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CASE STUDY

Ayurvedic Management of Non-Healing Fracture - A Case Study

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ABSTRACT

A 37-yr old female patient having symptoms of pain in and restriction of movements of right arm visited OPD of Kayachikitsa dept. at Govt. Akhandanand Ayurveda college & hospital, Ahmedabad on 1 march 2022 (opd no. 5341) for the treatment. Patient was having history of non-union of fracture even after surgical interventions (twice) in last one year. she was further advised for surgery for the same. Patient was in very apprehensive condition. Patient was advised ayurvedic treatment after complete clinical assessment. Patient got relief in her complaints clinically as well as proper union of fracture was achieved (x-ray/radiological assessment) following classical line of treatment mentioned under *Bhagna chikitsa in Ayurveda classics.*

Key Words *Kanda bhagna, Non-healing fracture*

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INTRODUCTION

A fracture is a break in the continuity of a bone[1] & Non-union is thought to occur in approximately 2% of all fractures[2] but for diaphyseal fracture the incidence can be as high as 20% for certain injuries[3]. The burden of a long bone non-union is substantial with pain, loss of function & psychological distress commonly encountered[4]. Acc. to the U.S FDA definition a fracture ununited 9 months after injury or one in which there is a failure of progression towards union over the previous 3 months can be classified as a non-union[5].

Bhagna is explained by *Acharya susruta* depending upon nature of trauma, shape of fracture, displacement of fracture fragments & fracture with & without wounds. If it is in the bone, it is called as *kanda bhagna* (bone fracture) & in the joint it is called as *sandhimoksha* (dislocation)[6].

The principle of fracture management defined by acharya *susruta* as per condition suggestive conservative or surgical treatment. Conservative modalities include *Kushabandha, Alepa, Chakrayoga, Taila droni*[7] *etc.*

PATIENT'S INFORMATION

A 37-year-old female patient came to OPD No 4 (PG Kayachikitsa department) at Govt. Akhandanand Ayurveda college & hospital,

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Ahmedabad with following complaints on 3rd march 2022.

Chief complains:

- Pain in right arm +++ (since 1 year)
- Difficulty & restricted arm movements ++++ (in abduction, adduction, flexion, & extension) since 1 year.

O/E

- Swelling at right arm ++
- Tenderness at right arm +++
- Restricted movements of right arm ++++

Past history: K/c/o hypothyroidism

Surgical history: Operated for fracture of hip bone in 1996

Treatment history: H/O surgery twice for humerus shaft fracture (1st in march 2021 & 2nd in October 2021) & advised for further surgery.

Family history: Nil

Personal history:

Appetite: Normal

***Stool*:** 1 time / day regular

Urine: 4 to 5 times/ day

Sleep: disturbed due to pain

INVESTIGATION: - X-ray of right mid shaft of humerus on (1st march 2022) shows non-union of fracture (fig 1).

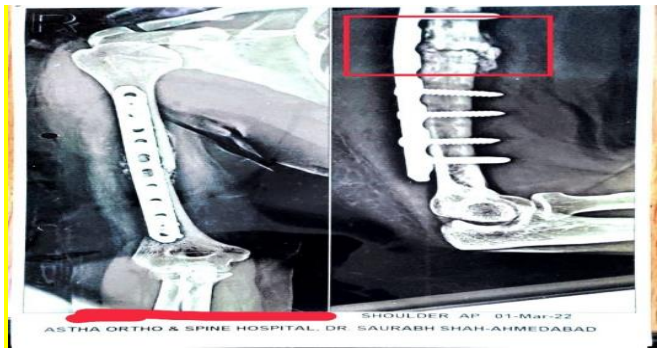

Figure 1 Non-union of fracture

DIAGNOSIS

Patient was diagnosed with non-union of fracture/*kanda bhagna* on the basis of investigation.

THERAPEUTIC INTERVENTION

She was given *shamana* medication (as given in table no 1)

Table 1 *Shamana* medication

Sr.no.	Medication	Doses
1.	*Yogaraja guggulu*	2 BD
2.	Tab. *Laxadi guggulu*	2 TDS
3.	Cap. *Hadjod*	2 BD
4.	*Dashamula kwatha*	40 ml BD
5.	*Doshaghna lepa*	1 time/day

The above treatment was continued for 8 months and treatment was changed according to clinical condition.

OBSERVATION AND RESULTS

Observations and results are mentioned in table no 2.

