CHAPTER 5
MATERIALS AND METHODS

This part of the work deals with the materials and methods of the research work carried out in the study.

Materials:

1. Literary study and 2. Observational study

Collection of materials:

Literary study: References from various Ayurvedic classics, other ancient texts were collected and analyzed.

Literary references were collected from the following texts and other sources:

- Charaka samhita with its reputed commentaries
- Sushruta samhita with its reputed commentaries
- Ashtanga hridaya with its reputed commentary
- Ashtanga sangraha with its reputed commentary
- Madhava nidana with its reputed commentary
- Sharangadhara samhita with its reputed commentary
- Bharatiya darshana
- Sarvadarshana sangraha
- Nyaya-vaisheshika by Rashtriya Sanskrit Sansthan
- Padartha tatva nirmayaha by Rashtriya Sanskrit Sansthan
- Brihat dhatu kusumakara
- Tarka sangraha
- Text book of Padartha vijnana by Dr. Heeralal Shivahare
Materials and Methods

- The Shabda kalpa druma
- A Sanskrit- English dictionary by Sir Monier Williams
- Amarakosha
- Ayurvediya moulika siddhanta by Dr. V.J.Thaker
- Ayurvediya shabda kosha
- Vedanta samvatsara by Mahamahopadhyaya Vidvan K.G. Subraya sharma.
- Nidana lakshanayoho sambandha by Gujarat Ayurveda University, Jamnagar
- Laghu siddhnata kaumudi
- Sobodha samskruta vyakarana by Sri D.N.Shanbhag
- Pramana paddati by Poorna prajna samshodhana mandira
- Shaankara siddhanta by Mahamahopadhyaya Vidvan K.G. Subraya sharma.

Websites

- Retrospective studies

Sources of data:

- Library, Sri Sri College of Ayurvedic Science and Research, Bengaluru.
- Library, Tilak Maharashtra Vidyapeeth, Pune.
- Library, Government Maharani Sanskrit College, Mysuru.
- Personal library (collections) of Mahamahopadhyaya Vidvan K.G. Subraya sharma, Bengaluru.
- Library / publication division of Poorna prajna samshodhana mandira, Bengaluru.
- Library / publication division of Rajiv Gandhi Sanskrit Mahavidyalaya, Shringeri, Karnataka.
**Observational study:** Diagnosed cases of Amavata of either sex were collected for the study. A detailed proforma was prepared considering different reasons pertaining to Amavata in Ayurvedic classics for the assessment.

**Methodology:**

**AIM:**
1. To study the relation between nidana and lakshana with special reference to Amavata.

**OBJECTIVE:**
1. To study the correlation between nidana and lakshana.

**Type of Study:**

* Literary study
* Observational study.

**Literary study:** Literary study was conducted by collection of various data from classical texts of Ayurveda, darshanas, grammar and translations. The data was applied with various grammatical applications to understand the depth of the meaning from its root. Data were analyzed applying tantrayukt, arthashrayas.

**Observational study:** Observational study was conducted by collection of various diagnosed cases of Amavata from different OPD’s and IPD’s of SSCASR Hospital, Bengaluru. Data thus collected was analyzed with the nidanas mentioned for Amavata in correlation with the symptoms produced.

**Research Design:**
The present study was a *retrospective cross sectional study*. Diagnosed cases of Amavata of either sex were collected for the study between the age group of 20 to 50 years by a non randomized method. The causative factors in each case were collected and compared with the symptom produced.

**Source of data:**
The patients form OPD and IPD of Sri Sri College of Ayurvedic Science and Research, Bengaluru were collected for the study.

**Method of collection of data:**
The diagnosed cases of Amavata were taken by cross sectional random method of either sex between the age group 20-50 years.
The data were collected in a detailed Case Record Form (CRF) prepared for the study.

**Inclusion Criteria**

1. Patients with classical signs and symptoms of Amavata, including all types of joint inflammatory disorders.
2. Both sexes.
3. Age group: 20-50 yrs.

**Exclusion Criteria**

1) Cases involving other systemic disorders.
2) Age - less than 20 years and above 50 years.

**Sample size** - Minimum of 350 patients.

**Sampling method:** Cross sectional simple random method.

**Parameters**

Subjective –

2. Reasons for Amavata.

**Table no. 5.0: Classical signs and symptoms of Amavata**

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Signs and Symptoms</th>
<th>Present</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Weakness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Heaviness in the chest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Stiffness of the body</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Body ache</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Tastelessness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Excessive thirst</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Lethargy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Heaviness all over the body</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Fever</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Indigestion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Swelling in the body parts</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A Retrospective Cross Sectional Study On the Relation Between Nidana And Lakshana With Special Reference To Amavata

Table no. 5.1: Reasons for Amavata

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Nidana</th>
<th>Present</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Viruddha ahara/ Incompatible food</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Viruddha cheshta / Improper activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Mandagni/ Reduced digestive capacity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Nishchala/ Sedentary life style</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Vyayama after snigdha ahara</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Observations:

The observations made were classified according to the frequency of the reasons involved, development of the pathogenesis according to the classical texts and the symptoms developed.

Statistical analysis:

Following descriptive and inferential statistics were employed in the present study.

Descriptive statistics

The Descriptive procedure displays univariate summary statistics for several variables in a single table and calculates standardized values (z scores). Variables can be ordered by the size of their means (in ascending or descending order), alphabetically, or by the order in which the researcher specifies.

Following are the descriptive statistics employed -

Mean, S.D, frequency and percentage

Inferential statistics

Cramer’s V Test (Cross tabulations)

The Crosstabs procedure forms two-way and multiway tables and provides a variety of tests and measures of association for two-way tables. The structure of the table and whether categories are ordered determine what test or measure to use. Cramer’s V test was employed in the present study.
Cramer’s V is a measure of association between two nominal variables, giving a value between 0 and +1 (inclusive). It is based on Pearson's chi-squared statistic. In the present study Cramer’s V test was applied to find out the association between grades and duration for various parameters selected.

**Chi-square test**

The Chi-Square Test procedure tabulates a variable into categories and computes a chi-square statistic. This goodness-of-fit test compares the observed and expected frequencies in each category to test either that all categories contain the same proportion of values or that each category contains a user-specified proportion of values.

All the statistical methods were carried out through the SPSS for Windows (version 23.0).