

Asthi Bhagna Management in Ayurveda and Modern Prespective

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ABSTRACT-

Ayurveda is a complete science of life, where we get elaborate descriptions about prevention of disease in a healthy individual as well as the management diseases. In modern the fracture is condition associated with injury of bones and joints; in Ayurveda it is termed as "Bhagna". The condition characterizes as break in movements/continuity of bones. There are two types of Bhagna i.e.; Sandhimukta and Kandabhagna, Sandhimukta can be correlated with dislocation while Kandabhagna means bony fracture. In the past, Bhagna was an issue that was frequently encountered during times of war and animal attacks, but in the present, they are most frequently caused by road traffic accidents (R.T.A.). According on the type of trauma, fracture morphology, displacement of the fracture fragment, and fracture with or without wound, Acharya Sushruta described Bhagna. As per the condition Acharya Sushruta described Many of the new techniques are well developed for the management of fracture like as it's etiology, classification, and various modalities of the management.

KEYWORDS- Ayurveda, Bhagna, Fracture, Management

I. INTRODUCTION-

Bony fracture is one of the worst disorders that can develop after a bodily injury. According to Ayurveda, a fracture is known as Bhagna and can be brought on by many physical traumas such as slippage, high pressure, rapid jerks, falling from heights, etc.

The word Bhagna is derived from the word Bhanj-dhatu and Katupratyaya meaning to break Bhanj means motion, which once again means to break. The bones sustain trauma in different ways.

Acharya Sushruta claims that he paid attentive and noticed that all the bones. Do not exhibit a comparable sort of reaction to shock or damage. He has categorized these consequences in relation to the various types of bone and listed them below along with the type of damage involved¹.

1. Tarun Asthi (Cartilage) – Namyante (Bending)
2. Nalak Asthi (Long bones) – Bhajyante (Breaking)
3. Kapal Asthi (Flat bones) – Vibhidhyante (Cracking)
4. Ruchak Asthi (Teeth) – Sphutanti (Fragmentation)

ACCORDING TO MODERN²-

Based on etiology-

- a) Traumatic
- b) Pathological

Based on Displacement-

- a) Undisplaced
- b) Displaced

Based on external environment

- a) Closed fracture or simple fracture
- b) Open fracture or compound fracture

Based on fracture pattern-

- a) Transverse fracture
- b) Oblique fracture
- c) Spiral fracture
- d) Segmental fracture

Based on complexity of treatment

- a) Simple
- b) Complex

Modern science mentioned techniques like X-ray, CT and MRI for diagnostic purpose and plaster, immobilization, medication, bandaging and physiotherapy, etc. for therapeutic purpose.

ACCORDING TO AYURVEDA³ -

Classification of bhagna-

1. Karkataka-Depressed fracture can be termed as Karkataka in Ayurveda.
2. Ashvakarna -Ashvakarna means complete oblique fractures in which fractured part of the bone is projected like a horse ear.
3. Churnita -Communicated fracture which gives crepitus feels termed as Churnita.
4. Pichchita -as per Ayurveda terminology Pichchita is types of compressed fracture in which bones gets crushed.
5. Asthichallitaa -Asthichallitaa means Periosteal evulsion fractures is injury in which one part of bone gets avulsed and other part gets lowered.
6. Atipatita -The complete compound fracture in which bone divides completely termed as Atipatita.
7. Kandbhagna -Complete compound fractures resemble Kandbhagna in Ayurveda
8. Majjanugata -The fractured bones affect other part also then it is called as Majjanugata.
9. Vakra -The Asthi get bent, but not broken, especially in tarunasthi's in children. Vakra means greenstick fractures.
10. Chinna -Incomplete fractures can be termed as Chinna in Ayurveda.
11. Patita -The Patita is type of fracture in which many small cracks occur in bone with pain.
12. Sphutita -Sphutita means fissured fracture associated with pain and swelling.

