



Palliative Surgery for Pathological Fracture of Humerus by Intramedullary Interlocking Nail: Case Report

Authors

**Dr Abhimanyu Singh, Dr Prasad Chaudhari, Dr Sanjay Dhar, Dr Abhay Agarwal,
Dr Naba Krishna Gohain**

D.Y.Patil School of Medicine, Nerul, Navi Mumbai

INTRODUCTION

Human skeletal system is most commonly affected by metastasis followed by lungs & liver. Majority of bone lesions which are non-mesenchymal in origin are due to metastasis apart from myeloma & lymphoma. Amongst all long bones, humerus comes next to femur to be affected by metastatic deposits. Casts, splints & braces have been used conventionally in the management of pathological fracture of humerus but over the years surgical intervention has gained popularity as it promises better pain relief & functional outcome. Factors such as quality of bone, size of the lesion, life expectancy etc. determine the decision making of choosing the best fixation modality. Internal fixation options include intramedullary nail, plate with screws, endoprotheses & arthroplasty.

MATERIALS & METHODS

-Thorough history-taking, clinical examination & diagnostic work-up.

-Establishment of final diagnosis after thorough analysis.

-Management & treatment of the patient by appropriate evidence-based intervention.

A 54 year old female came to D.Y.Patil Hospital Orthopaedics Unit 3 OPD for consultation in the month of October 2014. It was diagnosed to be pathological fracture of right humerus secondary to right-sided breast carcinoma after thorough history-taking, clinical examination & diagnostic work-up. Patient was immobilized in a functional brace & was advised to follow-up after the completion of her chemotherapy.

In April 2011, she was a known case of colloid goitre who was diagnosed for a lump on her right breast. On 07/05/2011, FNAC was done which was suggestive of hypercellular smear showing duct carcinoma cells on haemorrhagic background & the conclusion was a malignant breast lesion. She underwent LOBC with SCNL biopsy on 03/06/2011. (Fig.1 & 2)



(Fig.1)



(Fig.2)

After being diagnosed with Metastatic Grade III breast carcinoma she underwent 4 cycles of chemotherapy with a 3 week interval between each cycle. Drugs used were Docitaxel + Cyclophosphamide. (Table 1)

Date	Cycle
24/6/2011	Cycle 1
15/07/2011	Cycle 2
5/8/2011	Cycle 3
25/09/2011	Cycle 4

Followed by chemotherapy she then received radiotherapy 25 cycles from 13/09/2011 to 18/10/2011 one cycle per day (Figures 3 & 4).

JASLOK HOSPITAL & RESEARCH CENTRE
 15, Dr. G. Deshmukh Marg,
 MUMBAI - 400 026.
 Tel.: 5657 33 33 Ext. 2121

DEPARTMENT OF RADIATION THERAPY

GEBALT PRIMUS

APPOINTMENT CARD

Name SHOBHA ROLE

Hosp. No. 842408

R. T. No. 15198

Treatment Commenced on 13-09-11

Treatment Completed on _____

DR. B. C.
 Signature

This is a pass to admit the above patient into the Radiation Therapy Department reception room

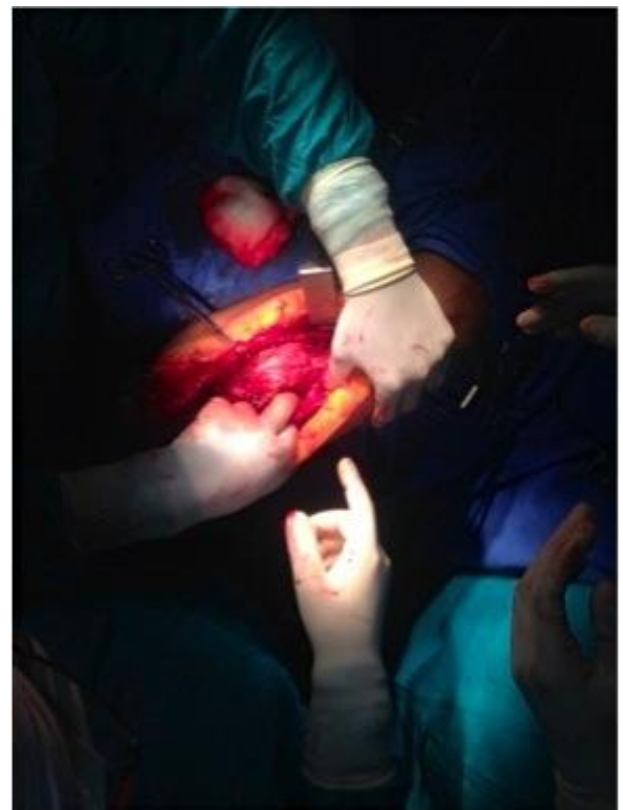
(Fig.3)



