SECTION-A

INTRODUCTION, OBJECTIVE, SCOPE
CHAPTER I. INTRODUCTION

1.1 THE SCIENCE OF DERMATOLOGY

1.1.1 Definition

The word 'dermatology' is derived from two Greek words: *derma* stands for skin and *logos* stands for discourse.

Dermatology is 'the science which deals with the skin, its structure, functions, diseases and their treatment.'¹

Dermatology is the medical specialty concerned with the diagnosis and treatment of skin disorders.²

The *Concise Oxford Dictionary of Current English* defines ‘Dermatology’ as ‘the study of the skin and its diseases.’³

It has also been defined as ‘the branch of science which treats diseases of the skin.’⁴

According to Pillsbury dermatology is concerned primarily with the diseases affecting the skin, not just diseases of the skin.⁵

The above definitions seem precise, but it fails to convey the immensity of the subject which requires a clear and in-depth knowledge of other branches of the medical science as well as some apparently unrelated subject (e.g., effect of the environment which has so many bearing on the skin) for the accurate diagnosis.
1.1.2 Evolution of the subject

'.....non illa pro simplici habenda est involucro, sed organum constituit.....'
Charles-Anne Lorry, 1777.

Skin is not just an envelop, but an organ.

The science of dermatology is one of the most ancient branches of clinical medicine. It had been historically dealt with as a part of the diseases of general medical disorders as well as some surgical conditions. Though the diseases of skin were dealt in medical practice with sufficient care in many countries in the world from ancient time, the process of awarding this subject an independent and modern status started only about three to four hundred years back in some countries like Italy, Germany, France, Austria etc.

Semantically the term ‘dermatology’ dates back to the third and fourth quarter of the eighteenth century. It is generally supposed that the first lecturer appointed under the term ‘dermatology’ was Antoni Rosner in 1858 at Cracow, Poland. Joseph Lindwurm became the first professor in dermatology (notably not in skin diseases as was told till this time) in the year 1863 in Munich. The first text in modern sense was written by Robert Willan(1757-1812) and he received the ‘John Fothergill Medal’ for it —first such honour in the history of dermatology. First suggestion to use histopathology in dermatological disorders came from the French school by Gilbert Breschet.

Dermatology in the beginning emerged as a branch of internal medicine during the 19th century. During 18th century many distinguished physicians began to note the prominent disorders of skin. At the end of the 19th century syphilis and tuberculosis took a central position in the kingdom of medical disorders. So the subject drew more attention and by the early 20th century some physicians started practicing dermatology as a special and separate subject. Vienna became the seat of modern dermatology and it was soon followed by Breslau, Berlin etc. The first international congress of dermatology was held in Paris in 1889.
In India, the history of modern dermatology dates back to the later part of the 19th century. In the beginning dermatology was taught as part of the internal medicine. The first chair of Dermatology was established in 1895 at Grant Medical College, JJ Hospital, Mumbai. In 1935-36 Dr. U.B. Narayan Rao started publishing a journal entitled *Indian Journal of Venereal Diseases* as an editor. Subsequently the name was changed to *Indian Journal of Venereal Diseases and Dermatology* in 1940. In the year 1947, the *Indian Association of Dermatologists and Venereologists* was formed and the first conference of this organization took place on 27th and 28th December, 1947. All medical colleges in India have a full fledged department in the subject at present and most of them are currently perusing postgraduate programmes in dermatology.

1.1.1 Present scenario

In the 18th century a long journey started and the subject of dermatology witnessed a dramatic progress in the clinical as well as in the field of medical research.

The science of dermatology has gained a lot from the advancement in researches on genetics, cell and molecular biology which happened in the past few decades. Skin is no more considered as an inert covering of the body. The change of homeostasis in cases of loss of skin in conditions like burn, erythroderma has revealed the immense role of the integument in maintaining the normal physiological condition of the body. Thus physiologists have found skin as infinite area of research. Skin has also become a rich field of study for various specialties of medical science. The function of the Langerhan’s cell in antigen presentation has fascinated the immunologists to work on it. The cutaneous absorption of many drugs and lessening of the side effect of many drugs which might have arisen if administered through other route has given pharmacologists an opportunity to exploit this route for the use of many drugs. Photobiologists have an ample scope of research in their field as skin is the most important target organ for the harmful rays.
Dermatology has not only attracted other specialty to work on it, but it has also led to the emergence of many subspecialties. Thus dermatopathology, immunodermatology, dermatopharmacology, dermatoonchology, paediatric dermatology, geriatric dermatology, dermatologic surgery, dermatologic LASER surgery, aesthetic dermatology etc. have widened the field to a great extent at present time.

