseases such as diarrheas, skin eruptions, colds, catarrhs, etc. Nature's favorite method of purifying infant organisms is through skin eruptions. If these are suppressed by drugs, salves, drying powders, oils, creams, soaps, warm baths, dense clothing, and cuddling, scurf rings begin to form, or, if already present, become more prominent, indicating that the skin's natural function has been compromised.

The scurf rim diminishes and gradually disappears when, under influence of natural diet, air, sun and light baths, cold water treatment, massage, etc., the cuticles become active and initiate skin eruptions, furuncles, carbuncles, etc. that rid the body of chronic toxins.

Scurf rims have a great deal of value as indicators of the underlying health of the skin. The significance of the normal activity of the skin for human health and survival makes it imperative in diagnosis and prognosis. The skin, besides containing the superficial organs of touch, also has two extremely important functions--heat radiation and excretion. At the equator or at the poles, we feel the same temperature regardless of

whether we swelter in the summer heat or shiver in the winter cold. A temperature deviation of a few degrees either way from normal is indicative of serious illness.

It is only through the lung and through the skin that the body is able to maintain this level of temperature. When the skin becomes clogged, sluggish, tense or atrophied, the temperature and blood pressure inside the body rises to a dangerous level. If the skin is too weak or relaxed, then radiation loss is too great, resulting in low inner blood pressure and temperature. High fevers, urate or pathogen poisoning, or atrophy, and clogging of the skin cause the internal organs to constrict and produce high blood pressure, catarrhal conditions, and inflammatory conditions that may lead to death.

Massing of the scurf rim in certain segments of the outer iris is always a sign of weakness and morbid encumbrance in the corresponding part of the body. If the scurf rim is very marked in the lower half of the iris and if the upper part, especially in the region of the brain, shows the whitish signs and clouds of inflammatory conditions, this is an indication that the circulation in the cutaneous surface and in the extremities is weak and sluggish and that as a consequence the inner blood pressure, especially in heart, lungs and brain, is abnormally high. This may mean cold extremities, sluggish circulation in the portal system (stomach, bowels, liver and spleen), swollen veins on the legs, hemorrhoids, neuralgias, toothaches, colds, and catarrhs of the throat, lung and nose, and high blood pressure or congestion in the heart, lungs and brain. From this it is apparent that in order to cure those various ills it is necessary to re-establish the normal activity of the skin, and this is best accomplished by the nude air baths, cold water baths, light,

porous or no underwear, massage, and by a low protein diet free from pathogenic materials.

In a natural regimen, new skin regeneration is accompanied by a gradual decrease and sometimes a complete disappearance of the scurf rim. As the skin becomes active and alive, fine, white lines appear in the dark rim and these gradually become light Patches. The scurf rim is a sign of chronic conditions in the iris due to suppressive treatment and weakening, enervating influences [20].

Skin

About 15% of the total weight of an adult is made up of skin, the largest organ of the body. The lining of the blood vessels protects the body from external physical, chemical, and biologic harm as well as prevents excessive water loss and regulates body temperature. It is surrounded by mucous membranes, with the skin being continuous. The skin and its derivative structures form the integumentary system. Skin consists of three layers: epidermis, dermis, and subcutaneous tissue. As the outermost layer of the skin, the epidermis, keratinocytes synthesize keratin, a threadlike protein that serves as a protective layer. Dermis, the middle layer, is primarily composed of collagen, a fibrillar structural protein. There are small lobes of fat cells called lipocytes within the subcutaneous tissue, or panniculus.

Epidermis

There are two types of cells in the epidermis: keratinocytes and dendritic cells. A unique characteristic of keratinocytes is the presence of intercellular bridges and

stainable cytoplasm. In addition to keratinocytes, the epidermis also harbors melanocytes, Langerhans cells, and Merkel cells, but keratinocytes are by far the most prevalent cell type. The epidermis commonly is divided into four layers. basal cell layer stratum germinativum, the squamous cell layer stratum spinosum, the granular cell layer stratum granulosum, and the cornified or horny cell layer stratum corneum.

Epidermal appendages

Eccrine Sweat Glands

Eccrine sweat glands are involved in the regulation of heat and are most abundant on the soles of the feet and least plentiful on the back. The sweat glands originate as a band of epithelial cells growing downward from the epidermal ridge. This tubular, or ductal, structure is modified during development to generate the three composite parts of the eccrine sweat unit, which are the intra epidermal spiral duct, the straight dermal portion, and the coiled secretory duct. The spiral duct opens onto the skin surface and is composed of dermal duct cells that have migrated upward. The secretory coil of the eccrine unit lies deep in the dermis or within the superficial panniculus and is composed of glycogen-rich clear secretory cells, dark mucoidal cells, and myoepithelial cells specialized in contractile properties. Glycogen-rich inner epithelial cells initiate the formation of sweat in response to a thermal stimulus. Initially an isotonic solution, the darker mucoidal cells in the secretory coil and in the dermal duct actively reabsorb sodium from sweat in the duct, thereby resulting in the extremely hypotonic solution that

is emitted onto skin surface through the intra epidermal spiral duct. This response promotes cooling while conserving sodium.

Apocrine Sweat Glands

Whereas eccrine glands are primarily involved in thermal regulation, apocrine glands are involved in scent release. Apocrine sweat glands in humans are confined mainly to the regions of the axillae and perineum, and unlike eccrine and apoeccrine glands, they do not open directly to the skin surface. Instead, the intra epithelial duct opens into pilo sebaceous follicles, entering in the infundibulum above the sebaceous duct. The basal secretory coil of apocrine glands, which is normally located entirely in subcutaneous fat, differs from that of eccrine glands in that it is composed exclusively of secretory cells; no ductal cells are present.

