

A Review of Asthi Bhagna and Bhagna Chikitsa in Ayurveda

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ABSTRACT

Ayurveda is the most ancient practiced medical science. The human body (*Sharira*) is described as a combination of external factors the *Atma* (soul), *Manas* (mind) and *Pancha Maha Bhoota*. The most important supportive framework of the body among these is *Asthi* (Bone tissue). The branch of surgery that deals with deformities of the bones is known as Orthopedics. Trauma management has been in practice since *Vedic* periods. This part of the treatment in *Ayurveda* is called *Bhagna Chikitsa*. It was at its peak optimum level during the period of ancient famous Indian surgeon, *Sushruta*. The *Ayurvedic* literature contains definition of *Bhagna*, its etiology, classification, general features, special features, and prognosis.

KEYWORDS: *Asthi, Bhagna, Bhagna Chikitsa*

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INTRODUCTION

Ayurveda is the fore runner of all the therapies of the world, since man has thought of providing an effective remedy to the diseases suffered by him. In all the living beings the matter and energy existing in the form of *Dosha Dhatu & Mala* but the most important supportive framework of the body is *Asthi* (Bone tissue). In Orthopedic surgery has its aim as "maintenance of normal mechanical function of the deformed bones". In Vedic periods *Ashwini Kumaras* used to perform surgeries like limb replacement, fixation of severed head etc. 'Famous Indian sage the *Acharya Sushruta*' was developed, practiced, and well documented this part of the treatment in *Ayurveda* is called *Bhagna Chikitsa*. *Acharya Sushruta* & others have described the aetiopathogenesis, symptomatology, classification & management of various traumatic musculo-skeletal conditions (soft tissue injuries, subluxations, dislocations & fractures etc.) in much elaborated way.

EFFECT OF TRAUMA ON ASTHI (BONES):

The word *Bhagna* is derived from the word *Bhanj-Dhatu* and *Katupratyaya* meaning to break *Bhanj* means motion, which once again means to break.

Acharya Sushruta has classified effects on different types of bones due to trauma:-

1. *Tarunasthi* (Cartilage) – Bend
2. *Nalkasthi* (Long bones) – Break
3. *Kapalasthi* (Flat bones) – Crack

4. *Ruchkasthi* (Teeth) – Fragmented
5. *Valayasthi* (Curved bones) - Crack or Break

CLASSIFICATION OF BHAGNA

***Sushruta's* classification:** On the basis of structure involved the skeletal injuries have been divided in two types-

1. *Sandhimukta* (Joint Dislocation)
2. *Kandabhagna* (Bone Fracture) ...

***Vagbhata's* classification:**

1. *Sandhibhagna*
2. *Asandhibhagna*.

Apart from these *Madhukoshvyakhya* further divided the *Bhagna* on the basis of their clinical manifestation as-

1. *Savrana Bhagna* (compound fracture)- Fracture with the wound i.e. bone comes outside just after injury.
2. *Avrana Bhagna* (closed fracture)- When bone is Fractured but no visible wound on the skin is seen.

- The dislocations have further been classified in to six varieties.
- The fractures are subdivided according to type of injury in to twelve types.

➤ *Acharaya Madhvakara* has described *Chinna* is of two types:

1. *Ekamanuvidaritam*

2. *Bahunuvidaritam.*

- *Acharya Sharangadhara has described the eight varieties of Bhagna.*

 1. *Bhagna prista*
 2. *Vidarita*
 3. *Vivartita*
 4. *Vishlishata*
 5. *Adhogata*
 6. *Urdhvagata*
 7. *Sandhibhagna*
 8. *Tiryaka kshipata*

CLINICAL FEATURES-

GENERAL FEATURES OF KANDABHAGNA

- *Shvyathubahulyam* (marked swelling)
- *Sparshasahisnutvam* (tenderness)
- *Avapidyamane shabda* (crepitus)
- *Vividhavedanapradurbhavah* (Different types of pains)
- *SarvasuAvasthasu Na Sharmalabha* (Inability to get comfort in any position)