Diseases of the skin is very important in posing burden on the country's economic scenario as some of the skin diseases may lead to the 'work day loss' as well as disability secondary to the deformity (e.g., in leprosy, mechanobullous disorders etc.) and/or intolerance of the working environment or substance (e.g., contact dermatitis). Now a day importance is given in the determination of the impact of dermatologic disorders on the daily life and therefore 'quality of life index' is calculated about the disease. The dermatologists of modern days will have to consider these factors in the management of a person.

So in present days dermatology is not merely confined to the study of skin diseases and treatment of it, but it is much more than that.

1.1.2 Future prospect

It is always very difficult to predict the future course of any subject particularly in reference of any time frame. Some single discovery may change the direction and pace of development of knowledge about a subject. We have noticed this phenomenon several times in the history of mankind. This fact is even more appropriate in the history of medicine. The discovery of penicillin has altered the management of infection radically. The discovery of corticosteroid has begun a new era in the treatment of the many hopeless diseases thought insurmountable till then. The discovery of 4:4diamino diphenyl sulphone (Dapsone) has changed the life and future of so many persons afflicted with leprosy who otherwise would have to live as a pariah. Similarly the newly evolved investigative procedures have
entirely transformed the concept regarding aetiopathology, diagnosis, treatment and prognosis of different diseases.

This may be assumed that the future will definitely see a sea change in the field of dermatology. There will be clear knowledge about the causation of many diseases with confusing aetiopathology, like collagen diseases, psoriasis, lichen planus, vitiligo ---to name but a few.

We may have more knowledge about the relation of skin disorders with other systems in the body. There may be further knowledge about the relation between brain and the skin. We will come to know more about the impact of various environmental factors on skin and its functions.

Many change in the current concept about the cause and effect of many diseases will be known to us. Being most easily accessible organ, skin will be used more and more in the medical research. Genetic engineering, molecular biology will use it for the purpose of many newer research strategies. Newer methods of drug delivery through skin will lead to the safer option of using many drugs that have not been tried or discarded so far for the fear of many side effects if used through other means.

Though the future can not be predicted, the pace with which the subspecialties are developing, it can be said with certainty that dermatology will take a very important role in the coming day’s medical world.

1.2 THE HISTORY OF DERMATOLOGY

1.2.1 About the need of the history

History is a record of the achievements of man.\textsuperscript{11} From the dawn of the history of mankind the knowledge of management of different bodily discomfort remained a primary prerequisite. The subject of medicine has started in the ancient time as empirical and passed through innumerable rectifications in the course of time to
reach to the present state. The same process is active today and will remain so in the future.

Now the question is; why one should have the knowledge of history of medicine?

The medical science we see today has not developed in a day. When we search the history of medicine it is found that the art of medicine has evolved into science through the process of gathering knowledge in the past by the process of trial and error, intuition and keen observation. To reach the diagnosis of a disease we need to have knowledge of symptoms and signs of that particular disease. The whole process thus required has evolved after a long history of observation for generations. The management and prognosis of the disease is also a reflection of the cumulative knowledge of the past.

The knowledge of history of medicine gives us relevant idea about the socio economic picture of that culture at that period. The history of famine or war has always been associated with a history of epidemic. The condition of that period gives us an advanced idea about the prevention of diseases if the similar calamities arise in the future.

Newer management of many diseases is the corollary of previous methodology. The use of psoralen in vitiligo had been derived from the old method of using Bavichi (Bakuchi) in India from time immemorial. The cosmetic correction of the deformed nose done at present as rhinoplasty is very much similar in principal with that practiced in ancient India during the period of Susruta or even before that. The process of cauterization we perform today is the result of our knowledge from the past. Hence we gather informations from the past that give us many new ideas which are of immense help in the present medical world.