Sebaceous Glands

Sebaceous glands are most abundant on the head and face, but are also found in nearly all other body regions except the tarsal plate of the eyelids, the buccal mucosa and vermillion borders of the lip, the foreskin, and mucosa lateral to the penile frenulum, the labia minora, and the female areola. The sebaceous glands contain many lipid droplets known as sebum in their cytoplasm, and they are arranged into lobules on the upper segment of the hair follicle. Sebaceous ducts are composed of lipid-filled basal cells which surround the lobule and help develop the lipid-filled cells that fill the infundibular segment of the hair follicle. Sebaceous glands provide secondary lubrication in the birth canal and may be evolutionarily important for this function. Specifically, this extra lubrication covers the areas that come into indirect contact with the birth canal, including

the vertex, anterior scalp over the forehead and nose to the lower jawline, and posterior shoulders, chest, and upper arms.

Nails

The fingernails protect the fingertips, enhance sensation, and allow the grasping of small objects. The nail bed is a portion of the nail matrix that contains blood vessels, nerves, and melanocytes and has parallel ridges. Toenails can provide information about toxic exposure or disease from many months in the past due to their slow growth rate. Arsenic poisoning may cause horizontal hypopigmentation across all nail plates known as Meese lines.

The dermis

The connective tissue of the dermis is comprised of fibers, filaments, and amorphous fibers that facilitate sensory stimulation and vascular access for nerves, fibroblasts, macrophages, and mast cells. The dermis comprises the bulk of the skin and is responsible for its pliability, elasticity, and tensile strength. The skin protects the body from mechanical injury, binds water, regulates body temperature, and contains sensory receptors. The matrix components - collagen and elastic connective tissue - are also depth-dependent and undergo turnover and remodeling in normal skin, in pathologies, and according to external stimuli.

The dermis is primarily composed of collagen, a fibrous protein family with at least 15 genetically distinct types. Collagen is a structural protein in the body's tendons,

ligaments, bone linings, and dermis. The skin's major stress-resistant material is collagen. The elastic fibers in skin, on the other hand, play a role in maintaining elasticity but are very less effective in resisting skin deformation and tearing. 70% of the skin's dry weight is collagen.

Subcutaneous fat

Embryologically, fat cells begin to develop in the subcutaneous tissue toward the end of the fifth month. Fat cells or lipocytes are separated from one another by a fibrous septa that is made up of large blood vessels and collagen. The panniculus varies in thickness depending on the site of the skin. The subcutaneous tissue provides buoyancy to the body and functions as a store house of energy. By the action of aromatase, androstenedione is converted to estrone in the panniculus. Lipocytes produce leptin, a hormone that regulates body weight through the hypothalamus [21].

Skin diseases

Acne vulgaris

Acne vulgaris is characterized by inflammation of the skin's pilosebaceous follicles. There are various lesions associated with it, including nodules, papules, pustules, and open and closed comedones. About 20% of adolescents and young adults have moderate to severe acne, and the severity of the condition correlates with pubertal maturity. The pathophysiological development of these lesions is still not clear.

At this point, the dominant hypothesis is that increased circulating androgens stimulate sebaceous gland activity and the resulting sebum production triggers hyperkeratosis. It causes the follicle to dilate and eventually form a comedone.

There is evidence that the transition from a comedone to a lesion like a pustule, papule, or nodule is due to a bacterium called *Propionibacterium acnes* colonizing the follicle and triggering an inflammatory response. T helper cells (CD4+), likely of T helper type 1, and macrophages infiltrate the local area, possibly as a result of antigenic stimulation. *Propionibacterium acnes* is the antigen identified as the most likely initiator of inflammation. The follicular basement membranes may become weaker in such a case, along with a reduction in linoleic acid levels within the follicle wall.

The reason for this is that increased sebum production is depleting local fatty acid stores. The follicle can begin to hyper proliferative as soon as the inflammatory cascade begins. In the follicular lumen, keratinized cells and sebum form a horny plug. As a result of this process, a comedone develops and is called ‘comedonegenesis’

Atopic dermatitis

Atopic dermatitis (eczema) is typically diagnosed in childhood, but is sometimes diagnosed in adults as well. Type 1 hypersensitivity involves an inherited tendency toward hypersensitivity reactions, and as such it is also common to see eczema and other allergic conditions in a person’s family history (such as allergic rhinitis and asthma). Physiological responses to the allergen cause chronic inflammation, which

requires pathology testing for definitive diagnosis. One of the most important diagnostic tests is a full blood count, which emphasizes the allergenic basis of atopic dermatitis. Atopic dermatitis can present itself differently depending on the patient's age. Most infantile eczema lesions are moist, red, vesicular, and crusted. Most often, they occur on the face, the neck, the buttocks, the arms, legs, and the extensor surfaces. Adults may also present with moist, red lesions; however, these will mainly be found in flexor regions of the arms and legs. Commonly, adults will present with dry, scaling lesions and lichenification (thick, leathery patches). Itching (pruritis) is a commonly reported symptom regardless of age. Those affected may become more sensitive to irritants such as soap, fabrics, and climate changes (temperature and humidity). These irritants damaged the stratum corneum intercellular bilayers by either altering lipid composition or removing them altogether.

Dysbiosis and immune function

Atopic diseases are associated with dysbiosis, or an imbalance in the gastrointestinal bacterial population. It is suggested that the bacteria balance is incorrect. Atopic dermatitis is an inflammatory condition, and oxidative stress is a potential side effect. In spite of the fact that it is not considered a causative factor, oxidative load may be putting a further strain on immunity and causing later problems.