SYMPTOMS OF BHAGNA⁴-

- Swayathu Bahulyam (marked swelling)
- Spandanvivantan
- Sparshasahisnutvam (tenderness)
- Avapidyamaneshabda (crepitus)
- Vividhavedanapradurbhavah (Different types of pains)
- Sarvasu Avasthasu Na Sharmalabha (Inability to get comfort in any position) are only a few of the symptoms of Bhagna that were recorded in Ayurveda. Similar to how contemporary medicine has described certain particular signs of fractures and dislocations, including swelling, soreness, crepitus, mobility restrictions, various types of acute pain and discomfort, etc.

BHAGNA CHIKITSA-

आञ्छनेः पीडनेश्चैव सङ्क्षेपैर्बन्धनैस्तथा॥१८॥

सन्धीञ्छरीरिसर्वास्तुचलानप्यचलानपि॥

एतेस्तुस्थापनोपायैःस्थापयेन्मतिमान्निषक्॥१९॥(सु.चि. 3 / 18,19)

Further Acharya Sushruta has stated a specific treatment for Bhagna which is as follows⁵-

1. Anchhana
2. Pidana
3. Sankshepa
4. Bandaging (Bandhana)

1. Anchhana-

'Anchhana' means traction. This is the basic step in reduction of Bhagna. The damaged Asthi is retracted during traction along the bone's axis. In turn, this causes proximally displaced fracture pieces to return to their original location. The bone alignment of the Bhagna location is accomplished in this way. In all full bhagna with displacement kinds, traction is required.

- In some fractures e.g., hairline, traction is not necessary.
- In some fractures only traction cannot serve the purpose (in alignment of fractured bones) where surgeon has to undertake Pidana and Sankshepa steps. i.e., manipulative procedures.
- In the fractures with angulatory or rotational deformities such manipulative procedures should be undertaken which are exactly opposite to that of mechanical events which lead to the production of the original fractures.

2. pidana-

The word 'Pidana' includes Awanaman and unnamana.

- Awanaman means pressing Asthi downwards along the force of gravity.
- Unnamana means pulling Asthi upwards at normal level.
- Parivartana means rotation; it may be external or medial rotation.

3. sankshepa-

It means the reduction of the fragments in case of bhagna

4. bandh / bandaging-

Bandages (Bandh) aid to stop bleeding, support tissue, keep topical medications at the application site, reduce oedema, correct deformity, and offer symptomatic relief. They also help to maintain splints and dressings in the desired posture. Regarding this, ayurveda advised applying sheaths (Kosha) around the thumb and fingers, crosses (spica) around the joints, spiral bandages (Anuvellita) around the upper and lower limbs, Khatva Bandh for the mouth and cheeks, etc. For bandaging reasons, a variety of materials are

employed, including cloths made of linseed fibres, cotton fibres, woollen materials, silk cloths made of Naga tree fibres, inner layer of bark, animal skin, and Munja grass, among others. To prevent swelling, blebs, discomfort, and instability, bandaging should be applied properly so that it is neither too tight nor too loose.

One of the most important therapeutic techniques is a proper immobilisation⁶ of the fractured limb; Acharya Sushruta has provided a comprehensive description of this usage of splints. Acharya Sushruta has identified certain significant tree barks for this purpose as Madhuka (Madhukaindica), Udumbara (Ficus Racemosa Linn.), Ashwatha, (Ficus religiosa), Palasha (Butea monosperma), Kakubha (Terminalia Arjuna), Vamsha (Bambusa), Sala (Shoverarobusta Gaertn.) Vata (Ficus bengalensis). Because they were readily available, these splints were used.

One of the other reasons for choosing these particular tree barks is that they fit inside the limb thanks to:

1. Their concave inner surface.
2. A solid and unyielding exterior.
3. A soft inside surface would function as a cushion for the limb, preventing pressure sores.

Sushruta recognised the benefits of physiotherapy in treating limb injuries. He has recommended starting with easier workouts that may be increased gradually. workouts shouldn't be recommended all at once when you first start out. For example, a mud ball is first handled, followed by a heavier object, such as a lump of rock salt, and then a tougher material, such as stones⁷.

1. Mritapinda Dharana
2. Lavana Dharana,
3. Pashana Dharana

General Treatment of Bhagna-

Acharya Sushruta instructs the surgeons before going to above steps he should follow the general line of treatment.

