

AN AYURVEDIC VIEW OF UNDERSTANDING KANDA BHAGNA AND ITS GENERAL MANAGEMENT (A REVIEW ARTICLE)

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ABSTRACT

Bhagna in ancient period were encountered during war or animal attack but in present time it occurs due to large sudden force on bone, chronic repetitive force or due to road traffic accidents. It was very well explained by Acharya Sushruta depending upon nature of trauma, shape of fracture, displacement of fractured fragment and fracture with or without wound. Acharya Sushruta explained Bhagna of 2 types- Kandabhagna and Sandhimoksha.<sup>[1]</sup> Kandabhagna is of 12 types which has been explained elaborately.<sup>[2]</sup> The principle of Bhagna Chikitsa defined by Acharya Sushruta centuries ago are as per condition either conservative or surgical management. The modalities explained by Acharya Sushruta like kusha bandha, aalepa, chakrayoga are much beneficial in the management of bhagna.<sup>[3]</sup> Therefore the concept theories and techniques which were practical several years ago holds true even in modern era.

**KEYWORDS:** Fracture, Kanda Bhagna, Bhagna Chikitsa.

INTRODUCTION

Ayurveda is the science of life where we get detailed description regarding the disease, its prevention and management. Acharya Sushruta has given detailed description regarding the etiology, pathology, clinical features and management of bhagna. It can be well correlated with fracture which is defined as loss of continuity of bone.

Acharya Sushruta has documented this without the help of x-ray or any other modern diagnostic techniques.

Understanding kanda bhagna as fracture (fracture of shaft bone)

The word kanda here means shaft of long bone and in this condition an attempted movement produces tremors also there will be displacement of fractured fragments. Kanda bhagna can be correlated to **complete compound fractures**.

Acharya Sushruta in Nidana sthana of sushruta samhita has mentioned 12 types of kanda bhagna which are Karkataka, Ashwakarna, Choornita, Picchita, Asthichallita, Kanda bhagna, Majjanugata, Atipatita, Vakra, Chinna, Patita and sphutita.<sup>[4]</sup>

Karkataka	Depressed Fracture
Ashwakarna	Oblique Fracture
Choornita	Comminuted Fracture
Picchita	Compressed Fracture
Asthichallita	Avulsion Fracture
Kanda Bhagna	Compound Fracture
Majjanugata	Fracture Impaction
Atipatita	Complete Compound Fracture
Vakra	Green Stick Fracture
Chinna	Incomplete Fracture
Patita	Fissured Fracture
Shputita	Split Fracture

Samanya Nidana For Kanda Bhagna<sup>[5]</sup>

Patana	Falling from a great height
Pidana	Violent pressure
Prahara	Strong blow from blunt instruments
Vyala Mrugadashana	Injuries caused by wild animals
Balavat Vighraha	Strong blow from heavy things
Asthi Vidradhi	Bone abscesses
Durjata Bhagna	Congenitally deformed bones
Phiranga	Syphillis

**Lakshanas of Kanda Bhagna According to Ayurveda.<sup>[6]</sup>**

Shvayatu Bahulya	Diffuse swelling at fracture sight
Spandana	Pulsatile feeling at fractured site
Vivartana	Displacement of fractured fragment
Avapidyamane Shabdaha	Crepitus elicited on palpation
Srastangata	Flaccidity of muscles
Vividha Vedana Pradurbhava	Different types of pain

**Compound fractures<sup>[7]</sup>**

In this type of fracture there is a communication between fracture and the exterior through the skin or mucous membrane and this may occur in two ways like:-

- The trauma which causes the fracture may cause soft tissue injury and break off the skin or mucous membrane so that the fracture site communicates with exterior, this is **External Compound Fracture**.
- When the sharp end of a fracture fragment penetrates through the overlying soft tissues and the skin then it is called **Internal Compound Fracture**.

**Importance of Compound Fracture:<sup>[8]</sup>**

It is a contaminated fracture and easily gets infected.

**Examination of Fracture:<sup>[9]</sup>** Examination of fracture includes local examination and general examination.

- **Local Examination:** Inspection, Palpation, Measurement, Movement and Complications.
- **General Examination:** Look for the evidence of shock and this is mainly due to amount of blood loss in major fractures. When a pathological fracture is suspected then an attempt is made to know the cause of pathological fracture. In infants multiple fractures may be seen in cases of osteogenesis imperfect which is characterized by dwarfism, broad skull, scoliosis etc. In young adults osteoclastoma and osteosarcoma are responsible.