The systematic study of history of medicine will enrich our present knowledge with many new information gathered by our ancestors with much care and great difficulties.
1.2.2 A brief history of dermatology in some countries (other than India)

The knowledge of medicine is as old as the history of mankind. In early days of history, men had to seek medical help when they were injured during hunting or fighting amongst themselves for various reasons. Hence every civilization had developed its own system and was related to its culture also. Skin diseases had attracted attention due to direct visibility and easy vulnerability. It had to be caught up in almost every injury of haunting or war. Persons afflicted with skin diseases were alienated from the rest of the society even at the early days of human civilization. We see mention of skin diseases in the entire major literary as well as religious works since ancient period. The references skin diseases are found in Rig-Veda—the earliest literature of Aryans. We see mention of skin diseases several times in the Old Testament in almost all the books like Genesis 9.8, Leviticus 13,14,21 and 22, Numbers 12.10, Deuteronomy 24.8, 2 Samuel 3.29, 2 Kings 5.1 and 5.27, Job 2.7, and 19.26. Skin diseases were considered so dreaded that there were also some laws implemented for barring a person from religious works (Leviticus 13). The Avesta, the sacred book of the Zoroastrians, dating back about B.C. 518 mentions about pruritus, some skin eruptions requiring isolation, scabies, leprosy, vitiligo etc. The Holy Qur'an also mentions about leprosy (? leucoderma) in the chapter of Al-'Imran in 3.49.

Every culture had developed a system of medicine, and medical history is but one aspect of the history of culture. If we analyze the medical practice of present days, it becomes evident that the medical practice of Mesopotamia, Egypt, Greece, Rome, India, China has influences that are clearly identifiable. As the exhaustive discussion about the history of medicine in general and that of dermatology in particular in these countries is not under the purview of this study, a brief discourse has been done in the next section. History of dermatology in some smaller countries like Lebanon, Israel, Iran, Guatemala, Nigeria are also discussed to see
the development of the subject at different corner of the world at present days. An in
depth account of the history of dermatology in India, the central topic of this study has
been undertaken separately.

**Mesopotamia**

Mesopotamia gave birth to one of the oldest civilizations in the world about 6000 years
back. Mesopotamia is often known as the ‘cradle of civilization.’ The basic concept of
medicine was based on magico-religious foundation. Along with the Assyrians and
Babylonians, Sumerians also started medical astrology. Their prescriptions were
compiled in clay tablets written in cuneiform writing. The king Hammurabi (2000 B.C.)
is well known in the history for the first codification of laws in the practice of medicine,
popularly known as the ‘Code of Hammurabi.’

The oldest medical text known to us is a 5000 year old clay tablet from Sumer, a city of
Mesopotamia. This tablet tells us about many lotions, salves and many other topical
remedies of the skin diseases. They used to formulate medicine using pulverized plant
product along with a specific wine known as *Kusumma* and cedar and other tree oil.
They also used honey in the preparation of some medicine for the treatment of many skin
ailments. Many tablets talk about about diseases like impetigo, leprosy, itching,
erysipelas, and jaundice. They were also well aware about some entities like skin, nails,
hairs, perspiration, pigmented skin lesions etc; birth marks were considered important in
the prediction of future of an individual. The ‘spotted evils’ were considered as an ill
omen.

**Egypt**

Egypt has a rich history of civilization. The history of Egypt is much known because the
inhabitant of Egypt developed pictographic writings by which they preserved the story of
their times in papyri. Egyptian medicine scaled its peak during the period of Imhotep
(2800 B.C.), who was known for the architecture of the step pyramid of Saqqarah along
with his able capacity as statesman as well as physician. Imhotep was so celebrated that
he was revered both as doctor and divinity.
The extensive references of different medical disorders and their treatment are found in the famous Edwin Smith papyrus (3500-2500 B.C.) and Ebers papyrus (2100 B.C.). The Edwin Smith papyrus is a treatise on surgery, whereas the Ebers papyrus is a compilation of about 800 prescriptions for some 70 diseases. This Ebers papyrus mentions dermatological conditions like swellings, tumors, eczema, scabies, boils, carbuncles, burns, sweating feet, nail disorders etc. Egyptians used to employ castor oil, tannic acid, opium, terpentine, gentian, senna etc. as medicines of plant origin and goose grease, fat of lion, hippopotamus, and snakes, bees as medicines of animal origin.16,18

