



Review Article

A CRITICAL REVIEW ON IMPORTANCE OF SAMPRAPTI WITH SPECIAL REFERENCE TO SANDHIVATA (OSTEOARTHRITIS)

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ABSTRACT

The way in which the *Dosha* gets vitiated and the course it follows for the manifestation of a disease is called *Samprapti* along the line of '*Dosha eva hi sarvesham rogatnamaka karana.*' *Sandhivata* is non-mortal but severely debilitating disease-causing limitation in day to day activities in old age leading to social and emotional burden for the person. The clinical presentation of *Sandhivata* closely mimics with Osteoarthritis (OA), the second most common rheumatologic problem. The disease is more common in women than men with prevalence rate of 22% to 39% in India. **Aim:** The study mainly aims to explore the concept of *Samprapti* w.s.r to. *Sandhivata* (OA). **Methods:** Ayurveda classics along with the commentaries were carefully studied to compile information about *Samprapti* of *Sandhivata*. Modern textbooks, journals, database, websites were also studied thoroughly to explore the concept. **Discussion:** *Nidana* aggravates *Vata* and this *Prakupita Vata* gets accumulated in *Rikta srota* and gives rise to various generalized and localized diseases. *Samprapti* (pathogenesis) of *Sandhivata* goes like – indulgence in *Vata prakopaka aahara vihara* results in *Vata prakopa* leading to *Vishamta* in *Agni*, due to which there occurs *Dhatukshaya* and *Dushti* of *Asthivaha srotas*. Further, *Sthana sanshraya* takes place in *Sandhi* resulting in *Sandhigata vata*. There are two variations in the *Samprapti* of *Sandhivata*: 1. *Dhatukshayajanya*: This mainly occurs in old age people. 2. *Aavaranjanya*: In obese, usually *Sandhivata* occurs in the weight bearing joints like knee joint, hip joint, lumbar spine etc. **Conclusion:** If physician understands the *Samprapti* in a proper way, he will never fail in the management of disease as *Samprapti Vighatana* is considered as *Chikitsa* in Ayurveda. Keeping this point in mind patients suffering from *Sandhivata* can be given a better life by Ayurveda if and only when the *Samprapti* of the disease is clearly understood.

INTRODUCTION

In case of most chronic Non-Communicable Diseases (NCD's), the current trend in contemporary western medical practice is to give the quickest relief to the subjective ailments or to reduce or mask the

physical suffering of the patient. This knowingly or unknowingly puts a veil to the physician about the minute flow of pathophysiologic events in the manifestation of the disease.

Samprapti (pathogenesis) is the story of disease. This tells how a disease is formed including the entire process right from the exposure to causative factors to the initial disturbances produced by those causative factors in the physical body and mind to the production of premonitory symptoms and symptoms of the disease which enable the disease to be identified, named and diagnosed.

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When *Samprapti* or pathogenesis is studied right from the disease producing food habits, lifestyle along with *Dosha dushya sammurchana* of *Shat kriya kaal*, then it helps both to gain knowledge about degree of

progression of disease and also to plan the treatment protocol as per the involved appropriate *Doshic* condition.

S.No.	Lakshana	Charaka	Sushruta	Vagbhatta	Madhav
1.	<i>Vatapurnadratisparsha</i>	+		+	
2.	<i>Shotha</i>	+			
3.	<i>Prasarana kunchanpravritisavedna</i>	+			
4.	<i>Sandhi sopha</i>		+		
5.	<i>Sandhishool</i>		+		+
6.	<i>Asthishosha</i>		+		
7.	<i>Hanti sandhi</i>		+		+
8.	<i>Sandhiaatop</i>				+

OA is the most common form of arthritis. Some people call it degenerative joint disease or 'wear and tear' arthritis. It occurs most frequently in the hands, hips, and knees. With OA, the cartilage within a joint begins to break down and the underlying bone begins to change. These changes usually develop slowly and get worse over time. OA can cause pain, stiffness, and swelling. In some cases it also causes reduced function and disability; some people are no longer able to do daily tasks or work.^[4]

