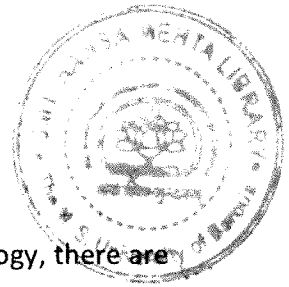


CHAPTER-2

AIMS & OBJECTIVES



2.0 Aims & Objectives

Effect of mud has been studied in varied fields. In the field of Dermatology, there are many chronic diseases and allopathic medicines face a lot of limitations, major one being side effects and the other, being costly. Due to this, a large number of people opt for alternative therapies. As mud is the **cheapest, easily available, and natural element** (so less risk of side effects), it is widely used as a therapeutic agent in complementary and alternative medicines. As described earlier, studies conducted in foreign countries (Italy, Russia, Israel) have shown positive results from its use, but as no scientific documented reports are available on therapeutic use of **muds of India**, we selected to **study four different Indian muds with respect to their efficacy in the treatment of psoriasis, eczema, and acne**. The study was also aimed to **grade the different muds with respect to their therapeutic efficacy**.

Hypothesis:

It has been postulated in our '*shastras*' that human body is made of mud. So we hypothesized that if "if the same natural thing which is similar in composition with our body, is used as medication, then it will be a safe, effective, bio-compatible, bioacceptable and **eco-friendly medicine**."

Our objective was also to prepare patient friendly formulations which would not restrict their mobility. The traditional method of using mud is to apply thick layers of mud on the affected body part or full body, leave it for 30 to 40 minutes and then wash it or take a bath. All this would mean that patient has to spare atleast in **total one and a half hour** for the therapy. Moreover if bath is taken by the patients at their house then it may choke up the drainage pipelines of the house. So the patient would have to take the therapy in Nature Cure Centres where mud is drained in the open. So our aim was also to see **whether applying little amount (compared to layers) of mud, to the affected part (unlike full body bath)** gave beneficial effect or not. If successful, this would save a lot of mud being wasted.

Our literature search revealed that therapeutically, mud is being used either as a mud bath or as mud packs. The former requires enrolment in Nature Cure Centres while the later suffers from subjective variability in application. Hence, our **second**

objective was to design and develop various newer formulations of mud which would control the amount of application, reduce subjective variability and hence improve therapeutic outcomes.

We also aimed to correlate physical and chemical properties of mud with its therapeutic efficacy for various skin disorders like psoriasis, eczema and acne.

As summarized in fig.no 7 and table no 10 we could observe the highly complex nature of the actions of mud in the treatment of various skin disorders. However, for successful commercial exploitation of our developed mud formulations it was necessary to scientifically explain its mechanism of action. Hence, we aimed to identify a few markers which could be correlated to the therapeutic efficacy of various muds and their formulations. From the large no. of constituents, we focused on monitoring the efficacy of mud with respect to changes in Humic acid, elements like Ca, Mg, P, etc, carbon (total and organic) and antimicrobial activity.

Plan of work

- (1) Literature survey, collection of four mud samples from three locations in India namely Kerala, Dwarka, and Vadodara.
- (2) Physical and Chemical characterization of various mud samples with respect to colour, moisture content, particle size analysis, pH, electrical conductivity, chemical constituents etc.
- (3) In vitro skin penetration studies of constituents of soils.
- (4) Preliminary clinical studies to study the efficacy of muds.
- (5) Design and development of mud formulations like paste, lotions, mud compress, powder, spray etc.
- (6) Clinical studies of developed formulations on patients of psoriasis, eczema and acne.
- (7) Analyzing correlation between properties and therapeutic activity of the muds.