Greece

The modern allopathic medicine owes the most to Greek medicine. The crest of Greek medicine was reached during 460-136 B.C. The greatest physician of the Greek medicine was Hippocrates (460-370 B.C.) known aptly as the “Father of Medicine.” He was the first to establish the disease on a base of reasoning instead of explaining on the ground of magical theory which was prevalent since past. His mammoth work was compiled into 72 volumes and known in the medical world as ‘Corpus Hippocraticum’. His oath of medical ethics is still followed today as the code of conduct of any doctor. The Greek medicine is based on the theory of four humors: phlegm, yellow bile, blood and black bile. Disease was believed to occur if there was any loss of balance amongst these humors.

In the Hippocratic writings there were a number of mentions of the skin diseases. In aphorism II: 15 there is reference of some papular lesions associated with fever. In aphorism III: 26 there are description of achrochordons, struma etc. The Greek physicians had knowledge about leprosy, lichen, psora etc. They used the word ‘pompholyx’ which is still in use. They also used the word ‘herpes’, though with some different meaning.19 It is presumed that by the word ‘lepra’ various skin diseases of different nature like scaly dermatoses, vitiligo etc were meant. Similarly, the term
'lichen' was used to describe ringworm or a tetter. Plato had also described many skin diseases in his work. According to Pusey, Hippocrates described urticaria also. Though the Greek physicians described a lot of skin conditions that were the result of their keen observation but most of the terms are not precise. They used same terms for many dissimilar disorders. The Western medicine owes a great deal to the Greek medicine for the present development.

Rome

The Romans conquered the Greeks but were influenced by the Greek medical philosophy. They had a keen sense of sanitation and gave adequate importance to safe drinking water, sewerage system etc. Several famous medical writings appeared during Roman Empire. The works of Celsus, Pliny, Dioscorides, Soranus and Galen are the most prominent of them. Aulus Cornelius Celsus (B.C.25-A.D.50) was the greatest medical writer whose medical work was discovered in the year 1443 by Tommaso de Sarzana in the papal library at St. Ambrose in Milan. His great encyclopaedic compendium contained agriculture, rhetoric, the art of waging warfare and works on medicine. The medical work was entitled De Medicina and consisted of eight volumes; the fifth and sixth books dealt with skin diseases. He used the term 'asptitudo' to describe urticaria. He had described many terms that were much used even today, though they might differ in meaning. We see the mention of erysipelas and gangrene in the chapter 26 of the fifth book. He described carbuncle, carcinoma, a condition ignis sacer (herpes zoster), chilblain, struma, furuncle, cerion ulcer, acrochordon, clavus, pustules, scabies, impetigo, vitiligo etc in the chapter 28 of the same book. The sixth book also deals with many skin conditions; few of them are mentioned here: about fall of hairs (chapter-1), porrigo or dandruff (chapter-2), sycosis (chapter-3), areae or alopecia areata (chapter-4), acne (chapter-5), lice (chapter-6), ulcer on the tongue (chapter-12), finger ulcer or paronychia (chapter-19) etc. Galen (130-205 A.D.), the physician to the Roman emperor Marcus Aurelius is remembered for his influence on the medical system which continued for centuries. He held that the diseases are due to three factors—predisposing, exciting and environmental, a concept so relevant even today. His Preternatural Swellings is considered as the first monograph on dermatology.
Cato (234-149 B.C.) mentioned about cancer of the skin in his *De Re Rustica*. Kriton (1st century A.D.) covered about 50 subjects in his 4 books on dermatological conditions, many of which are of cosmetological interest. Thus in ancient Rome dermatology witnessed an immense growth which not only influenced the contemporary medicine but had also cast its shadow for another 1500 years to come.

