

## LITERATURE REVIEW OF BHAGHNA MANAGEMENT IN AYURVEDA

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### ABSTRACT

Fracture is defined as break in the integrity of bone and its judicious management requires rational and holistic approach. Principle aim of management of fracture is to restore normal or near normal integrity of fractured part, without any complications. Ayurveda described fundamental principles of fracture management, which as it adopted by modern science. Sushruta mainly described mainly three principles for fracture management namely bhagna sthapana, bhaghna, bandhana and karmavartana. in addition to technical management various adjuvant therapy such as diet and regimen alepa, chakrayoga, pariseka, basti, nutritional status etc. by adopting these principle many such injury can be managed successfully with minimal rate of complication.

**KEYWORDS:** *Bhabgna, Bhaghna sthapana, Bhandhan, Fracture, Reduction.*

### INTRODUCTION

In ayurvedic classics specially in Susruta Samhita Acharya Sushruta has given four treatment principles for fracture management which are Aanchhan (Traction), Pidana (Pressure), Sankshep (Apposition) and Bandhana (Bandaging). Rehabilitation exercises like Mrutapindadharana (Holding of Earth ball), Lavanapindadharana (Holding of Salt ball) and after gaining proper strength Pashanpindadharana (Holding of stone ball) are also mentioned after fracture of hand. After prolong immobilisation there will be imbalance in vata dosha, which causes stiffness in affected joint.

Samhita Acharaya Sushruta has given various Alepana (External therapeutic coatings), and pariseka (Therapeutic streaming) to reduce swelling and inflammation.

## AIMS

To study the literature review of Bhaghna in Ayurveda.

## OBJECTIVE

To understand the Ayurvedic concept of Nidan, types, lakshan, chikitsa of Bhagna.

## MATERIAL AND METHOD

All textual reference of Bhaghna are collected from Ayurvedic classic in the library of Govt. Ayurvedic College, Guwahati.<sup>[14]</sup>

### Nidan of bhaghna (Etiology of bhaghna)

पतनपीडनप्रहाराक्षेपणव्यालमृगदशनप्रभृतिभिरभि- घातविशेषैरनेकविधमस्थ्नां भङ्गमुपदिशन्त ।।

- **Patana:** Fall from height, Fall on the ground with outstretch hand
- **Peedana:** Compression affects directly or indirectly over the bones
- **Praharana:** Striking or beating by blunt instrument
- **Vyalmrigradasana:** Trauma bite of ferocious animal
- **Akshepana:** Violent jerks, vigorous movement or sudden and severe contraction of muscle
- **Balavad vighraha:** Strong block from strongly built person
- **Abhigata vishesha:** Trauma caused by different reason

### Types of bhaghna

There are two types of bhaghna according Susruta Samhita

1. **Sandhimukta:** Dislocation
2. **Kandabhaghna:** Fracture

### Sandhimukta (Dislocation)

Sandhimukta again 6 types

1. **Utpista:** Swelling on both side of the joint with varied pain at night
2. **Vislista:** Mild swelling at the joints, continuous pain and deformity at the joints
3. **Vivartita:** The joint has dislocated to one side, characterised by unevenness in one part with pain

4. **Avakshipta:** Downward displacement of bone with separation of joint with severe pain
5. **Atikshipta:** Marked displacement of any articulation surface, with movement joint away from the bone
6. **Tiryakshipta:** Oblique dislocation of one of the articulating bone.

#### Cause of sandhimukta

- **Prasarana:** Extension of joints
- **Akunchana:** Forcefull flexion of joint
- **Vivartana:** Alteration of joint

#### Types of kandabhaghna

Kanda bhagna 12 in number

1. Karkatam 2. Ashwakarna 3. Churnita 4. Picchitam 5. Asthichallitam 6. Kandabhaghna
7. Majjanugatam 8. Atipatitam 9. Bakra 10. Chinna 11. Patitam 12. Sphutitam

#### Effect of trauma on bones

All the bone donot show similar types of response to the trauma. Susruta has classified these effects in different groups and co related with tyoes invoved as mentioned below

Tarunasthi	Cartilaginous bone	Bends
Nalakasthi	Long bone	Breakes
Kapalsthi	Flat bone	Cracks
Ruchakasthi	Teeth and small bones	Fragmented

#### Clinical features of bhaghna

Diagnosis of fracture can be done by history and clinical findings. the clinical sign and symptoms described by Sushruta stand same as modern surgical textbook. sushruta has mentioned sign and symptoms both in general and specific

#### General Sign and Symptoms

- **Shwayathu bahulya:** Diffuse swelling at the site of fracture
- **Spandana:** Pulsatile feeling at the fracture site
- **Vivaratana:** Displacement of fracture fragments
- **Sparsha asahishnuta:** Tenderness (Insensitive to touch)
- **Avapeedyamane sabdha:** Crepitus elicited on palpation
- **Srastangata:** Flacidity of fracture site