Psoriasis

Similar to eczema, psoriasis also starts with red papules. However, lesions eventually develop into flat, silvery plaques (although the basal layer remains red and inflamed). The lesions of psoriasis are commonly found on the face, scalp, elbows and

knees. Another potentially important intracellular compound is cyclic-AMP (cAMP) which regulates cell proliferation, but its precise mechanism and outcome is still not understood. In addition to immunological pathways and genetic factors, psoriasis has a complex pathophysiology.

It has also been argued, although unconfirmed, that the connection between bowel disorders and skin may be due to autointoxication through intestinal absorption of microbial antigens.

Table 2: Difference between Eczema and Psoriasis

Eczema	Psoriasis
More common in children	More common in adults
Skin reddens and becomes dry	Skin reddens and becomes dry
Painful or itchy	Painful or itchy White scales on top of reddish areas
Allergic reaction to the environment, chemicals or food	Unclear etiology
Initial stages of eczema—skin can look as if it has been boiled, with a red appearance and tiny blisters Later eczema typically dries and scales, and is often confused with psoriasis	Psoriasis is characterized by inflamed red skin topped by silvery scales (or sometimes pus-filled bumps)

Skin disorders such as atopic eczema and psoriasis can be managed by addressing the digestive system. This connection focuses on intestinal hyper permeability as an important pathogenic factor. There is a theory that toxins migrate into the circulation through weak junctions between enterocytes in the jejunum and lower duodenum. It is proposed that weakness in gap junctions between enterocytes in the jejunum and lower duodenum allows toxins to migrate into the circulation from the intestinal lumen. As these products are processed and excreted through the skin, they contribute to skin conditions. Therefore, naturopathic treatment for eczema and psoriasis focuses on gastrointestinal health to manage permeability and regulate food antigen absorption.

Asthma and eczema

Natural practitioners often use the eczema-asthma correlation, called the atopic march, to explain the principle Tolle Causum.

It is estimated that one in three children who develop atopic dermatitis in their first four years of life will develop asthma, and this risk persists into adulthood. In naturopathic terms, the rationale is that conventional therapies such as topical emollients, topical steroid creams, and antihistamines are not addressing the root cause of atopic dermatitis. In contrast, immune dysfunction, such as T helper 2 cell predominance, may result in cellular memory, leading to other compounds, such as inhaled antigens, becoming allergenic, resulting in atopic rhinitis or asthma [22].

The importance of skin changes in modern diagnosis.

Skin is the largest organ in the body, and if examined too briefly, subtle changes may go unnoticed. The practice of clinical medicine is less common in the modern era when laboratory and radiological investigations are readily available. Finding these clinical signs on a patient not only helps in making a diagnosis, but also satisfies the clerking physician. On a physical examination, dermatological changes are clearly visible. Many internal illnesses can be mirrored on the skin. The skin should be examined carefully from head to toe in all patients. [23]

Medicine's diagnosis historically was based predominantly on a thorough history and a visual examination. The medical profession is now able to accurately diagnose a wide variety of diseases due to the availability of easily accessible, sophisticated laboratory tests and diagnostic equipment. Nevertheless, there is a danger in relying only on these tests and excluding visual inspection of the patient. Dermatological examinations provide clues to laboratory evaluations, and recognizing early signs of disease reduces patient morbidity and medical cost. Diagnostic clues that are observed by a thorough skin examination are therefore crucial [24].

Gut and skin

Dysbiosis (disruption of the gut microbiota) has been linked to disorders such as obesity and inflammatory bowel disease, but it can also lead to diseases at distant sites, including autoimmunity, infectious disease, and cancer. In Vitiligo, mature epidermal melanocytes are destroyed through the actions of T cells, supported by the limited

availability of Treg cells. The intestinal tract carries a complex and diverse microbial community which plays an important role in vitiligo development in mice due to dysbiosis of the gut microbiota [25].

Lung and skin

The skin and lungs are involved in a wide range of conditions and diseases. Early detection and treatment of these conditions will help improve outcomes. There are many autoimmune diseases that affect the lungs and skin. Most of these conditions affect the skin first. The involvement of the lungs is variable among these patients. Rarely, skin manifestations precede lung involvement in such conditions. The diagnosis of some dermatological manifestations may be obvious at first glance due to their classical nature.

A lung disease screening may be indicated in certain diseases with dermatological manifestations when there are no obvious respiratory symptoms or signs. Even in the absence of other symptoms or signs, dermatological manifestations may indicate an underlying lung or other systemic diseases that warrants further evaluation [26].

Liver and skin

On the skin, liver disease can manifest itself in both acute and chronic forms. Symptoms can range from the very subtle, such as early finger clubbing, to the more obvious ones, such as jaundice. Early detection of these changes can lead to prompt diagnosis and management of underlying conditions.

Typical skin findings can be caused by chronic liver disease of any origin. Most practitioners have heard of jaundice, spider nevi, leuconychia and finger clubbing. Palmar erythema, “paper money” skin rosacea and rhinophyma are common, but often missing in a busy practice. Scratches, loss of axillary hair, and gynecomastia are subtler signs. Ascites can result in striae [23].

Kidney and skin

Renal failure has many causes, and complications from renal failure, underlying disease, and treatment are common. Common skin manifestations include xerosis, pigmentary changes, and nail dystrophies. It is possible to diagnose primary disorders leading to renal disease or the severity of the disease by examining the skin frequently. Careful examination of the skin can provide critical clues to renal failure diagnosis and aid in monitoring complications. In nephrology, the skin may provide early diagnostic clues to disease etiology. In addition, it may allow for identification of side effects and complications of treatment in a timely manner [24].

3.0 AIMS AND OBJECTIVES

Aims of the study

- To observe the presence of scurf rim in iris of patients with chronic skin disease.

Objectives of the study

- To evaluate the presence of scurf rim in iris of patients with chronic skin disease.
- To determine the diagnostic validity of iridology as a diagnostic tool.

