



# A critical literature review of Kati Pradesh (region) w.s.r. to Rachana Sharir.

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## **Abstract-**

*Kati* is a cylindrical region present in the *Madhyashareera*. In all the Samhitas, *Shroni* or *Kati* has been region rather than an organ. *Acharya Charaka* mentions that *Kati* is of 16 Angules in diameter. *Acharya Sushruta* mentions that the *Pramana* of *Kati* in males is 18 Angules in *Vistara* which is equal to the *Vistara* of *Urahpradesha* of females. Here, *Dalhana* quotes the opinion of other authorities that 24 Angules is the *Vistara* of *Urah* in males which is equal to *Pramana* of *Shroni* in females. *Kati* region is the main weight bearing region in the body. In this region following structures are present *Asthi*, *Sandhi*, *Sira*, *Dhamani*, *Snayu* and *Kandara*. *Vata* (*Apaan*), *Kapha* (*Shleshmak* and *Aylambak*) are situated at *Kati* region. Thus this article emphasized on the Anatomical structure present at *Kati* region.

**Keywords- Asthi, Ayurveda, Kati, Rachana, Sushrut.**

## **Introduction-**

The body is classified in to six Angaas by *Acharya Sushruta*. The six Angas are 4 Shakhas, 1 *Madyashareera*, 1 *Shirogreeva*.<sup>1</sup> *Kati* is a cylindrical region present in the *Madhyashareera*. According to *Shabda Kalpa Dhrama*,<sup>2</sup> *Kati* is the region of waist where the cloth is being worn. According to *Vaidyaka Shabda Sindhu*,<sup>3</sup> *Kati* is nothing but *Shroni*. In *Raja Nighantu* many synonyms of *Kati* are mentioned. They are *Kati*, *Kukudmati*, *Shroni*, *Nitamba*, *Kateerakam*, *Aaro*, *Shroniphalakam*, *Kalatrakam*, *Rasanaapadam* etc. *Vaidyaka Shabda Sindhu* gives the synonyms like *Shroniphalaka*, *Shroni*, *Kukudmati* and *Kata*. In all the Samhitas, *Shroni* or *Kati* has been region rather than an organ. According to *Acharya Vagbhata*, among 136 *Siras* present in the *Antharadhi*, 32 of them present in the *Kati* which shows that *Kati* is a part of *Antharadhi*. There is no clear cut demarcation of *Kati* region but, with the help of surrounding structures the limitations could be inferred as follows. .

## 1. Upper limitation

The upper limitation could be taken as the Nabhi.

## 2. Lower limitation

The lower limitation could be taken as the Mushka and Medhra.

## PRAMANA

Acharya Charaka says Pramana includes Utsedha (height), Vistara (diameter, expansion), Ayaama (length) and Parinaaha (circumference) etc. Acharya Charaka mentions that Kati is of 16 Angules in diameter.

Acharya Sushruta mentions that the Pramana of Kati in males is 18 Angules in Vistara which is equal to the Vistara of Urahpradesha of females. Here, Dalhana quotes the opinion of other authorities that 24 Angules is the Vistara of Urah in males which is equal to Pramana of Shroni in females.

Acharya Vagbhata has mentioned both the Vistara (diameter) and Parinaaha (circumference) for Kati. He mentions, Vistara is 16 Angulas and 50 Angules as the Parinaaha.

## STRUCTURES PRESENT IN KATI PRADESHA

### 1. ASTHI

Ancient seers of Ayurveda have classified the elements of body under three fundamental components- Dosha, Dhatu, Mala. Among these basic elements Dhatus are especially meant for Dharana & Poshana of Sharira.

Asthi is a Sharir-Dhatu, one from Rasadi Sapta Dhatu. It is a toughest quintessence Dhatu, which supports the body. Asthi are strong, stable and having cavity filled with Majja (bone marrow)

It is a main supportive compact and dense tissue of the body. It constitutes total skeletal framework of the body. Bones offer prime support to the body.

Bone, which is centrally placed, stabilizes the body, like the core of a tree. In the dead body the muscles, skin, other tissues etc. decompose and are lost but the only part which still remains is Asthi so it is called essence (epitome) of the body.

Asthis are enclosed by two membranes i.e. inner and outer. A thin membrane which covers the Asthi is called "Asthi-Dharakala". It has a great nutritive value for Asthi. While the membranes situated at inner bony cavity is known as "Majja-Dharakala".

### ASTHI SANKHYA (NUMBER)

Asthis are 360 according to Vedvadi but in Shalyatantra these are figured 300. Of these 300 bones, 120 are found in Shakha (extremities), 117 in Kshroni, Prushta, Parshva, Urah and remaining 63 are located in Greeva-pradesha. Thus  $120+117+63=300$ , total number of Asthi is three hundred.<sup>4</sup>

There are five bones in Kshroni Pradesh, out of these Asthis of Guda, Yoni and both Nitamba are four and remaining one lies in Trika (sacral region). Parshva contains 36 bones on each side i.e left and right side. 30 bones lie in Prushta, 8 in Urah and 2 Ansaphalakasthi (scapula).<sup>5</sup>

Number of bones in Greeva is nine, four in Kanthnadi, two in Hanupradesh, thirty two Danta (teeth), three in Nasa (nose), one in Talu, also Ganda, Karna and Shankha bears one bone each and Sheerah consist of six bones.<sup>6</sup>

According to Charak Samhita number of bones is 360 including teeth, sockets of teeth in the jaw and nails.<sup>7</sup>

360 bones are found in human body. Out of these 140 bones are present in Shakha (extremity), 120 in Antaradhi (trunk) and above Greeva i.e Sheerah and Greeva contains 100 bones. In this way 360 bones are present in body.<sup>8</sup>

### **ASTHI PRAKARA (TYPES)**

In the Ayurvedic science the Asthi are classified into five groups viz.

