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Comparative Study of Structural Changes in *Janusandhi* in *Amavat* and *Sandhigatvat*

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Abstract

This dissertation aimed at the comparative study of structural changes in *Janusandhi* i.e., Knee joint with special reference to *Amvat* and *Sandhigatvat*. These days joint pain is very common complaint of the patients all over the world creating great social health concern. *Amavat* and *Sandhigatvat* are the critical diseases from treatment as well as prognosis point of view[5,6]. The severity of pain is much more in these diseases due to continuous progressive degenerative changes. Ayurvedic science, the most ancient & trusted medicinal system, has explained *Amvata* and *Sandhigatvat* diseases with detailed and appropriate pathophysiology[5,6]. This study includes assessment of literary as well as clinical aspects of *Amavata* and *Sandhigatvat* diseases affecting significantly knee joint i.e., *JanuSandhi*·On the basis of clinical study of 30 patients each having *Amavata* and *Sandhigatvat* and the changes occurring in affected *JanuSandhi* the inferences are drawn. In *Sandhigatvat* maximum patients showed osteoporosis, osteophytes, loss of joint space whereas in *Amvat* maximum patients had muscle wasting.

Keywords

Janusandhi, Amavat, Sandhigatvat, Ayurved

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INTRODUCTION

Ayurved is a science of life which is based on unique concepts &principleswhich are established after studying about them for long time by great ancient *Acharyas*. This science has curative, preventive & holistic approach for disease free life. A vaidya who has sound knowledge about the *sharir* can understand the ayurvedic concepts & can be beneficial for society through good clinical practises. For good clinical practice, an updated knowledge of *sharir* is essential. *Acharyas* treated patients without help of any investigations in ancient era. It is beyond our imagination.Many researches are going on for improvement of the complicated and disabling diseases like *Amavata* and, *Sandhigatvat*. Still it needs more enlightening for improvement of its understanding which will impart good results in its management.

Janusandhi is the largest synovial joint of the body, as it bears weight of wholebody[8] .The commonly occurring disease of *Janusandhi* are *Amavat* and *sandhigat* having the chief complaints of joint pain , joint swelling, disfigurement & disability of joint, mainly affecting theknee joint [5,6].In Ayurvedic practice the percentage of patients suffering from *Amavat* and *sandhigatvat* is very high the and ayurvedic medicines play important role in treating these diseases whereas the modern science has limitations in treatment of these diseases. Hence to upgrade the knowledge about these diseases from clinical & prognosis point of view this study has been designed. To understand the severity of structural changes in knee joint in these diseases for improving practical knowledge, the present subject is chosen.

AIMS & OBJECTIVES

- To study the *Janusandhi* and knee joints according to Ayurved & Modern Science.
- To study *Amavat* disease in detail according to Ayurved & Modern Science.
- To study *Sandhigatvat* disease in detail according to Ayurved & Modern Science.
- To study the structural changes in *Janusandhi* due to *Amavata*.and *Sandhigatvat.*

MATERIALS AND METHOD

Material-

A) Literary Research

- ✓ Literary review of janusandhi from various ayurvedic texts
- ✓ Literary review of Knee joint from modern point of view

✓ Literary review ofAmavat from both ayurvedic& modern point of view

✓ Literary review of sandhigatvat. from both ayurvedic & modern point of view

B) Cadaveric dissection:-Cadaveric dissection was performed for detailed knowledge of structures around it.

C) Clinical Study –

a)Study design

Total 30 patients of each disease were selected irrespective of age, sex, religion.

- **Inclusion criteria**–Patients having complaints of Knee Joint & diagnosed as having

Amvat & *Sandhigat Vat*

- Age- 30 to 60

-Sex – Both Male and Female

- **Exclusion criteria**- Trauma, Fracture, congenital anomalies and other joint disorders

METHODS

A) Informed consent

The subject undergoing this study was informed about the nature of the study and written consent of each subject involved in the study was taken.

B) Study evaluation –

1 Special case paper was designed for diagnosis of these diseases with the help of ayurvedic *samhitas.*

2 Age ,sex weight and address were noted of each patient

3 Past history of any pre-existing disease was noted.

3 Hereditary history (*kul-vruta*) was noted

4Symptoms of said disease are verified with the help of case paper

5 Investigation reports are collected.

6 Radiological evaluation i.e. X-rays of affected knee joint/s of the patients included in the study were achieved.

RESULTS

Table 1 Age wise distribution in study group

Disease	Age (yrs)			Total
	30-40yrs	41-50yrs	51-60yrs	
Amavat	4(13.3%)	20(66.6%)	6(20%)	30
Sandhigatvat	0(0%)	14(46.6%)	16(53.3%)	30

Table 2 Sex wise distribution in study group:-

Disease	Sex		Total
	Male	Female	
Amavat	8 (26.6%)	22 (73.3%)	30
Sandhigatvat	12 (40%)	18 (60%)	30