Before doing the aforesaid measures, the surgeons are instructed by Acharya Sushruta to follow the general course of therapy.

1. **Pariseka**⁸: This refers to continuously sprinkling a liquid medication, such as a decoction, oil, or preparation of ghrīt, over the injured area for a predetermined amount of time to create analgesia and Dosha shamana. Based on the patient's Prakriti and Ritu, many types of Parisekadravayas are mentioned.

- a) Nyagrodhadi decoction: This is utilised for GrishmaRitu and in patients with PaitikaPrakriti.
 - b) Panchamula Siddha dughda: Panchamula Siddha dughda is suitable for Pariseka karma when Bhagna is in Vata pradhanaPrakriti and experiencing severe discomfort. This dish is also Pitta Shamaka.
 - c) Chakra Taila: This is employed in those who tend to be Vata and Kapha Prakriti and when Bhagna has happened in SheetaRitu and is linked to excruciating pain. Ushna Virya's tail preparation lessens the pain and swelling at the fracture site.
2. **Lepa**⁹: The local application of a medical paste or ointment to the diseased area is referred to as lepa.

The MajisthadiLepa, which includes Manjistha, Yastimadhu, Shalipisti, Raktachandana, and Shatadhautagritha, has also been described by Acharya Sushruta. Pain and edoema are reduced by this lepa. The chemicals are continuously absorbed, which aids in bone mending.

FRACTURE MANAGEMENT²-

Treatment of a fracture can be considered in three phases:

- 1- Emergency care
- 2- Definitive care
- 3- Rehabilitation

1- Emergency care

At the site of accident: Emergency care of a fracture begins at the site of the accident. In principle, it consists of RICE, which means:

- Rest to the part, by splinting.
- Ice therapy, to reduce occurrence of swelling
- Compression, to reduce swelling
- Elevation, to reduce swelling

2- Definitive care

The three fundamental principles of treatment of a fracture are:

- (i) Reduction- Reduction is the technique of 'setting' a displaced fracture to proper alignment. This may be done non-operatively or operatively, so-called closed and open reduction respectively.
- (ii) Immobilisation- Immobilisation is necessary to maintain the bones in reduced position. This may be done by external immobilisation such

as plaster etc., or by internal fixation of the fracture using rods, plates, Screw etc.

- (iii) preservation of functions-To preserve the functions of the limb, physiotherapy all throughout the treatment, even when the limb is immobilised, is necessary.

3- Rehabilitation

- Return person to as full function as possible
- Start as soon as reduced
- Earlier mobilisation better the prognosis
- Ensure pain is controlled

PATHYA-APATHYA¹⁰-

- Lavana, Katu Rasa, Kshara, and Amla Rasa should not be used by a patient who has shattered bones.
- They should maintain the tightest level of continence while avoiding excessive sun exposure and physical activity.
- The patient should be provided a diet that includes Shali rice, meat soup, milk, ghee, soup of Satina pulse, and any other nourishing and beneficial food and drink.
- A Vranipurush should generally not be administered milk, but a case of fracture makes an exception.

II. CONCLUSION-

Sushruta described basic principles of Bhagnasthapna, Sthirikarna, and Bandhanas, etc. for the management of traumatic injuries, and Bhagna Chikitsa has been described in Ayurveda for the management of Asthibhagna. Reduction, Immobilisation, and Rehabilitation are the main therapeutic principles of fracture treatment that have also been described in modern science. It is significant to notice that there are numerous parallels between the Ayurvedic and Western medical systems with regard to the fracture condition. Without the use of technology, Ayurveda has long addressed a number of Bhagna-related features, all of which are still useful, rational, and practical today. Fracture detection in modern medicine involves radiographic exams. Bhagna's illness is attributed by Sushruta to severe injuries of musculoskeletal origin. Both Ayurveda and contemporary medicine have identified trauma and accidents as the primary causes of fractures when it comes to the etiological element. As a result, we may draw the conclusion that the old medical system has given us highly good treatment for a variety of specific problems and that it is still functional, logical, and beneficial.

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