- **Vividha vedhana pradhurbhava:** Different types of at the fracture site
- **Sarva avastasu na sharma labha:** Discomfort in any posture

### Specific feature of kanda bhashna

1. **Karkataka:** Fracture resemble similar to crab
2. **Ashwakarna:** Fracture part has appearance of horse ear and is elevated and displaced
3. **Churnita:** Fractured part breaks into multiple fragments and able to regain normal shape, on palpation there will be crepitus sound.
4. **Picchita:** Fractured part get separated from body itself
5. **Asthichallita:** Fractured fragment are taken away from site of injury due to muscle contraction
6. **Kanda bhashna:** Fracture of shaft of bone, an attempted movement produces tremor
7. **Majjanugata:** Fragments of broken bone impacted into marrow cavity
8. **Atipatita:** Fragments are completely separated and separated fragments hang
9. **Vakram:** Incomplete fracture, there is bend in the affected bone
10. **Chinnam:** Incomplete fracture, one part of the bone remain patent
11. **Patitam:** Affected bone cracked into multiple fissure, resulting in severe pain
12. **Sphutita:** Fractured part is swollen like tip paddy bunch

### Types of bhashna

#### Principles of bhashna chikitsa

The line treatment of bhashna comprises of three important steps

1. **Bhashna sthapana (Reduction)**
  - Anchana (Traction)
  - Peedana (Pressure)
  - Sanskepa (Counter traction)
2. **Bhashna bandhana (Immobilisation)**
3. **Karymavarthana (Rehabilitation)**

#### Bhashna sthapana

Bhashna sthapana is only required in unstable fracture, whereas in stable fracture there is no required of reduction. The aim of bhashna sthapan is to approximate the fracture end and to achieve proper alignment.

There are three main techniques mention in sushruta Samhita for close reduction are Anchana, Peedana and Sanskhepa.

**Anchana (Traction):** By this technique wide gap between the fracture faragments are corrected.

**Peedana (Pressure):** It is technique by which fracture fragments are corrected by gentle and controlled pressure. In case of vinamana (Depressed) fractures fragments should be carefully lifted up. In case unnamana (Elevated) the raised fragments should be gently pressed down.

### **Bandhana (Immobilization)**

To prevents movements that interferes the with union, to prevents redisplacements of fracture fragments, to prevents angulation and to relieve pain and soft tissue injury bhaghna bandhana is done.

### **Karmavartana (rehabilitation)**

To regain the normal function of joints and fracture fragments, Sushruta has appreciated the importance physiotherapy. Various devices including exercise were suggested by Acharyas. in the fracture of carpel of the carpel, metacarpal and phalangeal joints, initially use of clay ball (Mritpinda) and at later period the use of salts and pieces of stone have been suggested.

### **Kapata shayana vidhi**

In case of fracture of tibia, fibula and femur (Janga uru bhaghna), Acharya Sushruta has mention unique immobilisation technique known as ' kapata shayan vidhi'. In this method patient was made to lay down on wooden board and was bound five pegs (Keel) at five different paces for immobilisation of the affected limb. A pair of pegs (Keel) should be placed either side of both the joint and one pegs should place at sole. The principles behind the procedure is immobilisation of the affected limb.

### **Criteria for shamyak bhaghna sandhan**

Clinical criteria for samyaka bhaghna sandhan (Fracture union)

- There should be no pain in fractured joint (Bhaghna sandhi)
- There should be no shortening or no gaping between two fractured end (Aheenagam)
- Anulbanam (No deformity or no swelling)
- Sukhchestaprasaranam (Complete or painless movement)

## DISCUSSION

The principles laid down in Ayurveda regarding to bhaghna chikitsa are universal and still in practice. Irrespective of system of medicine, the general management of any fracture are same. Acharya Sushruta has mentioned unique technical approaches for bhaghna management, including sthapana, bandhana and karmavartana. The essential management of fracture right from reduction to rehabilitation which are followed in present day orthopaedic can be traced back to Sushruta Samhita. External application of various bhaghna sthapna drug also been mentioned.

## CONCLUSION

On extensive study of bhaghna and its management, it can be understood that Acharya has given an extensive description on etiology and classification according to clinical symptom. even without any radiological evidence, various types fractures has not only been diagnose but also have been treated systematically. even though open surgical method have not been mentioned, management of open fractures and assessment of proper union, method of reduction, aligning and bandaging technique have been described. dietic indications, rate of curability of fractures according to age, and seasonal indications for changing bandages have also been explained. Along with management of local sites, acharyas has given a holistic approach.

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