The clinical presentation of *Sandhivata* closely mimics with the disorder called Osteoarthritis (OA) which primarily affects the elderly population. It is a major cause of disability in older adults, worldwide. According to World Health Organization (WHO) 9.6% of men and 18.0% of women age over 60 years have symptomatic osteoarthritis worldwide. 80% of those with osteoarthritis have limitations in movement and 25% cannot perform their major daily activities of life. It is the second most common rheumatologic problem and it is the most frequent joint disease with a prevalence of 22% to 39% in India. OA is more common in women than men, but the prevalence increases dramatically with age. Nearly, 45% of women over the age of 65 years have symptoms while 70% of those over 65 years show radiological evidence of OA.^[5]

Sandhivata is one of the challenging diseases for the clinicians due to its chronicity, incurability, complications etc. On day to day practice also, it is seen that patients of *Sandhivata* have a wide variety of pathogenetic cause underlying on the basis of their food habits, occupation, lifestyle, habitat, climatic conditions, genetic pre-disposition, and many other idiopathic variants. This highlights the importance of studying each patient individually and to dwell into the person and situation specific pathogenesis (*Samprapti*) of the disease. Ayurveda has a combined approach comprising of both drug and lifestyle modification

leading to regression of further *Samprapti* manifestation. This gives both i.e., relief to the patient and helps to combat the chronicity of disease.

AIM

- To explore the concept of *Samprapti* w.s.r. *Sandhivata* (Osteoarthritis).

METHODS

Ayurveda classics along with the available *Sanskrita* commentaries were carefully studied to compile information about *Samprapti* and *Sandhivata*. Relevant research articles from PubMed, Google Scholar and AYUSHDHARA were also referred. Modern literature, online websites, journals were also reviewed to clear the concept and pathogenesis of Osteoarthritis.

DISCUSSION

In Ayurveda, '*Sandhivata*' has been described under *Vatavyadhi chikitsa adhyaya*. Painful extensions and flexions during daily bodily movements are the classical symptoms of *Sandhivata* as mentioned in Ayurvediya classics.^[6] Again, the major function of *Prasarana* (extension), *Kunchana* (flexion) along with all type of locomotion (*Gati*) is governed by the *Vyana vayu*.^[7] Pathology in their functions leads to difficulty in locomotive movements as seen in *Sandhivata*. Involvement of *Vyana vayu* in the manifestation of *Sandhivata* might be the reason of description of *Sandhivata* under *Vatavyadhi*. No specific and clear pathogenesis of *Sandhivata* has been described in any Ayurvedic text but *Samprapti* of *Vatavyadhis* has been explained in *Charaka Samhita Chikitsa sthana*.^[8] Vitiated *Vata dosha* fills up the empty channels of the body thereby resulting in various disorders of either one part (localized) or the whole body (generalized) *Ashtang Hridaya* frames the *Samprapti* of *Vata Vyadhi* as *Dhatukshaya* aggravates *Vata* and same is also responsible to produce *Riktata* of *Srotas*. Thus, the vitiated *Vata* travels throughout the body and settles in

Rikta Srotas and further vitiate the Srotas leading to the manifestation of Vata vyadhi. Samprapti of Sandhivata can be understood according to the cause of Vata prakopa. Two predominant causes of Vata prakopa have been described in texts i.e., due to Dhatukshaya or due to Margaavarana^[9]. Hence, according to the cause and pathogenesis, Sandhivata can be divided into two types:

- (1) Dhatukshaya Janya Sandhivata
- (2) Marga Avarana Janya Sandhivata

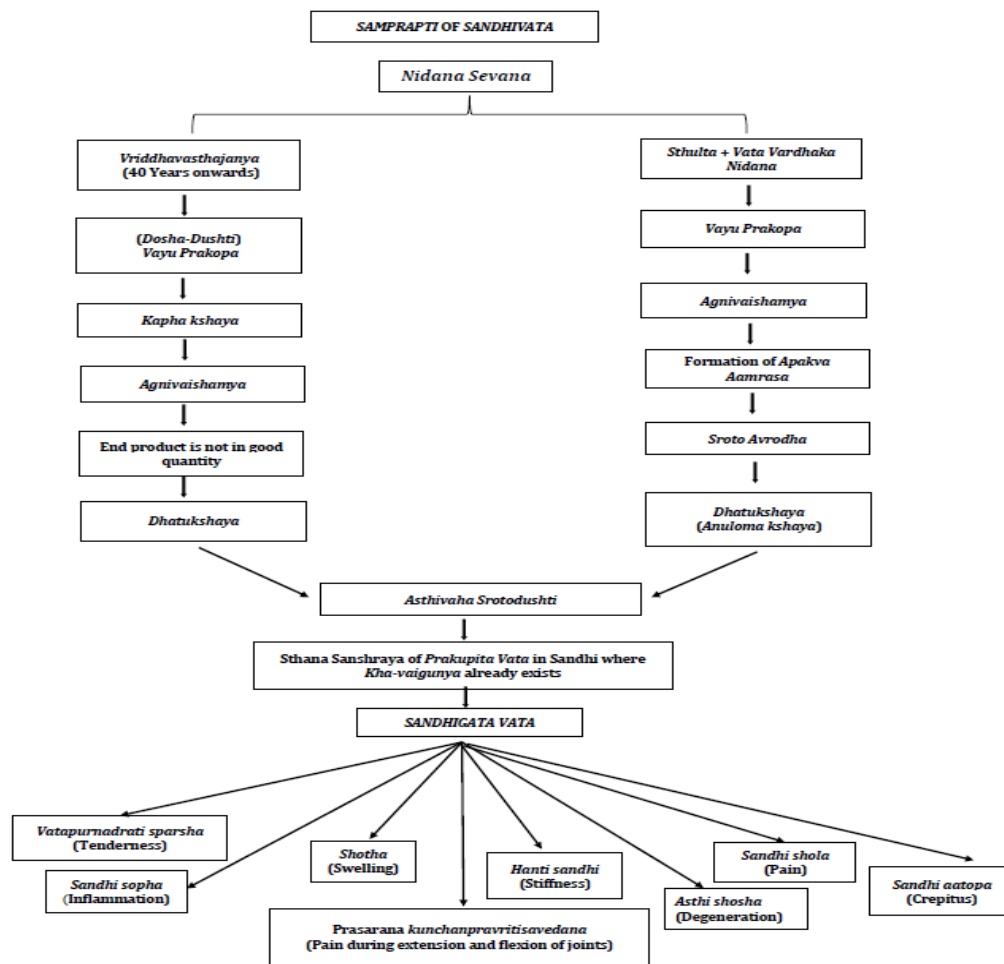
Dhatukshaya Janya Sandhivata

In old age, Vata dosha dominates in the body. This leads to Kapha abhava (depletion of Kapha), along with the impairment of Jatharagni and Dhatvagni. This all results in impairment of Dhatu formation due to which Dhatu formed are not of good quality. Reduction of Kapha in Sandhis makes Sandhi bandhana shithila as Kapha mainly Shleshak kapha is present in joints for their better functioning. Ashraya ashrayi sambandha of Asthi and Vata leads to Asthidhatu kshaya (Vata increases and simultaneously Asthi dhatu decrease). Asthi being the main participant of the joint, its Kshaya leads to Khavaigunya in the joints. In this condition, if

Nidana sevana is done it further produces Vata prakopa. Vata prakopa is not corrected if the person indulges in Asthivaha and Majjavaha stroto dushtikara nidana, the Prakupita vata spreads all over the body through these Srotas. In the meantime Sthanasamshraya of Prakupita vata take place in the Khavaigunya yukta janu sandhi. This localized Vayu, due to its Ruksha, Laghu, Kharadi guna over power and undo all properties of Shleshmaka kapha and thus produces the disease Sandhivata.^[10]

Aavarana Janya Sandhivata

Usually Sandhivata occurs in weight bearing joints in Sthoola individuals. Medodhatu is produced in excess due to Ati snehamsha of Amarasa in such individuals. The excessive Medas produce obstruction for the flow of nutritive materials to the future Dhatus i.e., Asthi, Majja and Shukra leading to their Kshaya. The excessive fat deposited all over the body produces Margavarana of Vata. Prakupita vata due to margavarana starts to circulate in the body. While travelling, it settles in the joint where Khavaigunya already exists. After Sthanasamshraya, it produces the disease Sandhigata vata.^[11]