4.0 HYPOTHESIS

Null hypothesis

A cross sectional observational study on patients with chronic skin disease does not show scurf rim in iris.

Alternate hypothesis

A cross sectional observational study on patients with chronic skin disease shows scurf rim in iris.

5.0 MATERIALS AND METHODS

Sample size:

121 Patients were recruited for the study after getting informed consent.

Selection and source of participants:

Subjects for this study were recruited from Known case of chronic skin disease patients visiting Government Yoga and Naturopathy Hospital, Arumbakkam at the age group between 11 and 45 years. The study protocol was explained in detail to the patients. After obtaining informed consent, they were subjected to take detailed case history and was enrolled for the study. They were also informed about the importance of being a part of the study and confidentiality of their data collected.

Inclusion criteria

- ✓ Patients with chronic skin diseases (any skin disease which persists for 3 months or more)
- ✓ Both gender
- ✓ Age group 11 to 45 years,
- ✓ Patient willing to participate in the study

Exclusion criteria

- ✓ Post traumatic and post-surgical condition of the eyes

- ✓ Disease condition of the eyes such as Cataract
- ✓ Glaucoma

Ethical consideration

The study was conducted after getting approval from Institutional Ethical Committee (IEC).

Design of the study

- Cross sectional Observational study

Data extraction

- This Cross Sectional Observational study was carried out among 121 subjects of both the gender aged between 11 and 45 years. An interactive introductory lecture about the purpose and design of the study was explained to Subjects. After obtaining the written consent (bilingual), detail case history was taken followed by taking High-Definition Images of Iris of the patients using 2017 CE FCC NEW 12 MP USB IRISCOPE IRIS ANALYSER Iridology Camera (with Pro Iris Software-GH11003, Germany). It is vital to isolate this part (iris) from the whole unwanted part in the eye (sample). This process comprises the following actions:

1. Eye images of the patients will be acquired using 2017 CE FCC NEW 12 MP USB IRISCOPE IRIS ANALYSER Iridology Camera.
2. Process of pupil and iris localization and segmentation, to classify the required region.
3. Attain normalization iris from circular shape to rectangular shape with full image.

4. Crop the normalization iris to 30% from full image
5. Analyze the normalization iris to get the histogram value.
6. Using OTSU to calculate the optimum threshold to detect scurf rim presence.
7. Scurf rim detected or not detected will be displayed in MATLAB window.
8. After confirmation of diagnosis, patients will be suggested to undergo Naturopathy and Yoga treatments. Using the IRIDOLOGY chart, we assess the progress of tissue strength achieved through naturopathy, the extent of healing signs. Observations will also be made on other changes if any.

Data analysis

Descriptive statistics (mean, standard deviation, frequency distribution and percentage) were performed using Microsoft excel 2010.

Sensitivity of the data was calculated using a standard formula $[a/(a+c) * 100]$.

Table 3: Mean and standard deviation of study parameters

Variables	Age	Height	Weight	BMI	SBP	DBP	PR
Mean	30.87	1.59	65.49	25.71	104.21	69.45	79.37
Standard deviation	8.82	0.08	14.66	4.77	13.15	8.94	5.26

Table 4: Scurf rim presentation report of the participants

SR Presentation	Number of Subjects	Percentage
Absence of SR	7	5.79
Dark SR	62	51.24
Light SR	41	33.88
Right eye Dark SR	1	0.83
Right eye Light SR	4	3.31
Left eye Dark SR	0	0.00
Left eye Light SR	3	2.48
Right eye Light SR & Left eye Dark SR	2	1.65
Right eye Dark & Left eye Light SR	1	0.83
Note: * SR = Scurf rim		

The Scurf rim observed in both Iris of everyone were summed and percentages of each lesion type in each area were estimated to assess the commonality in the Iris signs specific to Chronic skin conditions.

Figure 8: Frequency and percentage of absence of scurf rim

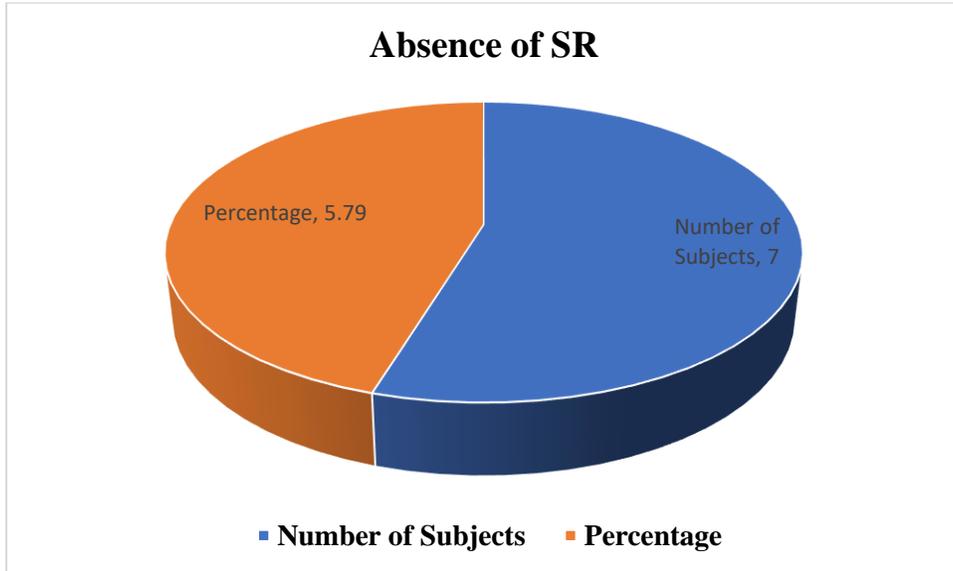


Figure 9: Frequency and percentage of dark scurf rim (SR)