**China**

It is said that the first well thought-out medical system and philosophy arose in China during B.C. 2700. The Chinese medicine was based on the concepts of the *yang*—the masculine principle and the *yin*—the feminine principle. A perfect balance between these *yang* and *yin* is mandatory for a healthy body; on the contrary, any imbalance leads to diseases. They used dietetics, hydrotherapy, massage, drugs for the treatment of ailments. They practiced variolation to prevent small pox as a process of immunisation. Some Chinese legends mentioned that Sheng Nung (3000 B.C.) was considered as 'Father of Medicine'. Underground remains of the Shang Dynasty mentioned about 'chieh' or scabies. *Huang Di Nei Ching* written during 2nd to 5th centuries B.C., mentions about the physiological aspects like sweating pores and pathology of the skin. Tsao Yuan-Fang wrote about more than 60 skin diseases in his book "Aetiology and Pathogenesis of diseases". Common disease condition like urticaria had been mentioned in the early Chinese medical literature of seventh century as Fong-Tzen-Kwai. There were many specialized volumes on the subject of dermatology in ancient days: Wan Ken-Tang's 'Wai Ko Zhun Chun' (1600 A.D.), Chen Si-Gung's 'Wai Ko Zhen Zhong' (1760 A.D.), Gu Si- Cheng's 'Yang Yi Da Chuang' or encyclopedia of external diseases etc. A record recovered from the excavation of the period of the Han Dynasty revealed about 100 stuffs for the treatment of skin diseases. Leprosy was prevalent in ancient China. Ren bei-Niu, one of the disciples of Confucius had leprosy—a fact 2500 years old. Old medical classics like *Huang Di Nei Ching* and *Seng Nung Pen Tsao* mentioned clearly about leprosy. Chaulmoogra seeds were used along with the other medicines for the treatment of leprosy during early Tang Dynasty. The beauty of modern Chinese dermatology and medicine is that unlike most other civilization they have not forgotten the past, rather trying to renovate the inherited treasures in the light of modern scientific knowledge.
Israel

The dermatological knowledge of the old Israel has already been discussed in the beginning of this section. Birth mark was noticed by them. People of ancient Israel used to wash the newborn and anoint them for a smooth and supple skin. ‘Zaraath’ was a condition, known to them, probably similar to leprosy.¹⁷

Iran

The Zend Avesta the ancient Persian religious work dating back to 518B.C. mentions about skin eruptions and pruritus. Hypertrichosis in children was considered as an influence of demon.¹⁸ It also described about scabies, vitiligo, leprosy etc. Razes (A.D. 865-925) was first to differentiate small pox from the measles. He was also first to sketch a proposal of acquired immunity. Avicenna (A.D. 980-1037) is another great physician whose work influenced the Graeco-Arabic as well as European medicine for many centuries. He described elephantiasis, leprosy, various hair and nail disorders, vitiligo etc. An observation on pemphigus is attributed to him. Afterwards the transition to modern dermatology took place under the influence of Western Medicine.²⁷

Lebanon

The concept of dermatological practice in this country is not very old. The culture of dermatology here revolves around two main centers: the American University of Beirut (AUB) and the Université Saint Joseph (USJ). The program in dermatology began in 1890 in AUB at the Syrian Protestant College and Charles B. Bliss was the first to hold the chair. The first chair of dermatology in USJ was occupied by Daniel Escher in 1936. The Lebanon is a developing country but it has a craze for the modern medicine which is also evident by the immense interest of the dermatologist in the cosmetic dermatology. The dermatology, as also the other branches of medicine has a great influence of Western medicine.²⁸
Guatemala

Guatemala is situated in Central America. On March 16, 1881 the first Military Hospital was established to render medical service. In those days there were no separate specialist for dermatology and general doctors were responsible for treatment of all sorts of diseases. On interesting fact of those days was that the patient with a venereal disease was to pay a fine of 50 cents and in the event of recurrence he/she had to pay two-third of the salary. In 1935 two pavilions were built for the patients of skin diseases. Dr Fernando Cordero was the first to be appointed as the Chief of the service of Dermatology and Venereology in 1945. On June, 1975 Dermatology was included in the medical curriculum as a separate topic. Till then the subject is gradually developing in great extent in different centers like Guatemala Institute of Social Security, Policlinica, Hospital General de Enfermedad Comun, Unidades Perifericas, Centro de Atencion Medica Integral para Pensionados, Hospital General San Juan de Dios, Instituto de Dermatologia y Cirugia de Piel etc.

