ABSTRACT

Introduction- Skin is the largest organ of our body. Beauty and attraction of individual depends upon it’s health. Shwitra ruins this beauty by causing depigmentation over different parts of body. It is described with Kushtha in most of the Ayurvedic classics. Pitta Dosha and Rakta Dhatu Dushti are considered main causes for skin diseases in Ayurveda. According to modern dermatology, Shwitra can be correlated with Vitiligo. Vitiligo is a progressive disease in which melanocytes are gradually destroyed causing depigmented or hypopigmented areas over skin. Researches suggest vitiligo may arise from autoimmune, genetic, oxidative stress, neural or viral causes. Materials and methods- Different Ayurvedic and modern parameters as per WHO (world Health Organization) were taken to diagnose the patients of Vitiligo(Shwitra). In this work blood samples of patients diagnosed with Shwitra were taken for hemoglobin level estimation to find out correlation as per told by Ayurveda considering Hb level as representative of Rakta. The study was conducted in OPD patients of Kayachikitsa department IPGT&RA, Gujarat Ayurved University, Jamnagar, India. Total 43 patients enrolled for study. Results: Observations based on investigations were highly supporting Ayurveda hypothesist. But this stands true for female patients exclusively as most of the male patients diagnosed Shwitra were having normal hemoglobin level as per WHO criteria.

KEYWORDS- 1: Shwitra 2: Rakta 3: Vitiligo.
INTRODUCTION
Skin is the largest organ of our body. Beauty and attraction of individual depends upon its health. Shwitra ruins this beauty by causing depigmentation over different parts of body. It is described with Kushtha in most of the Ayurvedic classics. It is said to occur when Doshas get vitiated in Rakta Dhatu.\(^\text{[1]}\) Pitta Dosha and Rakta Dhatu Dushti are considered main causes for skin diseases in Ayurveda. According to modern dermatology, Shwitra can be correlated with Vitiligo. Vitiligo is a progressive disease in which melanocytes are gradually destroyed causing depigmented or hypopigmented areas over skin. Researches suggest vitiligo may arise from autoimmune, genetic, oxidative stress, neural or viral causes. In Ayurveda it is postulated that disease arises from vitiated Doshas in Rakta Dhatu.\(^\text{[2]}\) It is an attempt to know any direct correlation between hemoglobin concentration and disease Shwitra considering hemoglobin as nearest correlated Rakta Dhatu from modern point of view.

AIMS
To find relation between hemoglobin and Rakta Dhatu.
To know relation between Shwitra and hemoglobin level.

OBJECTIVES
To achieve the target, patients diagnosed as positive cases of Shwitra were tested for hemoglobin level in the body.

Hypothesis
Null hypothesis
There is no relation between hemoglobin(Rakta Dhatu) and Shwitra.

Alternative Hypothesis
Shwitra is associated with definite changes in hemoglobin level in body.

MATERIALS AND METHODS
Objectives of the study: To know correlation between Shwitra and hemoglobin concentration in otherwise healthy adults (male and female both).

Study design
The patients were selected from O.P.D and I.P.D of IPGTRA, GAU, Jamnagar, Gujarat, India. Total 43 patients between the age group of 16-70 years, fulfilling the criteria for the diagnosis of the disease were registered for the study. Blood samples were collected and
hemoglobin levels were estimated. Further this data was merged with 3 other studies conducted at the same institution on same disease within same age group. Though all studies were interventional but for present study only observations for hemoglobin percentage at the beginning of study were taken to know the relation of hemoglobin level and disease.

**Inclusion criteria**

Patients fulfilling criteria for diagnosing Shwitra and age group 16 to 70 years were included in study.

**Exclusion criteria:** Patients having any serious diseases, pregnant and lactating women.

**DIAGNOSTIC CRITERIA**

Diagnosis was made on the basis of classical signs and symptoms of Shwitra (Vitiligo) described in Ayurvedic texts & modern medical science-

- **MODERN**
  - Depigmented macules
  - Trichrome: Three shades:
    - Central part is depigmented, surrounded by a hypopigmented rim and normal pigmented skin around it.
  - Leucotrichia: Hairs remain same but in older cases they also get hypopigmented.
  - Koebner’s phenomenon: Hypopigmentation over sight of injury margins.

- **AYURVEDA**
  1. **Tvak varna**
     *Rakta, Tamra, Shweta*
  2. **Roma**
     *Shukla roma*  
     *Rakta roma*

**Investigations**

1. Blood – Hb %, TLC, DLC, E.S.R., R.B.S. etc.
2. Urine – Routine & Microscopic examination.
3. Stool macro and microscopic investigation to ascertain the presence of *Krimi* if any.