(Fig.5)

DATE	TIME	DATE	TIME
13/9/11	~	5/10/11	~
14/9/11	12-10	7/10	~
15/9	~	10/10	~
16/9	~	11/10	~
19/9	~	12/10	~
21/9	~	13/10	~
22/9	~	14/10	~
23/9	~	17/10	~
26/9	~	18/10	12-10 p
27/9	~		
28/9	~		
29/9	~		
30/9	~		
31/9/11	~		
4/10			

(Fig.4)

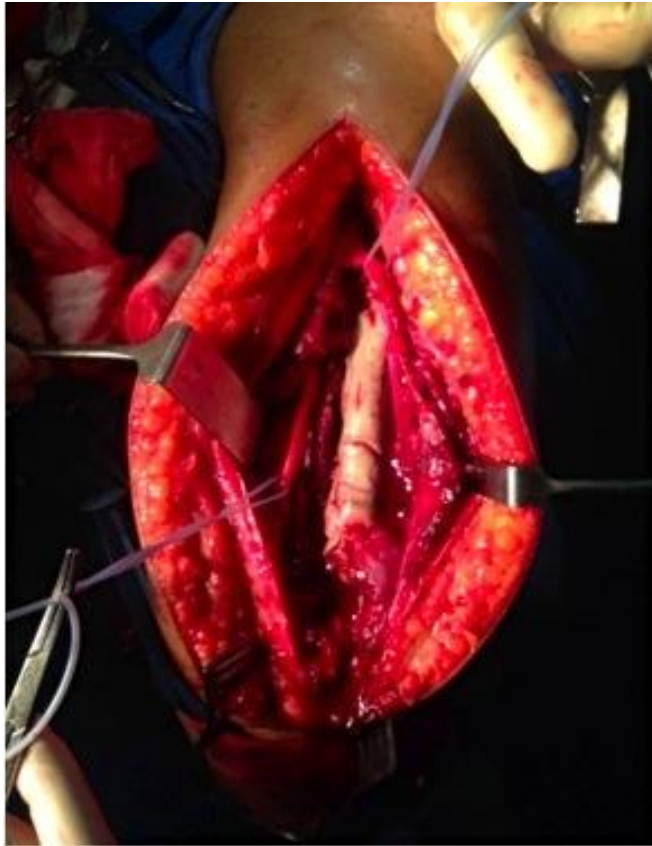


(Fig.6)

Later she underwent 6 cycles of chemotherapy from September 2014 to January 2015. Drugs used were Gemcitabine + Carboplatin, administered on D1 & D8 of each cycle with an interval of 3 weeks from the next.

She was planned for surgery on 03/03/2015 prior to which she was sent for embolization to Tata Memorial Hospital on 02/03/2015.

The surgery performed was “Debulking of the tumour with Intramedullary Interlocking Nailing & Intercalary bridging with antibiotic impregnated bone cement.”(Fig.6,7,8&9)



(Fig.7)



(Fig.9)



(Fig.8)

RESULTS & OBSERVATIONS

Elbow range of motion exercises & smiley ball squeezing hand exercises was started from post-operative day 2. After a week, shoulder range of motion exercises were started. Patient was discharged after suture removal on post-operative day 14. On follow-up, after 2 weeks patient had both right shoulder & elbow range of motion full & free.

CONCLUSION

Intramedullary interlocking nailing proved to be an effective & stable internal fixation modality for pathological fracture of humerus which brought early pain relief & mobilization of the affected extremity.