Table 3 Stagewise distribution:-

Disease	Stage			Total
	Early	Mid	Late	
Amavat	4 (13.3%)	20 (66.6%)	6 (20%)	30
Sandhigatvat	0(0%)	14 (46.6%)	16 (53.3%)	30

Table 4 Intensity of Painwise distribution in study group:-

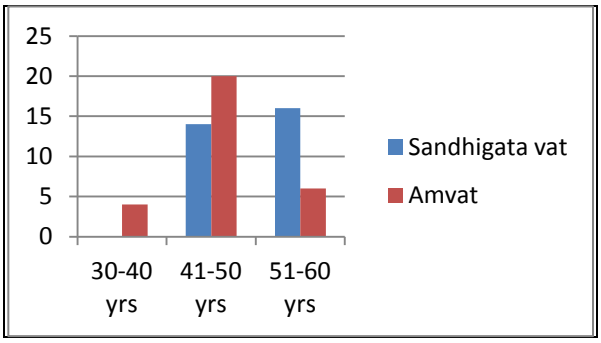
Disease	Pain			Total
	Mild	Moderate	Severe	
Amavat	10 (33.3%)	14 (46.6%)	6 (20%)	30
Sandhigatvat	6 (20%)	8 (26.6%)	16 (53.3%)	30

Table 5 Degree of swelling wise distribution:-

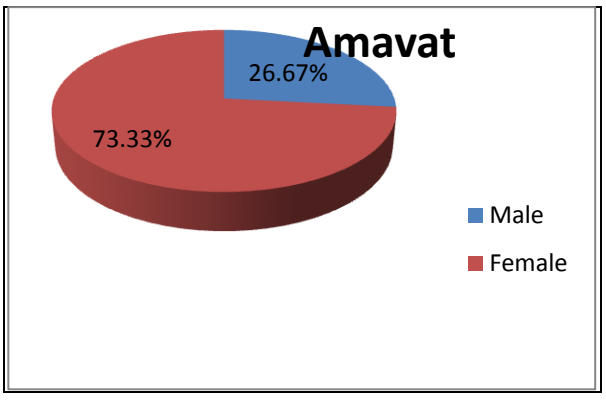
Disease	Degree of Swelling			Total
	Mild	Mid	Severe	
Amavat	2(6.6%)	16(53.3%)	12(40%)	30
Sandhigatvat	8(26.6%)	14(46.6%)	8(26.6%)	30

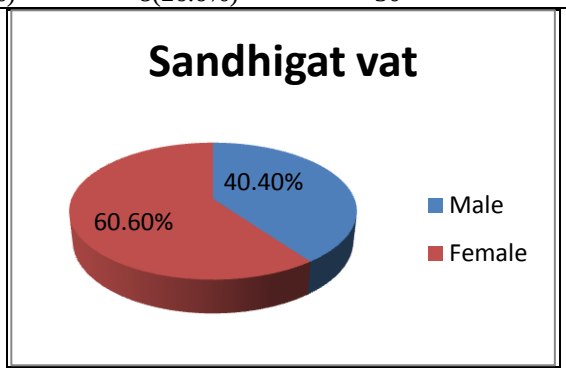
Table 6 Structural deformities in study group:-

Structural Changes	**Amavat**	**Sandhigatvat**
Osteoporosis	4 (13.3%)	16 (53.3%)
Osteophytes	0(0%)	10 (33.3%)
Loss of joint space	2 (6.6%)	20(66.6%)
Muscle wasting	22 (73.3%)	2 (6.6%)
Cyst formation	0(0%)	21(6.6%)
Meniscus tear	6 (20%)	0(0%)
No change	4 (13.3%)	16 (53.3%)

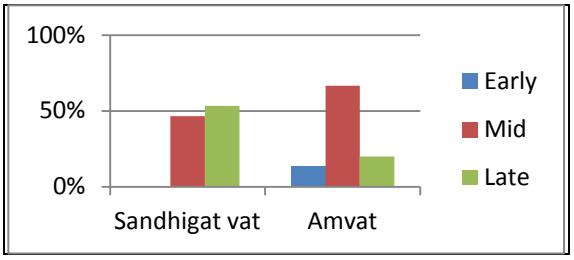


Graph No (1) Age wise distribution in study group

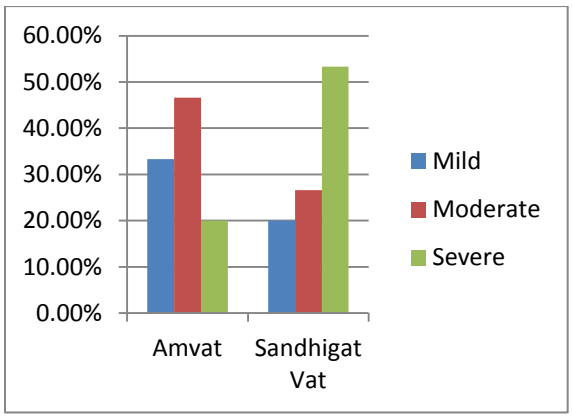




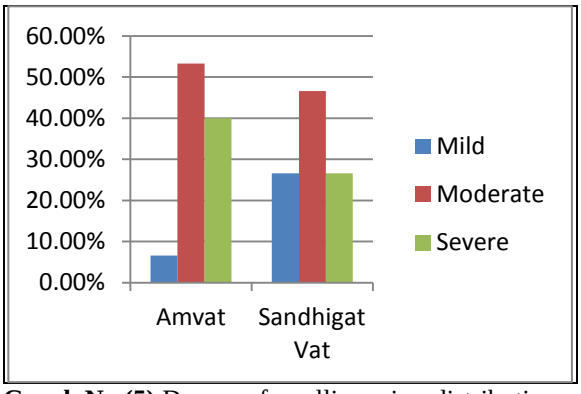
Graph No (2) Sex wise distribution in study group