Nigeria

The history of dermatology in Nigeri is very young. Before 1950 traditional medicine composed of magico-religious background was the mainstay of the subject. Modern medical therapy was imparted by the internists and general medical practitioners. In 1950 Dr George HV Clarke pioneered the establishment of dermatology at General Hospital in Lagos the then capital of the country. Clarke expressed his experience in a book “Skin diseases in Africa.” Another great man in the history of dermatology in Nigeria was Dr Stanley George Brown who did enormous work on leprosy. He worked on granuloma multiforme, also known as Mkar disease named after a village in Northern Nigeria. Thus the dermatology was started and at present it is an established specialty though with much shortage of trained personnel in comparison to what is actually needed.
CHAPTER II · OBJECTIVE AND SCOPE

2.1 AIM OF THE PRESENT STUDY

India is a country with a glorious past. The civilization of this country was at its zenith when most of the developed countries of present days were either in dark or was in their infancy. Subsequently with the passage of time, as per the tradition of history, the past was forgotten. When other countries beating the drum of success not long acquired in different fields, we failed to attract the world’s attention towards us either due to lack of enough effort or due to mere ignorance. Such was the story in the field of medicine. Even at present days there is very little well conducted study in the history of dermatology in India. The present work has been undertaken to study the history and evolution of dermatology in India since the ancient time.

Thus the aim of the present study will be as follows:

- To accumulate and study different works that give us an idea of evolution of dermatology in India;
- To know the status of the subject in the contemporary medicine;
- To analyze the notion of the medical men about the dermatological disorders;
- To see the common men’s attitude towards patients with skin diseases;
- To study how the science of dermatology was nurtured in our own way medicine and culture;
- To enumerate and discuss how different systems of medicine dealt the skin diseases in reference to their own principle;
- To search how the subject was systematized and organized to the present state;
- To find out the way by which the knowledge about the history of dermatology in India can further be enriched and percolated in the medical world; and
• To see how much of the indigenous thinking has influenced the modern dermatology in terms of research, therapy and miscellaneous matters.

2.2 SCOPE OF THE PRESENT STUDY

The present study has numerous scope of enriching the history of not only dermatology but also the medicine in general. The study may lay concrete on the path for the different areas for further studies on the subject:

• It will help to study the history of dermatology in this country;
• It will help to know the history of medicine in general, as dermatology is an integral part of the medicine;
• One may find out many newer mode of treatment for various skin diseases which may not have very effective treatment in present day medicine (as was the case of using psoralens for pigmentary disorders);
• The indigenous method may be more accessible and cheaper. So an already known but less practiced method may appear from the forgotten and little read literature. China has established that the older method can be intertwined with the modern method. So studies may be undertaken by the therapist and researchers in this regard;
• By studying the history of dermatology in our country and its link with the rest of the world one may know many information yet unknown about our past,
• The study may give an idea about the basis of many newer treatment which are actually practiced in old days and therefore not new at all.(e.g., thermocautery, heliotherapy);
• The study may give an idea about the epidemiology and variation of different diseases in the past( as we see many literatures about leprosy in the past whereas none about AIDS);
• The study generates a scope of research on socio-economic condition and the attitude of the state and society towards the disease and patient suffering from them in different ages(e.g., leprosy may be a ground for divorce and it may take away the right to take part in various social rituals in many societies; according to
the Dayabhaga School of Hindu law a leper may be excluded from the inheritance of properties.31 Even today according to the section 13(1) of the Hindu Marriage Act of the Indian Constitution leprosy and venereal diseases may constitute a ground for divorce,32 or it could be ground for separate living and maintenance according to clause (c), Section 18(2) of the Hindu Adoption and Maintenance Act, 1956 33);

- The study may help in performing research on anthropological field for analyzing the taboos and practices of different races and tribes (e.g., shamanism of the past);
- The study may give an idea about the acculturation amongst various methods of treatment developed at different places (e.g., effect of Greek Medicine on Unani and Tibb systems);
- Lastly this class of study gives us an opportunity to propagate our inherited knowledge to the rest of the medical world that can be used to alleviate the pain and agony of many patients worldwide.