- i) Kapalasthi – Asthi at places of Nitamba, Ansa, Talu, Sheerah.
- ii) Ruchakasthi – All teeth
- iii) Tarunasthi – Asthi located at Ghrana , Karna, Greeva & Akshikosh
- iv) Valayasthi – Asthi found in Parshva, Prushta, and Urah.
- v) Nalakasthi – remaining Asthi (long bones)

All the five types of Asthi are named after their external appearance. Mamsa (muscles) is bound to these bones with the help of Sira and Snayu.<sup>9</sup>

### **ASTHI – KARYA (FUNCTIONS)**

To maintain upright erect posture of body and Majja –Poshana (formation of bone marrow) are important functions of Asthi.<sup>10</sup>

### **ASTHI-DOSH-SAMBHADH**

Vata Sthanas are Pakvashaya, Kati, Saksthi, Kshrotra, Asthi and Twacha among these Pakvashaya is a prime location.<sup>11</sup>

### **TARUNASTHI**

Tarunasthi are numerous and precarious in number. Tarunasthi are present at vertebral column in the form of intervertebral discs, also in joints, chondral parts of ribs, nasal wall, pinna and in trachea, bronchi and their branches.

## **2. SANDHI**

The meeting point of two or more Asthi is termed as Sandhi. Sandhis are the Moolsthanana of Majjavaha Srotasa.<sup>12</sup>

## SANDHI SANKHYA

Charakacharya mentions 200 Asthi-Sandhi<sup>13</sup> while Kashyapa include 381 Sandhis in his text. Sushruta accounts 210 total Asthi-Sandhi out of which 68 in Shakha, 59 in Koshta and 83 in Greeva and above part (i.e head and neck).<sup>14</sup>

Out of 59 Sandhis in Koshta three are present at Katikapal, 24 in Prushta-Vansha (vertebral column), 24 in Parshva and 8 in the chest region.<sup>15</sup>

## SANDHI PRAKARA

There are two types of Sandhi, first is movable and other is immovable. Sandhis present at the places of extremity, mandibular region and lumbar region are movable Sandhi. Remaining are immovable Sandhis.<sup>16</sup>

The Sandhis are further classified into 8 group viz. Kora, Ulukhula, Samudga, Pratara, Tunnasevani, Wayastunda, Mandal and Shankhavarta Sandhi.

These are as follows-

1. Kora Sandhi- Sandhis at the places of Anguli, Manibandha, Gulfa, Janu and Kurpara.
2. Ulukhula Sandhi- Sandhis at the places of Kaksha, Vankshana, and peg and socket (teeth)
3. Samudga Sandhi- Sandhis at the places of Ansapeeth, Guda, Bhaga and Nitamba.
4. Pratar Sandhi- Sandhis at places of Greeva and Prushthvansa.
5. Tunnasevani Sandhi- Sandhis at places of Sheerah and Katikapala.
6. Wayastunda Sandhi- on both the side of Hanu (mandible)
7. Mandal Sandhi- Sandhis at places of Kantha, Hridaya, Netra and Klomnadi.
8. Shankhavarta Sandhi- Sandhis at the places of Kshrotra, Kshrungataka.<sup>17</sup>

## 3. SIRA

Among 700 Siraas present in the body, 32 Siraas are present in the Shroni which consist of Vatvaha, Pittavaha, Kaphavaha and Raktavaha Siras each 8 in number. There are 32 Siras in Kati region and 6 in Prishtavamsha, which does the Prrenan, Jeevana and carries the functional, nutritional and metabolic units to Sandhis of Kati region.<sup>18</sup>

## 4. DHAMANI

Acharya Sushruta says, among twenty four Dhamanis, ten Adhoga Dhamanis which carry the Vata, Pitta, Kapha and Rasa-Rakta complex, nourishes and maintains the structures present below the Nabhi- the Pakvashaya, Kati, etc.<sup>19</sup>

## 5. SNAYU

Snayus are structures resembling the shape of hemp. Among 900 Snayus present in the body, 230 Snayus are present in Madhya Shareera. The Snayus bind Asthi, Mansa and Meda and hence forms an integral

part of joint. Snayus are of 4 types, i.e. Pratanvati, Pruthula, Vrutta, and Sushira. About 60 Snayus are present in Katipradesha.<sup>20</sup>

## 6. KANDARA

Kandaras are considered as strong or great Snayus. 16 Kandaras are present in the body, which help in performing actions like flexion and extension. Among them 4 Kandaras are present in Prushtha which tightly bind Shroni with Prushtha and Nitamb & other parts of lower regions.<sup>21</sup>

## 7. DOSHA

Vata (Apaan), Kapha (Shleshmak and Avlambak)

Kshaya of Shleshmak Kapha plays a significant role in degeneration of bones, because it may relate with the nucleus pulposus of the intervertebral disc, that at the side of its shock absorbing capability acts as a supply of nourishment. Shleshamka Kapha nourishes the articulation of bones whereas Snaya offers it stability.

Acharya Vagbhata opines that one in all perform of Avalambaka Kapha is Trika Sandharana. It suggesting Kati, Trika, Greeva etc. vertebral joints are reinforced by Avalambaka Kapha.

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