



FRACTURE MANAGEMENT CONCEPTS IN AYURVEDA



INTRODUCTION

- A fracture may be a complete or incomplete break in the continuity of a bone, or a crack, as defined by J.C.Adams.
- Fracture may serve as a speed breaker of life.
- Traumatic Orthopaedics require expertise to manage every aspect of the multifaceted pathology of fractures.

- - A wide concept of traumatic musculo-skeletal injuries has been described in *Ayurveda*.
 - *Sushrut Samhita*, *Yogratnakar*, *Chakradutta*, *Bhaishajya Ratnavali* are the main *Ayurvedic* texts where all the basic principles of fracture management have been described.



Initial / First aid Treatment

- In *Yogratnakar (Bhagna Chikitsa-14)*, initially cold sponging followed by mud application with subsequent immobilisation is advocated.
- Also in *Astang Hridaya (A.S.U-27/20)* continuous excessive cold applications are advocated.



Basic Principles of management

Reduction

- Main emphasis upon the techniques of closed reduction as *Achhana* (traction), *Peedana* (compression), *Sankshepana* (reduction), *Unmanna* (pulling upwards), *Vinmanna* (pressing downwards).

(Su. Chi.3/17-19)

- The cardinal rule of reduction i.e. to reverse the mechanism of injury has been followed well.

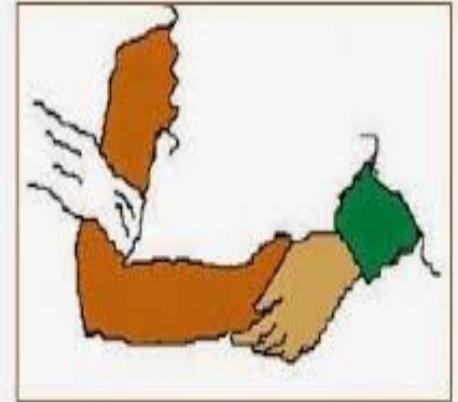


Figure 1: Achhana (Traction).

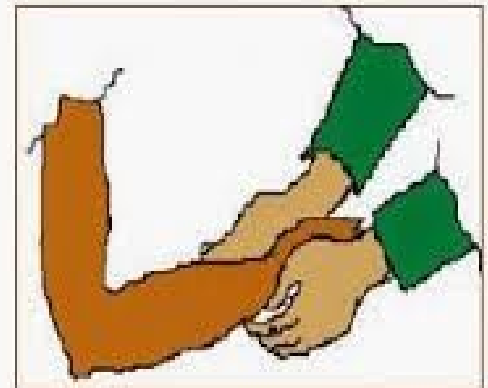


Figure 2: Peedana (Manipulation).

Retention

- Under *Kusha-Bandhana* barks of various trees have been used. **(Su.Chi.3/6)**
- *Sadharana bandhana* has been advocated. **(Su.Chi.3/10)**
- The concept of *Kapata Shyana* i.e. the Fracture bed has a great relevance in the immobilisation of fractures involving back, pelvis and lower limbs. **(Su.Chi.3/48-50)**
- Traction and counter traction methods have been used for reduction and immobilisation of fractures of pelvis **(Su.Chi.3/28)**

Rehabilitation:

- The concept of rehabilitation is one of the fundamental contributions by *Ayurveda*.
- In *Sushruta Samhita (Su.Chi. 3/35)* under the management of fractures of bones of palm (meta-carpals) , gradually increasing weight bearing has been described.
- It is the field where *Ayurveda* can **help a lot** in various ways. A number of local applications, medicated fomentation, oleation, *Agnikarma* all can play a definitive role in decreasing the post- immobilisation stiffness, muscle spasm, swelling and pain.

Management of Mal-united Fractures

The basic concept simulates with that of osteoclasia practised now a days.

(*Su.Chi.3/52*)

Management of Open Fractures

- Special consideration of open fractures is there.
- Management of wound prior to the management of fracture has been emphasised

(*Su.Chi.3/14, 53*)

Prevention of complications

- Mainly *Paka* (pyogenic infection) of tissues.
- Description of Osteomyelitis has been given under *Asthi Vidradhi*.

(*Su.Chi.3/14, 53*)

(*Su.Ni.-9/36-40*)

Concept of Anatomical Healing

- The signs of ideal union as mentioned in *Sushruta Samhita* reflect a brilliant concept of anatomical healing.

(Su.Chi.3/70)

- Fractures affecting *Marma* (vital areas) require a special management protocol. The concept of *Marma* is well established in *Ayurveda*

(Su.Sha.6)



Adjuvant Therapy

- There is a wide range of Disease Modifying Modalities in *Ayurveda* in addition to the local treatment.
- Oral medications including various herbal and herbo-mineral preparations
- *Panchkarma Therapy*
- Local Treatment



ADJUVANT THERAPY



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graph TD; A[ADJUVANT THERAPY] --> B[ORAL MEDICATIONS]; A --> C[PANCHKARMA]; A --> D[LOCAL TREATMENT]; B --> E[Herbs & Herbo-mineral preparations:]; E --> F["• Asthishringkhala  
• Babool Churna  
• Arjuna Churna  
  
• Pravala Bhasm  
• Peet Varatika Bhasm  
• Lakshadi Guggulu  
• Abha Guggulu etc."]; C --> G[Shirovasti  
Karan puran  
Nasya  
Anuvasna Basti]; D --> H[Pareesheka  
Lepa  
Abhyanga  
e.g  
Manjishthadi lepa  
  
Gandh Taila  
Chakra Taila  
Tripushadi Taila  
Ghrita];
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ORAL MEDICATIONS

Herbs & Herbo-mineral preparations:

- Asthishringkhala
- Babool Churna
- Arjuna Churna
- Pravala Bhasm
- Peet Varatika Bhasm
- Lakshadi Guggulu
- Abha Guggulu etc.

PANCHKARMA

Shirovasti
Karan puran
Nasya
Anuvasna Basti

LOCAL TREATMENT

Pareesheka
Lepa
Abhyanga
e.g
Manjishthadi lepa

Gandh Taila
Chakra Taila
Tripushadi Taila
Ghrita

Factors influencing fracture healing

- Age, Physical status, Nutritional Status, Type of bone involved, Techniques of management, Seasonal variables, *Prakriti* (Psycho-somatic constitution), Anatomical factors etc.
- A major group of factors can be modified to ensure an easy and unhindered healing.

Concept of Non Union and Delayed Union

- The average estimated time duration for healing has been mentioned according to the age (*Su.Chi.3/16*).
- The Ayurvedic orthopaedicians were well versed in the concept of non union and delayed union.
- Various *Rasayana Yoga* can prove helpful in improving the quality of life by increasing the immunity, vigour and vitality.
- The age related degenerative changes and pathological fractures resulting from osteoporosis can be prevented.



THANK YOU