



TOTAL ELBOW REPLACEMENT AS A MODALITY OF TREATMENT IN POST TRAUMATIC STIFF ELBOW

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ABSTRACT

Trauma to the elbow is a common cause of stiff elbow. Human is the only privileged species in the world known to walk on hind limbs and thus it has freed both the upper limbs for various day to day activities like eating, drinking, cooking, writing, making machines and tools etc. These activities are not possible if elbow joint is stiff. So we require a painless, mobile, and stable elbow. Current literature is not sufficient enough to draw firm statically based conclusions. There is no high level evidence for the best surgical treatment modality for post traumatic stiff elbow. The objective of this article is to evaluate the results of total elbow replacement as a modality of treatment in post traumatic stiff elbow.

KEYWORDS : Post traumatic, stiff, total elbow replacement.

INTRODUCTION

There is no high level evidence for the best surgical treatment modality for post traumatic stiff elbow'. Despite various modalities of treatment available ,still a large number of patients present with post traumatic stiff elbow, specially in developing countries like India. Treatment for post traumatic stiff elbow tried till date ranges from late open reduction in neglected posterior dislocation elbow to , excision arthroplasty, anatomical arthroplasty, interpositional arthroplasty and total elbow arthroplasty. None of them have given a satisfactory solution to the problem, which is, to provide a painless, mobile, stable and functionally useful elbow. Excision arthroplasty leads to an unstable joint, anatomical arthroplasty led to failures and re ankylosis, interpositional arthroplasty also did miserably poor. So arose the need for total elbow arthroplasty with an aim to achieve a painless, mobile, stable and useful elbow.

MATERIAL AND METHOD

This study was conducted in Department of Orthopaedics, SNMC Agra, India, which is a tertiary medical college and hospital. The study group comprised of seven patients of post traumatic stiff elbow, admitted through the out patient department over a period of 17 months from August 1995 to December 1996. Cases having active, occult or previous infections were not included in this study. Heavy labourers, patients below 17 years age, patients having functional range of motion were also excluded from the study. A detailed clinical, pathological and radiological assessment was done. A sloppy hinge prosthesis with varus and valgus laxity of 7 to 10 degree was used. Operation was done with posterolateral curved incision under general anaesthesia. Analgesic, anti- inflammatory and antibiotic drugs were given post operatively. Drain was kept for 24 hours. Stitches were removed after 2 weeks. Slab was used for 3 weeks. Two weeks after the surgery intermittent passive movements were started. Active assisted movements were started after three weeks. Patients were called for follow-up at regular intervals and their parameters were recorded , as per our scoring criteria. We used the scoring system devised by Hospital for special surgery (New York).

RESULTS

A total of seven patients of post traumatic stiff elbow were treated over a period of 17 months from August 1995 to December 1996. All patients were treated with sloppy hinge prosthesis total elbow arthroplasty. Overall average age of these patients was 33.86 years (male 29.8 years, Females 44 years). Most patients belonged to middle class socioeconomic status. None of them needed high functional demand. Average period of post operative immobilization was 22.5 days. Post operative complications seen were infection in one case, transient ulnar nerve palsy in two cases, Myositis ossificans in one case and delayed wound healing in One case. We achieved good results in 6 patients and satisfactory in 1 patient. Average gain in points was 44.72 (ranging from 28 to 52) according to the scoring system adopted by us.

DISCUSSION

Post traumatic stiff elbow is not only debilitating to the patients but it also poses a great challenge to the treating surgeon. As the mode of treatments available till date, such as excisional arthroplasty, anatomical arthroplasty, interpositional arthroplasty etc. are not very satisfying so total elbow arthroplasty is a better option specially for low demanding patients. In this study we could achieve painless, mobile and stable joint with minimal complications. We got good result in 6 patients while satisfactory in one patient. These results are in accordance with other studies. Rate of infection in our series was minimal. No triceps weakness was seen as we used triceps sparing technique in all our cases. We started active movements of the elbow after 2 weeks, which helped us in achieving good range of motion in our study in accordance with other studies. There was no case of ulnar nerve palsy in our study. Two case of transient nerve palsy recovered within three weeks time. There was no case of dislocation of the implant or skin necrosis or humeral or ulnar fracture or proximal subsidence in our study.

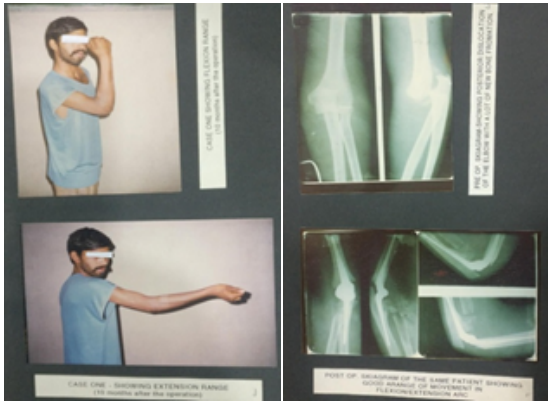
CONCLUSION

In our study we found that the immediate results of total elbow arthroplasty with sloppy hinge prosthesis were quite encouraging, specially in patients with low functional demand. So the patient's needs and expectations should be kept in mind before suggesting this treatment for post traumatic stiff elbow, to avoid major complications like loosening and dislocation.

S. No.	Age	No. Of Males	No. Of Females	Total
1	17-20	2		2
2	21-40	2	1	3
3	41-60	1	1	2

S. No.	No. Of Days Of immobilization	No. Of Patients
1	0 to 7	0
2	8 to 14	0
3	15 to 21	3
4	22 to 28 29 to 35	3
5		1

S. No.	Complications	No. Of Patients
1	Deep Infection	1
2	Ulnar Nerve Palsy	
	Transient	2
	Permanent	0
3	Myositis formation	1
4	Delayed wound healing	1



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