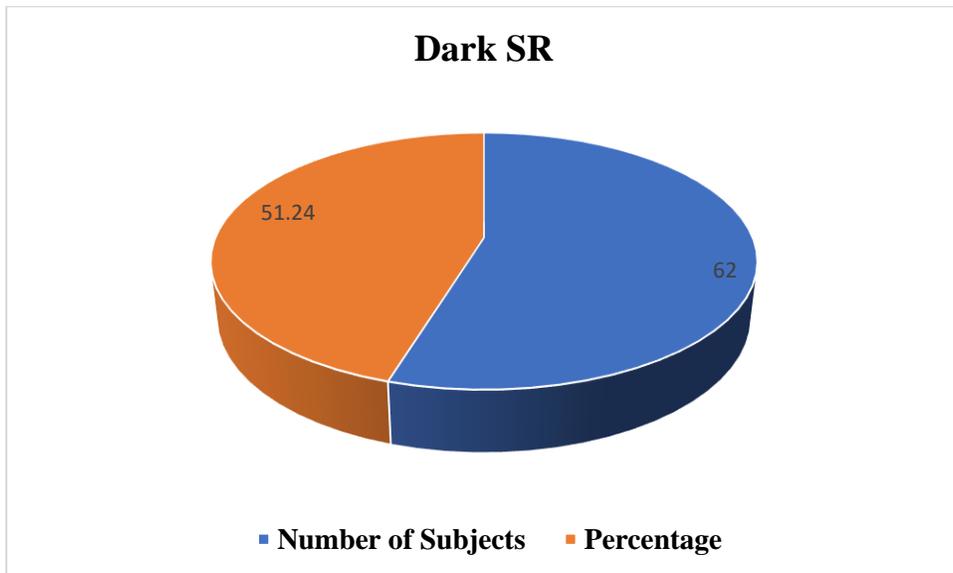


Figure 10: Frequency and percentage of light scurf rim (SR)

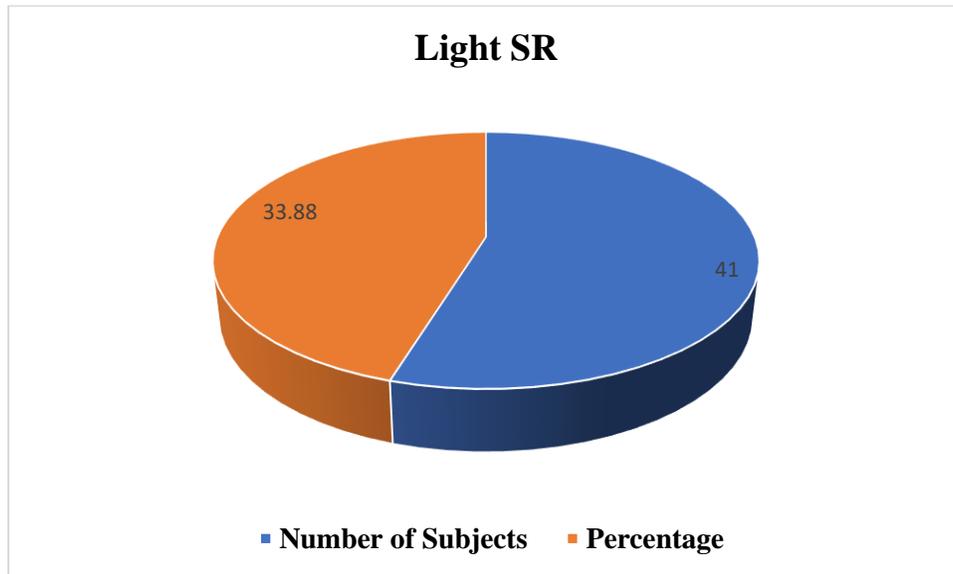


Figure 11: Frequency and percentage of right eye dark scurf rim (SR)

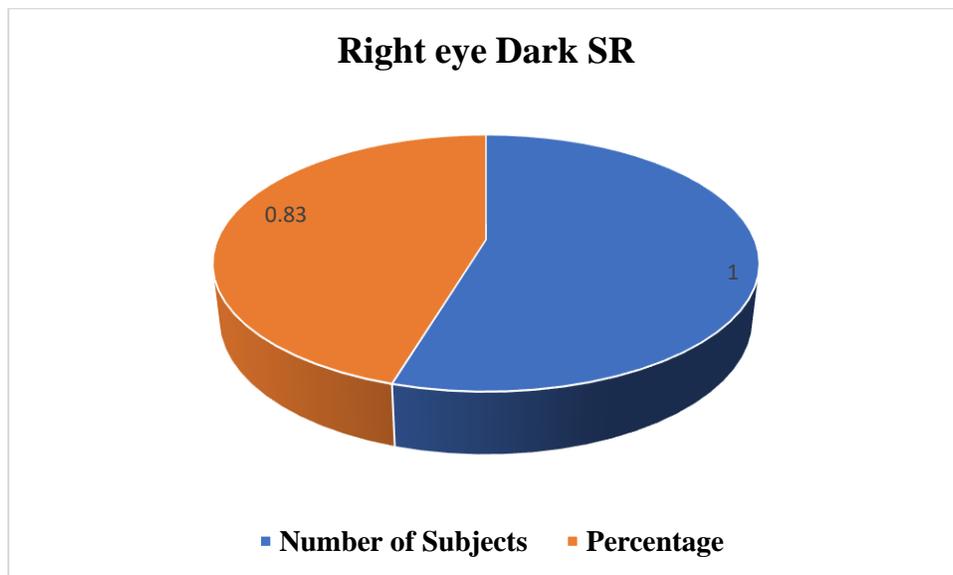


Figure 12: Frequency and percentage of right eye light scurf rim (SR)