Specified Symptomatic Samprapti of Avaranajanya Sandhivata on Etiologic Basis

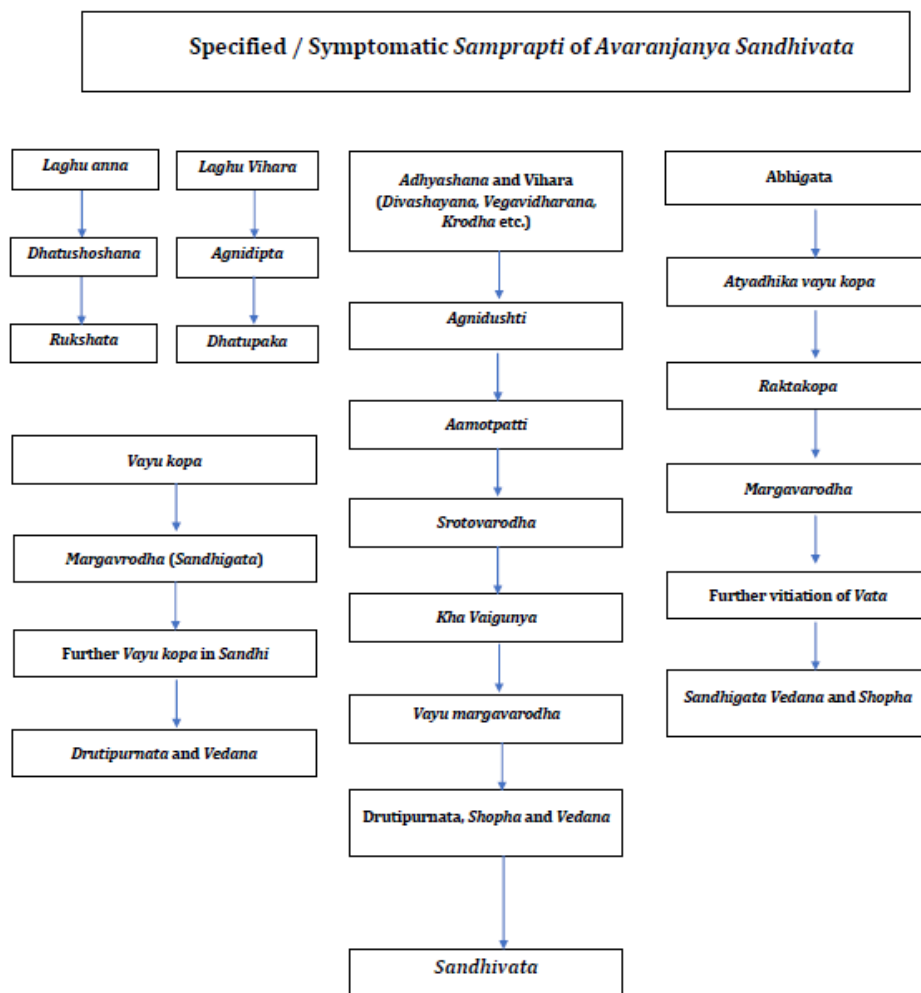
Laghu ahara-vihara

On consuming *Laghu anna* (easily digestible food like *Mudga*, *Varaka*, *Uddalaka* etc) depletion of vital tissue elements (*Dhatukshaya*) occur. This leads to *Rukshata* and *Vata prakopa* which further causes *Sandhigata margaavrodha*. Thus the *Vayu* gets vitiated in the effected *Sandhi* causing *Sandhivata* (mainly *Drutipurnata* (air filled bag like swelling) and *Vedana* (pain) *Lakshanas*.

Similarly on indulging in *Laghu vihara* like *Plavana* (swimming), *Atiadhwa*, *Ativyayama* etc *Agnidipta* occurs leading to *Dhatupaka*. This *Dhatupaka* causes *Vata prakopa* and the rest of the incidence follows as mentioned earlier leading to *Sandhivata*.

Abhigata

On *Prapidana*, *Prapatana* (trauma) etc *Vayu* gets aggravated which further leads to aggravation of *Rakta* in *Sandhi* causing local *Margaavrodha* of *Vayu*. Thus, the restricted *Vata* in *Sandhi* causes *Vedana* and *Shopha* *lakshanas* of *Sandhivata*.



