



**FRACTURES IN AYURVEDA**

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**ABSTRACT**

When we think of fractures, we think of plaster of Paris casting, strapping, types of fractures like oblique, spiral, simple computed fractures, dislocation, subluxation, reduction physiotherapy rehabilitation, gleaming antiseptic theatres, analgesics and state of the art of equipments. However, the fact is that these fractures are clearly described and well managed even thousands of years ago. Ayurveda, the world's oldest system of medicine is the pioneer in this regard. References like Kusaa Bandhanam, keela bhandana, Unnamana, Avapeedana, Aanchana, Sthapana, vastra pattabandhana, Kapaatasayana, Atiksptha, Choorita and many other things justify the above statement. When we study these in detail we can clearly make out that the current descriptions and procedures are the refined sophisticated version of past. We should be proud that the explanation and treatment principles of Acharya Sushruta holds good even today which has been described long back, without the help of modern technology. Here an attempt is made to highlight such extraordinary lucid and detailed explanation which are precursors of current techniques.

**KEYWORDS:** Fracture, bhanda.

**FULL PAPER**

Ayurvedic system of medicine do not limit itself to just fulfilling the needs of primary health care, but also reach out to certain specialized areas. One such popular but little known area is that of Fracture. Today we are able to examine a fractured bone directly under radiological examination. In the absence of this, Acharya Sushruta had evolved extremely useful, logical and detailed methods of determining the types of fractures. The description laid down by the Ayurvedic text are so relevant that they hold good even in present times.

This study helps to explore the hidden skills, powers and methods of identification and descriptions of fracture, according to ancient times and simultaneously comparing with fractures according to the highly evolved and accepted modern medicine. Such a study could definitely arouse interest as well as broaden the limited vision of main field. Conventional medicine professionals to the ancient system of medicine.

Starting from the word meaning: Fracture is termed as "BHAGNA" in Ayurveda, which means breach /break in movements /of continuity of bone. Bhagna is of two types Sandhimukta and Kandabhagna.

In Modern, Fracture is a break in the surface of bone, either across its cortex or through its articular surface.

**ETIOLOGY**

Acharyas have described, falling from heights, squeezing the body greatly, hitting, beating, very vigorous movements, bite by wild animals and such other assaults /injury are the causes for different kinds of Bhagna.

**Modern Perspective**

Fractures of bones can happen in a variety of ways but the common causes –

- a) When the force on the bone is too large and occurs suddenly as in road traffic accidents, falls.
- b) When a force on the bone is chronic and repetitive.
- c) When the natural resistance of the bone is eroded by a disease process.

In classics we can come across SAMANYA and VISHESHA lakshanas.

In Samanya lakshanas, Inability to perform actions such as extension contraction, rotation, vigorous movements, severe Pain and inability to withstand touch.

When we see today's modern perspective same symptoms have been mentioned like pain, swelling, Deformity, Inability to use the affected part.

Also, In Orthopedic management we come across terms like Subluxation :- When the articulating surface of a

joint are no longer congruous, but still maintains some contact, SO VISHLISHTAM description.

“Vishlishte alpa: shopho vedanasathathyam sandhivikriya:”

DISLOCATION – When there is complete loss of congruity between the articulating surface of joints, which is delt in detail in ayurveda with six varieties.

i) UTHPLISHTTA

ii) VIVARTHITAM – Dislocation with lateral displacement.

iii) AVAKSHIPHTAM - Dislocation with downward displacement.

iv) ATHIKSHIPTAM – Dislocation with Overriding.

v) TIRYAKKSHIPHTAM –Dislocation with oblique displacement.

In Vivartita- Joint is shifted to any one side resulting in dislocation of the part and pain.

In Avakshipta – Drooping down (ptosis) of the joint and pain.

In Atikshipta – Both the (two) bones forming the joints are moved apart (making a gap in between) and pain.

In Tiryakshipta - Any one of the bone of the joint only is displaced to a side and produces pain.

Khanda Bhagna –here the fracture of the shaft of bones are described.

Acharyas have explained symptoms like Profound swelling Inability to bear tapping, rotating and touching, producing sound (at the site). When pulled or squeezed, part of the body hanging down loosely, appearance of various kinds of pain and not finding comfort in any position.

So the modern perspective of symptoms like pain, swelling, deformity inability to use the signs like Tenderness, Swelling, Deformity, abnormal mobility between fracture fragments, loss of transmitted movements, Crepitus. All these are include in the above said shlokas by our acharya's.

Acharya's have explained 12 types of Khanda bhagna where they have described specific lakshanas for each khandabhagna. When we go through lakshanas we can clearly make out the description holds good with current day's types of fracture.

#### Let me elucidate this

- In Karkataka –the two(broken)ends of the bone are moved apart and there is a bulging in the middle resembling a tumor. Here, Separation of fracture ends are seen.

- Asvakarna – The end of the bones are raised up, appearing like the ear of the horse. In can be compared to OBLIQUE FRACTURE.
- Churnita – When felt by the hand, it produces sound as though broken into pieces. So ‘SIMPLE COMMUNUTED FRACTURE’ goes with it.
- In Piccita –The bone is compressed between the two opposite forces, it gets widened transversly, can be compared with a COMPOUND COMMUNUTED FRACTURE.
- Asthicchallitha – One bone is above and the other felt below or at the sides of the joints, Compared with ‘AVULSION FRACTURE’
- In Vellita khanda bhagna fractured, part shows tremors on any ttempt of movement, can be compared with COMPLETE TRANSVERSE FRACTURE.
- In Majjanugata, fragment of the bone is impacted into the bone marrow of the other fragment, can be compared with IMPACTED FRACTURE.
- Atipatita, the entire bone is broken to pieces without any remainder. COMPLETE FRACTURE is very much similar to this.
- In Vakra – The bone is bent inwards or become curved without getting detached, compared with GREEN – STICK FRACTURE.
- In Chinna - The bone is found moved to the other side, can be called as INCOMPLETE FRACTURE.
- In Patita – The bone is split into many small pieces and having pain.
- In Sphutita – The Bone is more swollen, feels as though filled with thorns and is greatly split, splintered, chopped off, Occurs in small bones and teeth(FISSURED FRACTURE)

Bone Levers, Bone splints which are excessively used in fractures in current days such instruments for levering fractured bones into their proper positions are mentioned several times by Acharya Susrutha. In the treatment of the nasal bone, a salaka is recommended to be used as a bone lever for raising and depressing the fractured ends. Sometimes a ‘musala or pestle is advised to be used. The pestle was also used by Hippocrates to reduce dislocation of shoulder joint. Karapatra which can be compared with ‘saw’. It seems that saws of various size's are used and its principal use is to saw a bone. Sometimes it is recommended for the purpose of scraping. In modern times the saw is still used for identical purposes in surgery. Mudgara, Hammer is used to strike an arrow firmly fixed in bone until loosened then extracted by means of a pair of forceps, such techniques instruments holds good even in today's practice.

Hence with all these references we can make out many similarities in both Ayurveda and Modern medicine in the understanding of fractures as both the fields hold excessive force and pressure on the bone, whether caused by a slip or fall, sudden assault by the animals in ancient times, or a road traffic accident in the modern times, as

the main reasons why fractures happen. The Symptoms of fractures as understood according to modern medicine have been mentioned centuries ago in the Ayurvedic texts, In the absence of radiological examination ancient system had evolved extremely useful logical and detailed methods of determining the types of fractures. It would also probably be worthwhile, in the time to come, to explore such concepts mentioned in Ayurveda for accentuating fracture.

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