**Diagnosis of Fracture:<sup>[10]</sup>** Diagnosis can be made on certain facts like.

- History of trauma
- Localised pain
- Swelling and deformity
- Local bony tenderness
- Crepitus
- X-Ray

**Complications of Fracture:<sup>[11]</sup>**

- Shock

**Types Of Bandaging (Bandha) According To Site<sup>[16]</sup>**

KOSHA BANDHA	Around thumb and fingers
DAMA BANDHA	Sling around straight parts
SWASTIKA BANDHA	Spica around joints
ANUVELLITA	Around upper and lower limbs
MANDALA	Circular bandage around broad area
PANCHANGI	Head, Neck above level of clavicle

- Crush syndrome
- Venous thrombosis
- Fat embolism
- Fracture fever

**Principles of Kanda Bhagna Chikits<sup>[12]</sup>**

**Alepa:** Lepa should be made by using drugs like Manjistha, Madhuka, Rakta chandana and flour of shali rice mixed with ghee washed 100 times.

**Importance of Lepa**

Lepa pacifies burning sensation, reduces pain and itching sensation.

**Bhagna Chikitsa When Associated With Pain<sup>[13]</sup>**

Bhagna when associated with pain should be sprinkled with decoction of Nyagrodhadhi gana dravyas and also milk treated with laghu panchamula dravyas.

**Savrana Bhagna Chikitsa<sup>[14]</sup>**

In case of fracture associated with wound should be treated with the paste of plants mixed with ghee and honey and the remaining regimen as bhagna chikitsa.

**Main Principles Adopted In Kanda Bhagna Chikitsa<sup>[15]</sup>**

- **Anchana (Traction):** It is a technique in which the wide gap between the fragments may be corrected anteriorly, posteriorly, medially or laterally and displaced fragments can be brought in alignment by application of traction.
- **Peedana (Pressure):** In this technique the fractured fragments are approximated by applying gentle and controlled pressure.
- **Samkshepa (Retention/Immobilization):** This is done to prevent movements that interfere with union, to prevent re-displacement of fractured fragments and also relieve pain and soft tissue injury.

**Bandhana Mokshana Kala**<sup>[17]</sup>

- In Hemanta rutu bandage should be changed in 7 days.
- In Greeshma rutu bandage should be changed in 3 days.
- In Samasheetoshna rutu bandage should be changed in 5 days.

**Pathya and Apathya in Bhagna**<sup>[18]</sup>**Pathya**

Sali rice, mamsa rasa, ksheera, sarpi, yusha, brumana annapana.

**Apathya**

Lavana, amla, kshara, katu rasa, rukshannapana, ativyayama, atimaithuna.

**Features Of Proper Union In Bhagna**<sup>[19]</sup>

Movements which can be done easily without pain or discomfort, no shortening, no deformity.

**Bahya Chikitsa In Bhagna**<sup>[20]</sup>

- Pariseka
- Lepa

**Abhyantara Chikitsa in Bhagna (shamanaoushadhi)**<sup>[21]</sup>

- Madhuraoushadha Ksheerapana
- Asthisamhara Choorna
- Peetavaratika Bhasma
- Rasonadi Kalka
- Lakshadi Guggulu
- Abha Guggulu
- Gandha Taila

**DISCUSSION**

Reason for the fracture is that even though bones are rigid they do bend when an outside force is applied to it. When this force stops, bone will return to its original shape.

The principles laid down in Ayurveda with regard to bhagna chikitsa are universal and still in practice. Irrespective of the system of medicine, the general management of any fracture is an elevated fractured part should be reduced by pressing it down and while hanging down it should be reduced by raising it up, by pulling it in the case of its being pushed aside, and by re instating in its upward (proper) position in the event of its being lowered down.

**CONCLUSION**

However there are certain principles behind every line of management, if correctly laid down, would universally remain unchanged whatever be the means that may be adopted to achieve them.

The present day medical science has also accepted most of the principles of bhagna chikitsa described in ayurvedic classics. Objectives described in classics include approximation of the fractured fragments, re alignment of fractured ends without any angulations as far as possible so that the full length of the limb or the injured part is obtained, facilitate the injured bone to heal or unite.

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