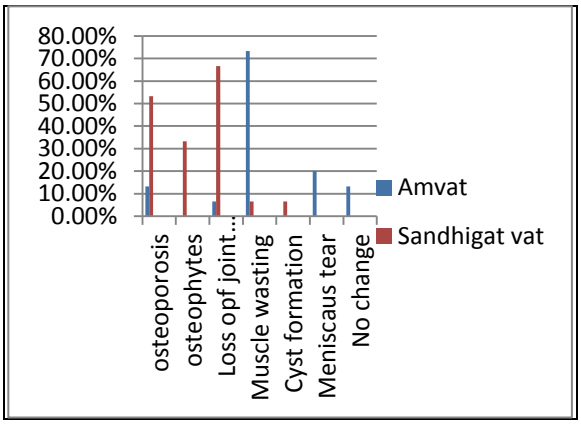
Graph No (3) Stage wise distribution



Graph No (4) Intensity of Pain wise distribution in study group



Graph No (5) Degree of swelling wise distribution



Graph No (6) Structural deformities in study group

DISCUSSION

Sandhi(.,joint) is the most important structure of the body as the locomotion of the body is dependent on them[8]. Bones are bound together in joints in such a manner so that different actions of body are possible[8].*Janusandhi* is the main weight bearing joint of the body. Due to many factors like faulty food habit and modern lifestyle, lack of physical activities, over intake of fatty food resulting in poor digestive capacity produces *(Ama)* means improperly digestive food in the body. This *Ama* along with vitiated *Vatadosha* moves to the different seats of *Kapha* including joints in the body. This aggravated *Vatadosha* in joints gives rise to the signs like swollen joint, stiffness and restricted movements of the joint, various actions of the joints difficult & effortful[5, 6].For the diagnosis of this *Amavat* and *Sandhigatvat*, special case paper was prepared and diagnosis of the patient's made according to clinical examinations.

X-rays are achieved for identifying the structural changes in the knee joints of affected patients. All observations are noted and divided in to some specific groups like age,sex, stage wise distribution of cases, pain in study group, swelling in study group, and structural change in study group and tried to compare the severity & extent of damage in *Amavat* and in *Sandhigatvat.*

In *amavat* 13.3% patients had osteoporosis deformities, no patient had osteophytes,6.6%patients had loss of joint space,73.3%had muscle wasting and no patient had cyst formation,20%patients had meniscus tear, and 13.3%patients had no change in the structure, 6.6%patients had cyst formation while none had meniscus tear.

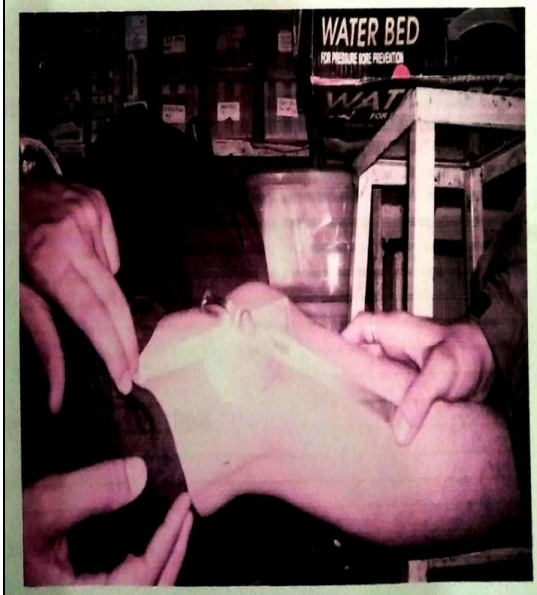
CONCLUSION

1) It can be stated that In *Sandhigatvat* osteoporosis, osteophyte and loss of joint space occur more frequently than in *Amavat*.

2) In *Amavat* the muscle wasting and meniscus tear occur more frequently than in *Sandhigatvat*

3) From this study it can be stated that the patients of *Sandhigatvat* are more prone to the structural changes in the knee joint also in early stage as compared to the patients of *Amvat* where structural changes are seen in chronic stage.

ASSESSMENT OF SWELLING



ASSESSMENT OF MOVEMENT WITH THE HELP OF GONIOMETER

Mild medial compartment of the knee

Lack of space represents worn cartilage and bone-on-bone contact.

X – Ray of Sandhigatvat

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