FEATURES OF INDIVIDUAL KANDABHAGNA

- 1. *Karkataka*
- 2. *Ashwakarana*
- 3. *Churnita*
- 4. *Pichhita*
- 5. *Asthichallita*
- 6. *Kanda bhagna*
- 7. *Majjanugata*
- 8. *Atipatita*
- 9. *Vakra*
- 10. *Chinna*
- 11. *Patita*
- 12. *Sputita*

1. **KARKATAKA & 2. ASHWAKARANA (OBLIQUE)**



2. **CHURNIT BHAGNA (COMMINUTED)**



3. **PICCHIT BHAGNA (COMPLICATED #)**



4. **ASTHICALLITA BHAGNA (LONGITUDINAL #)**

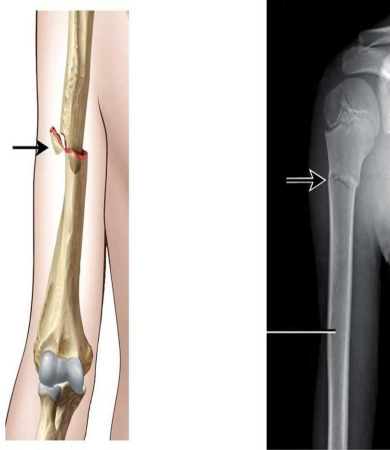


5. **KANDA BHAGNA (TRANSVERSE #)**



6. MAJJANUGATA BHAGNA (IMPACTED #)

Impacted Fracture



9. CHHINNA BHAGNA (INCOMPLETE #)



7. ATIPATITA BHAGNA (COMPLETE #)



10. PATITA BHAGNA (DEPRESSED #)



11. SPUTITA BHAGNA (FISSURED #)

Fissured Fracture/Linear/Hairline



Fissure fracture of the vault of the skull running from the right temporal region to the left temporal region.

8. VAKRA BHAGNA (GREEN STICK #)



PROGNOSIS:

According to Acharya Sushruta the prognosis of fractures in to Sukhasadhya, Kashtasadhya, and Asadhya depends on: -

- Prognosis
- Seasonal Variation, Age, Status of patient,
- Site of fracture, Status of Asthi and Type of fracture.

- *Sukhasadhya*
- *Kastasadhya*
- The fractures occurring in –
 - Pediatric age group and frail and emaciated persons.
 - Individuals suffering with Dermatological, Asthmatic anomalies and other supervening disorders.
 - A person with intemperate habits or *Vatika* temperament or who is sparing in his diet have also poor prognosis.

The Following Fractures have Guarded Prognosis (*Asadhya*):

- Complete fracture and dislocation of Pelvic bone with displacement.
- Comminuted (*Churnita*) fractures of iliac bone and Frontal bone and Dislocations of the cranial bones.
- Fracture of sternum, temporal bone, vertebral column and cranium.
- The fractures treated by an expert surgeon get properly united if it occurs at the first three stages of life (childhood, adolescence, adult).
- The management of fractures is difficulty in the patients who consumes excessive *Lavan, Katu, Kshara, Amala Dravyas* etc. Also one who is performing *Vyayama, Maithuna* etc.

COMPLICATIONS (*Upadrava*)- Mentioned by *Acharya Dalhana-*

1. Local 2. Systemic.
1. Local complication
2. Systemic complications

BHAGNA CHIKITSA-This includes:

1. Principles of *Bhagna Chikitsa*.
 2. General Management of *Bhagna*.
 3. Specific Management for different types of fractures.
 4. Medicinal preparations for different kinds of fractures.
 5. *Pathya- Apathya*.
 6. Clinical criteria of fracture healing
- Four Principles of Treatment mentioned by *Sushruta:-*
 1. *Anchan*
 2. *Pidana*
 3. *Sankshep*
 4. *Bandhan*

GENERAL TREATMENT OF BHAGNA:-
Instructed by *Sushruta :-*

1. *Pariseka*
2. *Lepa*

SPECIFIC MANAGEMENT FOR DIFFERENT TYPES OF BHAGNA'S

- Fracture associated with the wound or a compound fracture locally a mixture of '*Nyagrodhadi gana dravyas*' in paste form, *Madhu* and *Ghee* should be applied.
- Phalanx fracture or dislocation- first set in its natural position and bandaged with pieces of thin linen and sprinkled with *ghee*.
- ❖ Foot bone fracture- gently massaged with *Ghee*, then duly splinted up, and then bandaged with linen.
- ❖ Fracture of Tibia – Fibula or Femur and arm- massaged with *ghee* and traction is carefully applied along the direction of the bone. After splinted with the barks and bandaged with the help of linen.