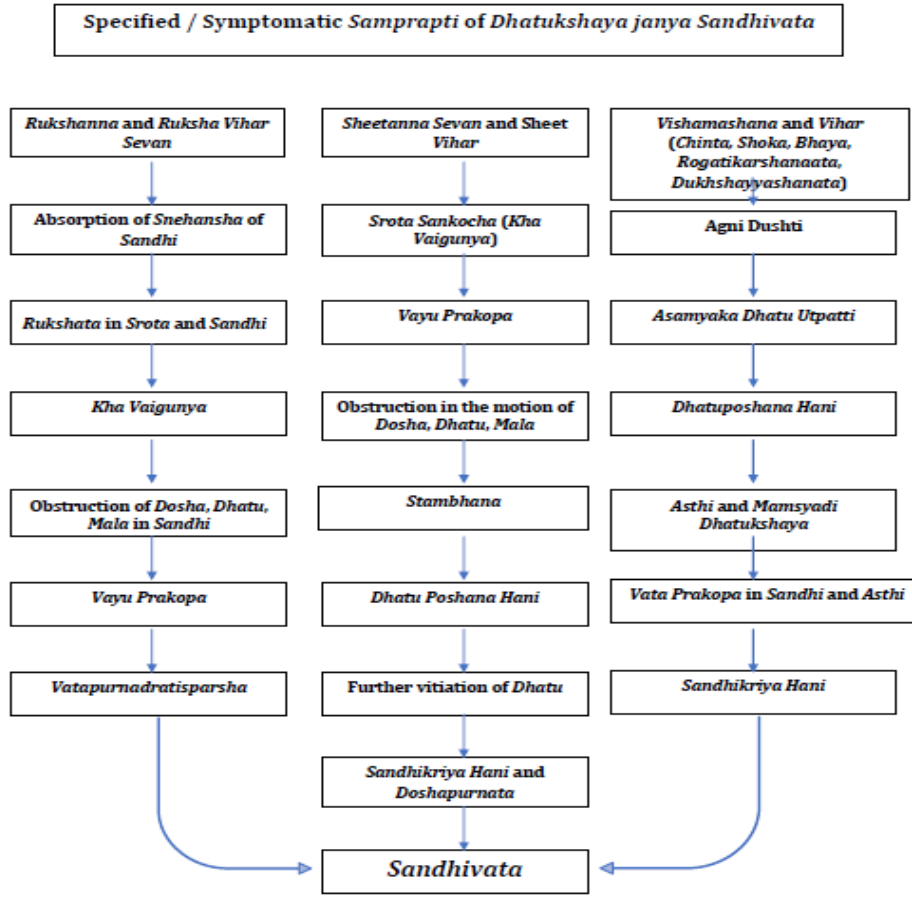
Specified Symptomatic Samprapti of Dhatukahayajanya Sandhivata on etiologic basis

Ruksha ahara-vihar

Unctuous food intake like *Shaka*, *Vallura*, *Shyamaka*, *Kodrava*, *Harenu* etc and *Ruksha vihara* like *Langhana*, *Ratrijagrana*, *Bharhanana* etc causes absorption of *Snehamsha* (fibro fatty tissues) of *Sandhi*. The resulting dryness in *Srotasa* and *Sandhi* leads to *Kha vaigunayata*, where *Dosha dhatu sammurchana* takes place causing obstruction of *Dosha*, *Dhatu*, *mala* in *Sandhi*. These events aggravate *Vata* which presents the symptom *Vatapurna druti sprash*, thus completing the pathogenetic cycle of *Sandhivata*.

Sheet ahara-vihara

Repeated indulgence in *Sheeta ahara* and *Vihara* cause narrowing of vital channels (*Srotas sankocha*). This causes *Vayu prakopa* and further obstruction in the motion of *Dosha*, *Dhatu* and *Mala*. This leads to restriction in *Sandhi* which results in depletion of nutrition to vital tissues. *Vata* vitiation takes place and *Sandhivata* occurs by manifestation of *Sandhikriya hani* and *Doshapurnata*.



CONCLUSION

When the etiological factors are *Laghu ahara-Vihara, Abhighata, Adhyashana* and *Divashayana, Vegavidharana, Krodha* etc the manifestation of *Sandhivata* mainly occurs by *Aavarana*.

When the aetiology is mainly *Ruksha ahara-vihara, Sheet ahara-vihara, Vishamashana* along with *Chinta, Shoka, Bhaya, Rogatkarshanata, Dukshayyashanata* etc, at that time the manifestation of *Sandhivata* occurs by *Dhatukshaya*.

By keeping the above facts in mind, early and better treatment can be planned according to the condition of patients. If a physician understands the *Samprapti* of a disease in a proper way he will never fail in the management of disease as '*Samprapti Vighatana*' is considered as *Chikitsa* in Ayurveda and hence patients suffering from *Sandhivata* can be given a better life by Ayurveda.

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