



“Conceptual study of Asthi Dhatu poshan kala with special reference to bone healing process”

Authors:

1. Vd. Rajahamad Ghudulal Jamadar.(Assistant professor Dept. of Kriya Sharir, ADAMC,Ashta)
2. Vd. Amit Sudhakar Pethkar. (Professor Dept. of Kriya Sharir, ADAMC,Ashta)
3. Vd. Archana Wadkar.(Associate professor Dept. of Panchkarma, ADAMC,Ashta)

Abstract :

According to Ayurveda saptadhatus are described as Rasa, Rakta, Mamsa, Meda, Asthi,Majja and Shukra. The development of dhatus is also described. According to Charakacharya asthi dhatu poshan (nourishment) takes place on fifth day after aaharsevan. Like that according to Sushrutacharya asthi dhatu poshan takes place on twentieth day. According to modern science it will be proved that fracture of bone, to get repair takes atleast twenty one day's time. For that we are going to collect the X-ray reports of twenty patients those who got fracture. It shows that according to Sushrutacharya the poshan kala of asthi dhatu is twenty days but according to Charakacharya it is fifth day so we can come to conclusion that the poshan kala of asthi dhatu will start on fifth day and completed on twentieth day.

Keywords: Dhatu poshan ; Fracture; X-ray.

Introduction:

Ayurveda is the science of life which deals with the health of healthy individuals as well as the cure of disease of a diseased person. In Ayurveda dosha, dhatu and mala are considered the mula (roots) of the sharir. The samyavastha of these three leads to the swasthavastha (health) otherwise their vitiation causes rogavastha (disease). Dhatus are seven in number viz. rasa, rakta, mamsa, meda, asthi, majja and shukra. In that asthidhatu is fifth in number according to poshanakrama and it is considered as most strongest element in the body. According to khalekapot nyaya asthi is nourished directly from the ahararasa while according to kedarkulya nyaya asthi is nourished from the medadhatu when medagnipaka occurs and the prutvi, agni and vayu samskar occurs, the sthira, khara and Ghana guna of prutvi diminishes the dravatva of medadhatu and produces the asthidhatu. According to tridha parinaman when asthidhatu poshakamsha goes through the asthivahasrotas the asthi dhatwagni acts on it and produces three elements viz. 1. Sthayi dhatu i.e. asthidhatu and upadhatu i.e. danta. 2. Majjadhatu poshakamsha. 3. Mala- kasha, lomaand nakha.

Like a circulatory motion the process of nourishment of asthidhatu is going on continuously but according to Charakacharya the asthidhatu poshan takes place on sixth day of aaharasevan as well as according to Sushrutachrya it takes place on twentieth day from the aaharasevan, so if we consider the fracture of bone according to modern science we put slab or plaster near about 20- 25 days. The process of healing of fracture involves joining of broken ends by the deposition of new bone.

Stages of bone repair after fracture :

1. Formation of hematoma between the broken ends of bone and surrounding soft tissues. Hematoma means swelling or mass of blood clot confined to a tissue or space due to rupture of blood vessel.
2. Development of acute inflammation.
3. Phagocytosis of hematoma, debris and fragments of bone by macrophages.
4. Formation of granular tissue and development of new blood vessels.
5. Development of new osteoblasts and formation of new bone called callus.
6. Spreading of new bone to fill the gap between the broken ends of bone.

7. Reshaping of new bone by osteoclasts, which remove excess callus and formation of canal in the new bone.

Generally whenever a fracture occurs and there is no requirement of surgical process then we are putting the plaster or slab to the fracture site and generally it heals within 20 -25 days so the this entire process can be consider for the study of asthidhatu poshan kala, which mostly occurs within 20 – 25 days in the normal physiological conditions.

Aims and Objectives:

1. Find out the asthiposhan kala according to Charakacharya and Sushrutacharya.
2. Find out the timespan of healing of bone fracture.

Material and Methods:

Materials:

1. Literary review from Ayurvedic as well as modern texts.
2. X-ray machine.
3. B. P. Apparatus.
4. Clinical hammer.

Methods:

1. Twenty fracture pateints are randomly selected from an orthopedic hospital with irrespective of age and sex.
2. Patient should have a simple fracture i.e. no surgical process is required.
3. Patient should not have any major pathological conditions.
4. Patient should not suffer from any systemic diseases.
5. Observations are to taken from the patients follow up.

Observations :

- 1.The selected patients were having age between 18 years to 45 years.
2. In that 8 patients were female and 12 patients are male.
3. The symptom of swelling was reduced on 7th day, and disappears on 15 th day.

4. The symptom of pain was reduced on 3rd day and disappears on 7th day.
5. Reflexes were normal in all patients.
6. Muscle spasm was disappears on 7th day.
7. All the fractures were healed on 21th to 30th day.

Results:

The healing of fracture requires the time span of 21 to 30 days.

Discussion:

According to modern science as well as according to Ayurveda the time span for the healing of fracture is mostly considered of 21 to 30 days so we can put forward the theory of Charaka as well as Sushruta that the after aaharasevan the various processes are occurs in the body and the nourishment of dhatus takes place. Both acharya has told different time span for the nourishment of asthidhatu. Charaka has told 6th day after aaharsevan and Sushruta has told 21th day. By the observations we can say that both the theories are almost correct, because Charaka might have considered the starting time of asthidhatu poshan which starts on 6th day and Sushruta might have considered 21th day as the complete poshan kala of the asthidhatu.

Conclusion

1. Charakacharya told the asthidhatu get poshan on 6th day of aharasevan.
2. Sushrutacharya told the asthidhatu get poshan on 21th day of aharasevan.

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