Table 2 Observation & Results

Symptoms	Before treatment	During treatment	After treatment
Pain in right arm	+++	++	-
Swelling at right arm	++	++	-
Tenderness at right arm	+++	++	-
Restricted arm movements	++++	+++	-

INVESTIGATION DURING AND AFTER TREATMENT

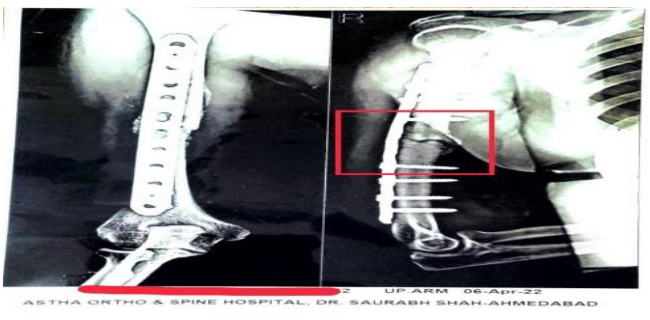

Figure 2 During treatment

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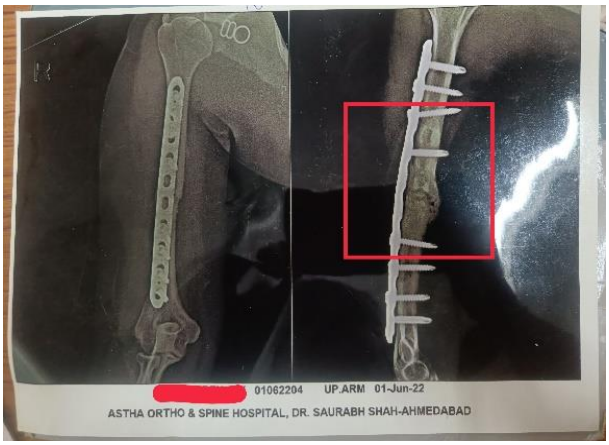

Figure 3 During treatment

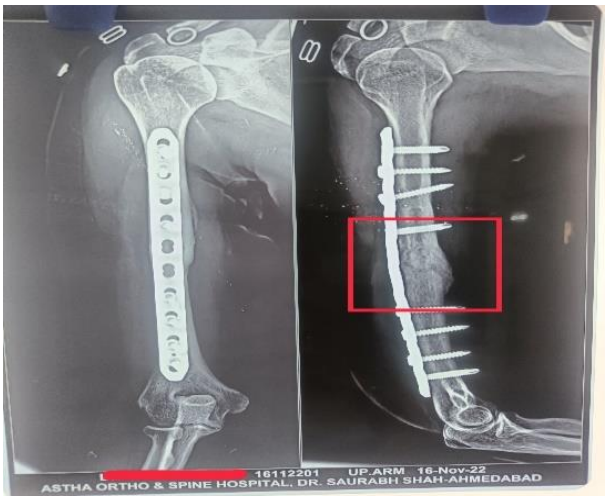

Figure 4 Union of fracture (After treatment)

RESULTS

Patient got 50% relief in all symptoms & good callus formation in x-ray 1/4/22 as mentioned above in figure 1. During this treatment X Ray was repeated on 6/4/2022,1/6/22 and 16/11/2022 as mentioned in above figure 2, figure 3, figure 4 respectively. After 8 months of treatment almost complete healing was seen in x-ray. So, patient had complete healing of fracture site & got complete relief without any surgical intervention which she has advised by surgeon.

DISCUSSION

Fracture is discontinuity of bone. Treatment protocol of modern science consists of surgical & non-surgical intervention. After surgical & non-surgical intervention there are chances of non-union & non-healing of fracture. But through *ayurvedic* treatment principles like *Sothahara, Asthisandhanak, Sulaprashamansa* medications fracture can be healed & united effectively. In present case study following the classical treatment principles of *bhagna chikitsa* with drugs like *Dashamula kwatha, Yogaraja guggulu, Laxadi guggulu & Hadjod*, these drugs have *Sothahara, Asthiposhaka, & Asthisandhanaka* properties, it helps in promotes callus formation & healing of fracture.

CONCLUSION

In current case, the patient got remarkable improvement in pain, range of movements & strength within 30 days of treatment & after 8 months patient got almost complete relief in pain & able to perform routine activity of right arm. X-ray showed union & complete healing of fracture.

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