

Long Term Functional and Clinical Outcome of Mini-Open Rotator Cuff Repair: A Study in Retrospect.

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Received: 04-01-2022 / Revised: 09-02-2022 / Accepted: 13-03-2022

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Conflict of interest: Nil

Abstract

Introduction : Rotator cuff tear is one of the common ailment encountered in orthopedics leading shoulder pain and dysfunction [1]. In recent times arthroscopic repair has taken precedence over mini open repair however many surgeons still prefer mini open technique over arthroscopy due to lack of infrastructure, skill or by choice.

Mini open technique still seems to give satisfactory functional results [2].

The purpose of this study was to evaluate the results of mini open rotator cuff repair.

Material and methods:- This was a retrospective observational single center multi surgeon operated study done at Shree Krishna hospital Karamsad.

On the basis of the clinical records obtained from MRD (medical records department) patients who were treated surgically with mini-open technique, from February 2018 through August 2021 were called upon in the OPD and were assessed according to VAS(visual analog score) and Quick DASH(disability arm shoulder and hand) score and results were evaluated .

Inclusion criteria: All patients operated with mini open rotator cuff repair technique before 6 months.

Exclusion criteria: Patients above 70 yrs of age, patients with shoulder lesions other than rotator cuff tear and revision rotator cuff repair.

Results: The mean Quick DASH score was and VAS score was at average follow of .

Discussion: There is a significant improvement in VAS and Quick DASH score after surgery with mini open rotator cuff repair.

Keywords: Rotator cuff repair, Mini open approach, functional outcome.

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Introduction

One of the major causes of shoulder pain and dysfunction in adults is rotator cuff tear and is known to affect adults of all age groups peaking at an average of 44yrs [3]. With growing interest in sports in our

society and easy availability of the imaging modalities like MRI these cases are likely to increase in number.

Patients with rotator cuff tears usually presents with severe pain in shoulder joint

which may exacerbate at night. Pain is more significant when patient tries to abduct or on lifting of heavy objects. Hence, the aim of any surgical intervention in rotator cuff tears should be to provide painless arc of motion with minimal dysfunction.

Methods:

This was a retrospective observational single center multi surgeon operated study done at Shree Krishna hospital Karamsad.

This study was conducted at shree krishna hospital karamasad. clinical records department was asked to retrieve the data of all the patients treated surgically for rotator cuff tear in the last 5 years. Documents of these patients were reviewed in detail for their operative notes. All the patients who were operated with mini open technique were included in this study. All these

patients were called telephonically and were given appointment in OPD for follow up.

We selected quick dash score for recording functional outcome as it is a PROM (patient reported outcome measure). Also the Quick DASH has high construct validity and good responsiveness [4]. Several studies confirm that the Quick DASH is highly responsive and valid for different patient populations with upper limb pathologies [5,6).

On follow up after taking consent, they were given handouts of Quick DASH score and their responses were recorded. These responses were compared with their pre operative quick dash scores in the clinical records obtained from MRD.

Statistical method:

Data was analyzed using paired t-test.

SR. NO.	SEX	HOSPITAL NO	DATE OF OPERATION	PRE OP QUICK DASH	POST OP QUICK DASH	FOLLOW UP IN MONTHS	PRE OP VAS	POST OP VAS
1	F	41299-L	06-02-2018	50	2.3	46	6	3
2	M	63434-H	28-02-2018	43.2	0	46	7	2
3	F	51045-A	05-07-2018	45.5	4.5	41	5	1
4	M	67628-L	18-07-2018	45.5	0	40	8	4
5	F	81473-D	30-07-2018	43.2	2.3	41	5	0
6	F	14020-L	02-08-2018	50	0	40	7	2
7	M	57822-B	17-08-2021	43.2	2.3	6	6	1
8	M	16960-M	09-03-2019	43.2	4.5	33	7	1
9	F	20843-M	15-04-2019	45.5	0	32	7	2
10	F	23974-M	01-05-2019	50	2.3	31	6	1
11	M	29308-M	10-06-2019	45.5	4.5	30	8	2
12	F	99246-D	20-07-2019	43.2	4.5	29	5	0
13	M	95404-K	14-02-2020	43.2	6.8	20	6	2
14	F	32635-N	13-06-2019	50	9.1	24	7	2
15	F	23884-K	30-05-2020	45.5	2.3	7	6	1
				45.78	3.026666667	31.06666667	6.4	1.6

Figure 1: Data collection sheet

Results:

In our study total 15 patients with rotator cuff tear operated with mini open technique came to follow up for evaluation of Quick DASH score out of which 9 females(60%) and 7 males(40%).

Mean follow up interval of patients in our study was 31.06 months(range:6-46)

The mean quick dash value of all the patients pre operatively was found to be 45.78 (range:43.2-50) and mean post operative quick dash value of all the patients post operatively was found to be 3.02 (range:0-9.1).

The mean VAS score value of all the patients pre operatively was found to be 6.4(range 5-8) and mean post operative VAS score value of all the patients post operatively was found to be 1.6(range 0-4).

Conclusion:

Mini open technique for surgical repair of rotator cuff repair has promising results and can be considered standard of treatment requiring minimal infrastructure support and generous learning curve. Long term results of this technique are considerably good providing excellent post operative outcome at long term follow up



Figure 2: Pre-operative X-ray



Figure 3: Post-operative X-ray

Limitations of study:

Small sample size, subjective responses in Quick DASH score.

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