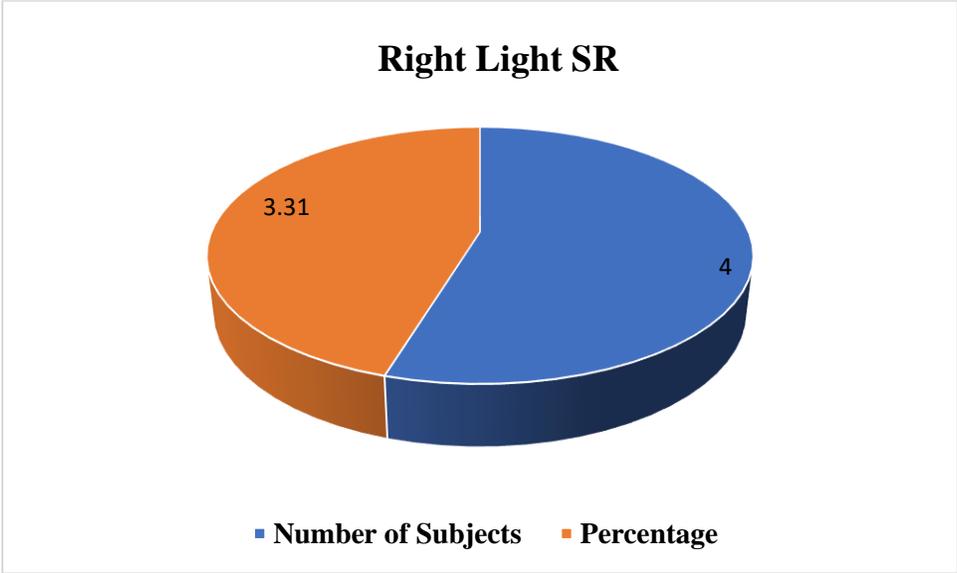


Figure 13: Frequency and percentage of left eye light scurf rim (SR)

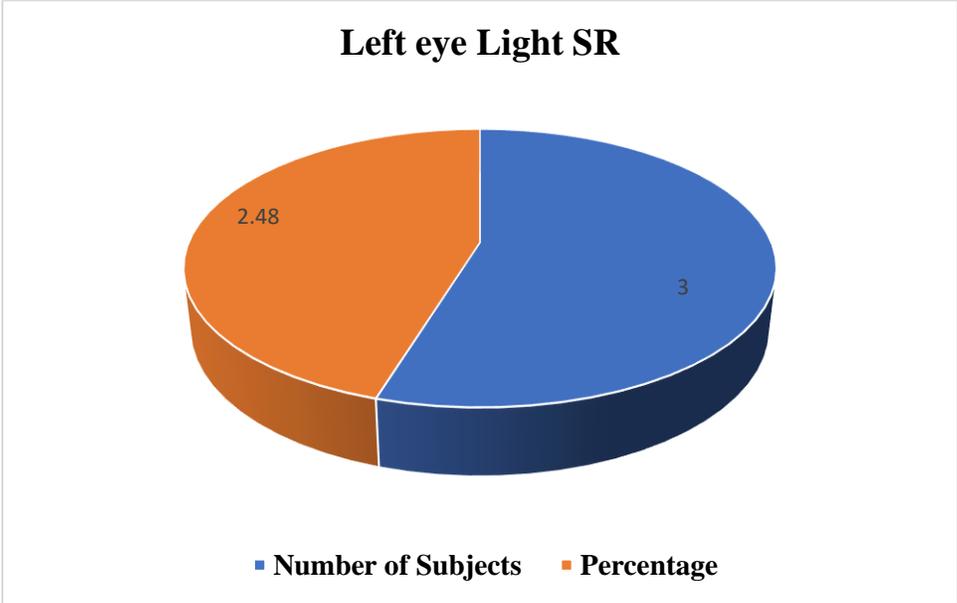


Figure 14: Frequency and percentage of right eye light and left eye dark scurf rim (SR)

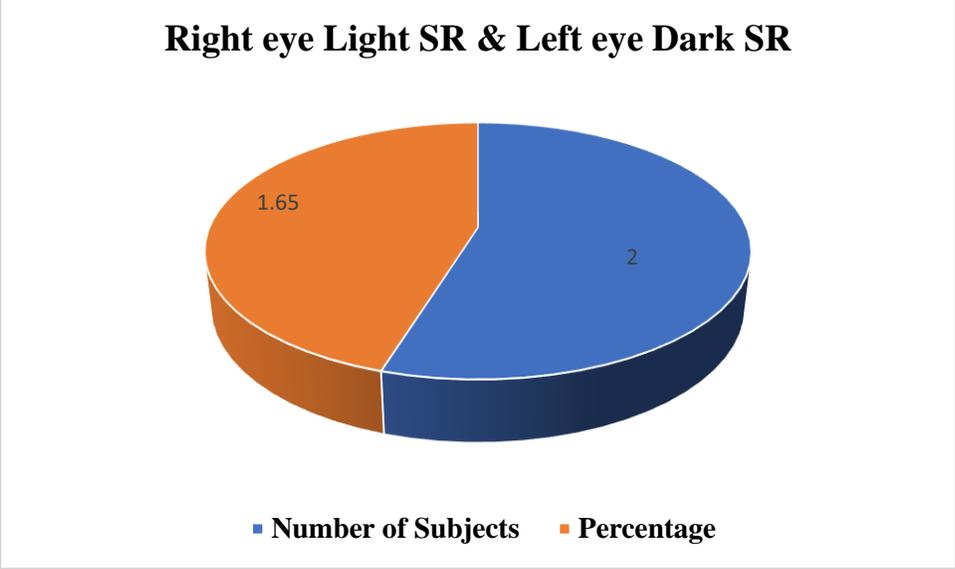


Figure 15: Frequency and percentage of right eye dark and left eye light scurf rim (SR)