All tests were performed on first visit of patients.
OBSERVATION AND RESULTS

Blood samples were taken from all patients and mean hemoglobin percentage was calculated based on individual hemoglobin level. All investigations were performed at Pathology lab ipgt&ra. In this study out of 43 patients 22 were male and mean hemoglobin for these patients was 14.25 g/dL and for 21 female patients mean hemoglobin value was 11.47 g/dL.

Mean hemoglobin for all 43 patients was 12.89 g/dL. Specimen from which information collected was too small, so to get large sample size this data was merged with 3 other studies conducted on Shwitra in same institution.

Observations of all studies are as shown in table below

<table>
<thead>
<tr>
<th>Sr.no.</th>
<th>Speciality</th>
<th>Scholar</th>
<th>MD Thesis Title</th>
<th>Hemoglobin (Mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-</td>
<td>Kayachikitsa</td>
<td>Nirank Kumar (n=43)</td>
<td>A comparative clinical study on Mitrapanchaka Yoga and Avalgubjeejadi Lepa in the management of Shwitra w.s.r. to Vitiligo</td>
<td>12.89 g/dL</td>
</tr>
<tr>
<td>2-</td>
<td>Rasashashtra and Bhaishajya Kalpana</td>
<td>Hasmukh R. Jadav(n=50)</td>
<td>Pharmaceutical standardisation of two different dosage forms of Apamarga Kshara Yoga and their clinical efficacy on Shvitra (Vitiligo)</td>
<td>12.91 g/dL</td>
</tr>
<tr>
<td>3-</td>
<td>Rasashashtra and Bhaishajya Kalpana</td>
<td>Dr. Rahul K Shingadiya(n=50)</td>
<td>Pharmaceutical standardization of two different dosage forms of Savarnkara yoga and its efficacy on Shvitra (Vitiligo)</td>
<td>12.90 g/dL</td>
</tr>
<tr>
<td>4-</td>
<td>Panchakarma</td>
<td>Nilesh Kumar L Patel(n=29)</td>
<td>Dhatryadi Kwatha &amp; Manhshiladi Lepa Along With And Without Trivritadi Yoga Virechana-Shvitra (Vitiligo)</td>
<td>12.55 g/dL</td>
</tr>
</tbody>
</table>

RESULTS

Considering all subjects together total no of patients 172 and mean hemoglobin value 12.81 where as mean hemoglobin value in world for hemoglobin Men: 13 to 18 g/dL.

Women: 11.5 to 16.5 g/dL.[6]

On comparison to normal hemoglobin concentration range in world population the sample taken for study shows hemoglobin concentrations below the normal limit in case of males whereas near to lower limit in cases of females (but within normal range).

DISCUSSION

Acharya Charaka gave idea of skin conditions originating from vitiated Doshas in Rakta Dhatu.[7] Pitta Dosha is mainly associated with all skin conditions. Skin is also a site of
Bhraja Pitta which is in direct contact with blood(Rakta), Ranjaka Pitta is responsible for normal colouration of Rakta which ultimately gives colour to skin. It can be understood with the examples of diseases like Pandu\(^8\) (Anemia) and Kamla\(^9\) (Jaundice) in which affected Rakta Dhatus causes abnormal skin colour (white and yellow respectively). Whenever Pitta Vardhaka Ahar Vihar is taken this increased Pitta Dosha does direct effect on Rakta Dhatus. It causes Dushti of Rakta Dhatus. Rakta is having access to whole body so whenever affected can have widespread manifestations. Visarpa (cellulitis) is also caused By Rakta Dhatus as a Dushya and shows manifestations on skin.\(^{10}\) Vatarakta (gouty arthritis) is also a Rakta Pradoshaja Vikara which also shows skin manifestations.\(^{11}\) Virechana (Purgation) is said to be the best medicine for Pitta.\(^{12}\) Virechana also reduces increased blood pressure\(^{14}\) and increased blood sugar level\(^{15}\) which is a direct evidence of its working on Rakta Dhatus. Also Shrinsana (Purgation)\(^{16}\) and Rakta Mokshana\(^{17}\) (blood letting procedure) Chikitsa told for Shwitra by Acharya Charaka are for Rakta Dushya and Pitta Dosha.

CONCLUSION

Decreased haemoglobin level in patients affected by Shwitra (vitiligo) gives strong correlation between Rakta Dhatus and hemoglobin. It also indicates that low hemoglobin level can be associated with disease Shwitra.

REFERENCES

2. Charaka Samhita, Charak, Vidyotini hindi commentary by Kashinath Pandey and Gorakhnath Chaturvedi, Publisher Chaukhambha Bharti Academy, Reprinted 2009, Sutra 28/11-12, Pg 572.