- ❖ Hip joint dislocation- reduction done by traction and rotational movements, then splint applied and bandaged.
- ❖ Cracked or bruised femur fracture- the part bandaged in a foresaid manner.
- ❖ Iliac fracture reduced by manipulative procedures including elevation of depressed fracture followed by bandaging.
- Treated with a *Sneha Basthi*.
- Dislocation of *Amasasandhi* (Shoulder joint.) the region of *Kaksa* (Axilla) raised with an iron / wooden rod (*Musala*) then the surgeon bandage the part by *Swastika Bandha* (Figure of Eight Bandage).
- A dislocated Elbow joint or knee joint, wrist joint and ankle joint-First massaged with thumb, after which it pressed to set in its normal position alternating with flexion or extension. Then sprinkled with any oleaginous substance.
- Fractured Metacarpal bones-the two palms made even and opposed and bandaged together for support. Then sprinkled with *Ama Taila*.
- Fracture of the cervical spine- causing lateral flexion or shortening of the neck, traction is applied in upward direction. Then around neck an appropriate splint applied and tied with the help of linen. Advised complete bed rest in supine position for next seven days.
- ❖ A Depressed nose elevated with the help of the thin capillary rod (*Salaka*), Then two hollow tubes inserted in to each nostril (to facilitate breathing) then nose is bandaged and sprinkled with *Gritha*.
- ❖ Mandible dislocation the region is fomented thoroughly then the mandible is duly reduced its appropriate position and *Panchangi Bandha* is applied.
- ❖ In Tibia, Fibula or Femur fracture and fractures and dislocations of pelvic joint, vertebral column, chest and shoulder joint *Acharya* have described the special immobilization method, known as '*Kapata Shayana*'.
 - Rehabilitation: The importance of Physiotherapy in a limb injury was also appreciated by *Sushruta*. He has prescribed the exercises like:-

- 1) *Mritapinda Dharana* 2) *Lavana Dharana* 3) *Pashana Dharana*

- ❖ Ancient *Acharya* have described numerous medicinal preparations for the faster union of the fractured bone.
 - Like *Gandha Taila, Gandhaprasarini Taila, Chakrataila, BhagnasandhanaTaila, Laksha Guggulu, Ashwagandha Chaturbhadra choorna, Pravala Panchamruta, Sudha Bhasma* etc.
- ❖ *Apathya: Lavana, Katu Rasa, Kshara* and *Amla* and over exposure to sun and physical exercises.
- ❖ *Pathya: Shali* rice, meat soup, milk, *ghee*, soup of *Satina* pulse and all other nutritive and constructive food and drink. As a general rule milk should not be prescribed to a patient suffering from *Vrana* (Wound) , but a case of fracture forms an exception.
- ❖ A fracture in youth gets healed in course of a month. In two months in case of middle aged man, and three months in the old aged man.

CLINICAL SIGNS OF IDEALLY UNITED BONE-

1. No swelling or hardness on palpation.
2. Absence of shortening and deformity.
3. Painless and easy movements

CONCLUSION

Ayurveda has given ample importance to *Asthi Sharir* by describing it as *Saara* (base) of body. Further Ayurvedic literature contains definition of *Bhagna*, its etiology, classification, general features, special features, and prognosis. The treatment of the fracture includes treatment principles then specific treatment for different bones, clinical criteria's to assess bone healing, followed by *Pathya Apathya* (do's and don'ts). Prospects of management principles mentioned in *Ayurveda* are evident from the act that along with the general principles of fracture management an additional stress has been given on the local application of various *Lepa & Pariscechan* upon the fracture site along with number of herbal & herbomineral preparations mentioned for the internal usage. These measures mentioned in *Sushruta Samhita* can be explored in variety of means as the potential treatment mode in the fracture management. Such immense knowledge clearly depicts the understanding and far sightedness of our *Acharya's* as these principles are applicable in present era also with same efficacy.

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