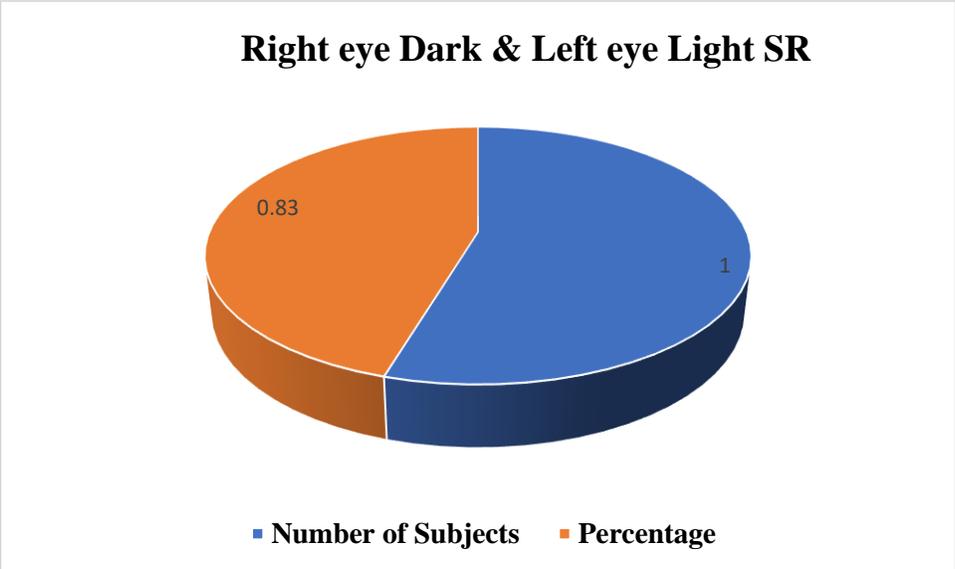


Figure 16: Left iris with dark scurf rim

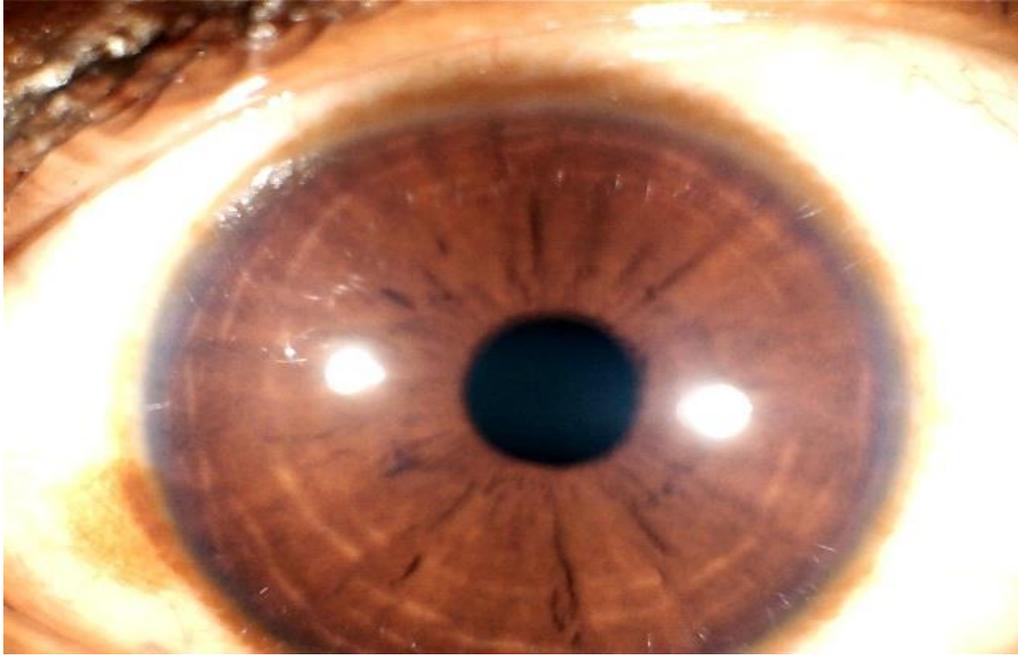
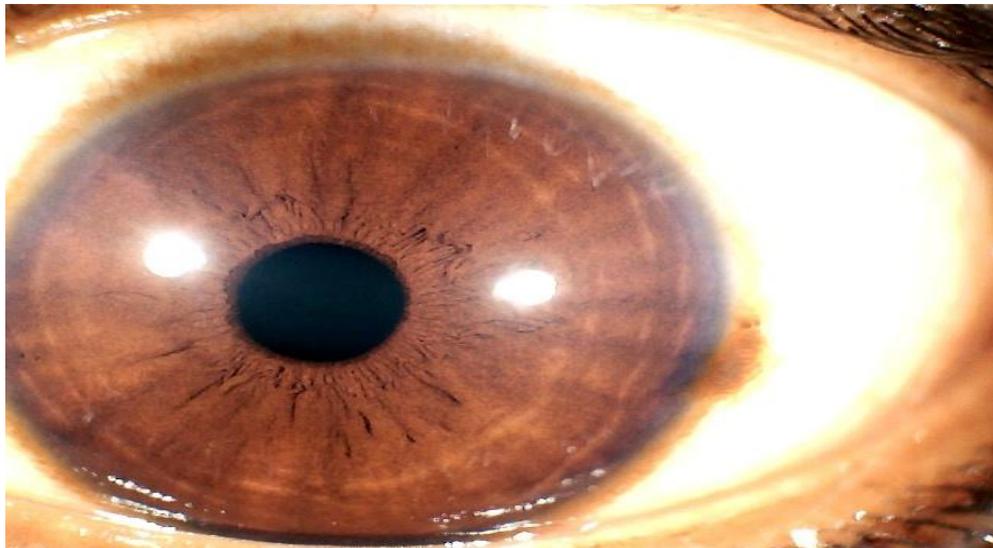


Figure 17: Right Iris with dark scurf rim



6.0 RESULTS

The results indicate that 51.24% of subjects had dark scurf rim, 33.88% of subjects had light scurf rim, 3.31% of subjects had light scurf rim in the right iris, 2.48% of subjects had light scurf rim in the left iris, 1.65% of subjects had dark scurf rim in the left iris and light scurf rim in the right iris, 0.83% of subjects had dark scurf rim in the right iris and same 0.83% of subjects had dark scurf rim in the right iris and light scurf rim in the left iris. None of the subjects had dark scurf rim only in the left iris. 5.79% of subjects does not have scurf rim in both the eyes. As a result, this identification of scurf rim using Iridoscope (Iris diagnosis) has 94.21% of sensitivity to detect the skin diseases.

7.0 DISCUSSION

According to a study, patients with chronic skin conditions are about 94.21 percent likely to have a scurf rim in their iris. The skin is the largest organ in the body since it performs two essential functions, respiration and excretion. When it is absent, the kidneys, liver and other eliminative organs have to compensate. The body systems are interrelated and affect each other and are affected by each other. In the interior ecological processes, movement, change, and interaction are constants. Underperforming systems may have to work harder to compensate for hyperactive systems. Whenever a skin pore is blocked, toxins accumulate under the skin and return to the bloodstream. Benedict Lust writes in his seminal text that the origin of everything can be explained by accumulations of foreign material in the body's discarded organs: the kidneys and skin. The dermatological changes are clearly visible on a physical examination. Due to the fact that a number of internal diseases can appear on the skin, the health of various internal organs should be determined by examining the skin from head to toe. By the formation of scurf rims, the iris alerts us to approaching serious conditions of skin and internal eliminative organs such as the lungs, kidneys, liver, and intestines.

Summary of the findings

- Identification of scurf rim using Iridoscope (Iris diagnosis) has 94.21% of sensitivity to detect the skin diseases.

Strength of the study

- Non-invasive technique of diagnosis
- Not much technical knowledge need
- Simple and easy diagnostic tool
- Cost-effective
- Easy to handle and capture
- Findings of the present study is expected to pave way for technology development in the area of Iris diagnosis

Limitations of the study

- Small sample size
- No objective tools were used to validate the pathophysiological observations speculated.
- Rationale / significance of the type of lesion in an area and its association with the pathophysiology has not been taken into consideration for data analysis.
- Further progression or effacement of the scurf rim is not being observed through follow up.
- No intervention was given to see the difference in iris.

Suggestion for future studies

- Can do the study with larger sample size
- Also take in consideration of all the eliminative organs like lung, liver, and kidney as they are closely related to each other.
- Provide active intervention and observe the change in the iris.

8.0 CONCLUSIONS

Prominent scurf rim is seen in most of the patients with skin disorders. Hereby we conclude that iridology can be taken into consideration for diagnosing skin diseases. It can also help in detecting skin diseases and can be used as a non-invasive diagnostic tool.

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ANNEXURE-I

INFORMATION SHEET

- We are conducting a cross sectional observational study on the chronic skin disease and its relation with human iris among the patients of Government yoga and naturopathy medical college & hospital, Chennai and for that, your participation may be valuable to us.
- The purpose of this study is to observe the presence of scurf rim in the iris of the patients with chronic skin disease.
- The privacy of the patients in the research will be maintained throughout the study. In the event of any publication or presentation resulting from the research, no personally identifiable information will be shared.
- Taking part in this study is voluntary. You are free to decide whether to participate in this study or to withdraw at any time; your decision will not result in any loss of benefits to which you are otherwise entitled.
- The results of the special study may be intimated to you at the end of the study period.

Signature of Investigator

Signature of Participant

Date:

ANNEXURE-II

INFORMED CONSENT FORM: A SAMPLE COPY

Title of the study: Relation between Scurf Rim in iris and Chronic skin diseases.

Principal Investigator (PI): Dr. Seithoon Nisha M

Participant's Name:

I have been invited to participate in the research study titled "Relation between scurf rim in iris and chronic skin diseases." I understand that it will involve diagnosis with iridology, which may be useful for my well-being. I have been informed that iris analysis will be taken using standardized techniques of Iridoscope.

I am aware that there may be no benefit to me personally and that I will not be compensated whatsoever.

I had given the opportunity to ask questions about the study and the questions what I asked have been answered to my satisfaction.

I understand that I have the right to withdraw from the research at any time without affecting my medical care or legal rights.

Hereby, I confirm that I have understood the above study. I myself consciously give consent to participant in this study.

Date:

Patient's Signature:

I have accurately read or witnessed the accurate reading of the consent form to the potential participant, and the individual has given opportunity to ask questions. I confirm that the individual has given consent consciously.

Date:

PI's Signature:

ANNEXURE-III

PROFORMA

Government Yoga and Naturopathy Medical College, Arumbakkam, Chennai-106

Title of the study: Relation between scurf rim in iris and chronic skin diseases

Demographic Details:

Subject Code: OP/IP No:

Date:

Name:

Mobile:

Age (Years):

Education:

Gender:

Occupation:

Marital status:

Residing at: Urban/Rural

Address (PIN):

Height (meter):

Weight (kg):

BMI (kg/m²):

Outcome measures:

Parameters		Present	Absent
Right Eye	Scurf rim		
Left Eye	Scurf rim		

