



REVIEW OF LITERATURE AND COMPARISON OF FAILED REVERSE SHOULDER ARTHROPLASTY IN TERTIARY CARE CENTER

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ABSTRACT **Background:** Reverse Shoulder Arthroplasty (RSA) addresses complex shoulder pathologies but carries high complication rates. This study reviews causes of RSA failure and compares outcomes from a regional cohort in Tertiary Care Center. **Objectives:** To analyse reasons for RSA failure, compare regional outcomes with literature, and evaluate pre-operative epidemiology, indications, and patient satisfaction. **Methodology:** A retrospective review was conducted using data from the Tertiary Care Center Arthroplasty Audit Group. Sixty-six patients who underwent RSA were included. Patient-reported outcome measures (PROMs)-Oxford Shoulder Score (OSS) and QuickDASH-were collected pre-operatively and at 26 weeks, 52 weeks, and annually up to 5 years. Statistical analysis included paired t-tests and ANOVA to compare outcomes across indications. **Results:** Mean patient age was 73.8 years; 74.3% were female. Common indications included proximal humerus fractures/malunions (52%) and rotator cuff tears (18%). Significant improvement in OSS and QuickDASH was observed by 26 weeks, though outcomes varied by indication. Complication rates were highest in malunion/non-union patients (82%). Satisfaction was lowest in this group, while patients with cuff tears or osteoarthritis showed sustained improvement. Overall satisfaction at 5 years was 64.3%. **Conclusion:** RSA improves function in most shoulder conditions, but outcomes are poorer in complex cases like malunions, highlighting the need for careful patient selection and counselling.

KEYWORDS : Reverse Shoulder Arthroplasty; Patient-Reported Outcome Measures; Complications; Orthopaedic Surgery; Shoulder Replacement

INTRODUCTION

Reverse Total Shoulder Arthroplasty, initially designed for the management of cuff tear arthropathy but over time the broadened indications include the treatment of complex 3 or 4 part fractures of the proximal humerus, variable amount of cuff deficiency, irreparable cuff tear without OA, inflammatory arthritis, tumour resection, failed hemiarthroplasty after trauma, failed hemiarthroplasty done for cuff deficiency. Since reverse shoulder arthroplasty is a solution to complex conditions the reported complication rates are high⁽¹⁾.

Degenerative joint disease is common throughout the world, the shoulder is one of the commonly affected joints due to primary or secondary degenerative joint disease, the treatment of which is joint replacement surgery⁽²⁾.

Fractures of the proximal humerus are the third most common type of fractures worldwide after pertrochanteric and distal radius fractures and are more prevalent in the elderly population⁽³⁾. As the increasing age expectancy and presence of osteoporosis leads to frailty which predisposes to fractures even after a simple fall, which also contributes to the fact that the elderly are more prone to sustain complex fractures compared to the younger population⁽⁴⁾.

There are not many studies done to compare outcomes/failure rates/satisfaction or dissatisfaction rates of RSAs in literature with those done in this region. This study aims to review and understand the various reasons for dissatisfied/ failed Reverse Shoulder Arthroplasty mentioned in the literature and compare them to a cohort of RSAs done in Tertiary Care Center and to investigate the pre operative epidemiological data, diagnosis and indications for surgery.

METHODS AND MATERIALS:

Caldicott Guardian approval was obtained to access existing data from the Tertiary Care Center arthroplasty audit group (TAAG) database, clinical portal and picture archiving and communication system (PACS) of NHS, Tertiary Care Center. The present study is a retrospective case review of prospectively collected data of demographics, pre- and post-operative functional scores using validated questionnaires measuring Patient Reported Outcome Measures (PROMs) and radiographs of patients who have undergone Reverse Shoulder Arthroplasty.

To be included in the study, patients must have undergone a Reverse shoulder Arthroplasty in Ninewells Hospital, Dundee, NHS, Tertiary Care Center with their outcomes measured. A total of 66 patients were included in the study. The patient files were analysed to extract the following data: presenting side of shoulder, age at surgery, gender of the patient, BMI, condition diagnosed due to which surgery was performed, any co-morbidities, history of previous surgeries, date of operation, any complications and present status of the patient.

Patient's functional outcome was evaluated using validated questionnaires of Oxford shoulder Score (OSS), quick version of Disability of Arm, Shoulder, and Hand (quick DASH) scoring systems. The OSS comprises of a 12-item questionnaire to assess pain and function of the shoulder joint in two parts. There are 12 questions each having a maximum score of 4 with maximum score of 48 and the minimum 0, a higher score indicating better results. The Quick DASH score, on the other hand, is an 11-item questionnaire with a summative maximum score of 100 indicating maximum disability or worst results. In addition, patients were surveyed on their overall satisfaction (yes or no) with the procedure.

Both scoring systems were used pre and post operatively at 26 and 52 weeks. If the procedure class includes stabilisation, then the patient receives the instability version of the questionnaire. The QuickDASH outcome measure consists of 3 modules which are scored individually. These are disability (11 questions), work (4 optional questions) and sports and performing arts (4 optional questions). The scores for each question are summed and converted to a value on a scale between 0 and 100, where 0 represents the best possible outcome.

The questionnaires were sent to the patients pre-operatively, at completion of 26 weeks and 52 weeks post-surgery. Of these, all 47 patients had a minimum 26-week follow-up and 41 of them had a follow-up of 52 weeks. Hospital records were documented by orthopaedic audit nurses as part of the TAAG system protocol in order to record any acute hospital stay and post-operative complications.

The data analysis was mostly a description of the patient's demographics, complication rates, and comparison of pre-and post-operative functional as well radiographic parameters. A p value of < 0.05 was considered to be significant in this study. Demographic and

functional data were compared using R software. Variations in other parameters due to demography were tested for statistical significance using the Kruskal-Wallis rank sum test and Fisher exact test. The pre-and post-operative functional scores at 26 weeks and at 52 weeks were compared using the Paired T-Test. A comparison was also done between functional scores for different indications for surgery using the ANOVA test.

RESULTS:

A total of 66 patients underwent RSA with patient reported outcome measures recorded at 26 and 52 weeks. This study includes patients from 2015 when recording of PROM's began in NHS, Tertiary Care Center to 2024 with at least 26 weeks follow up. The majority of the patients included from the study were from 2023, post COVID.

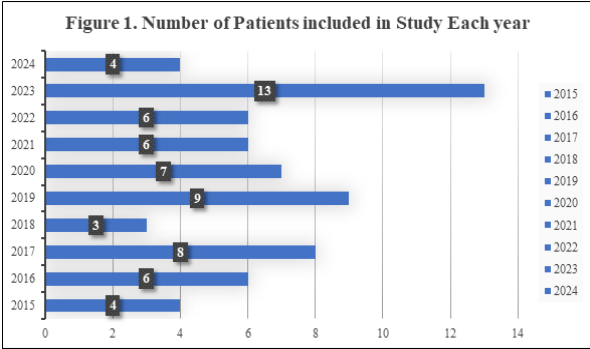


Figure 1. Number Of Patients Included In Study Each Year.

Table 1. Demographic Characteristic Of The Patients:

Patient demographics		Count (N)	N%
Age (Mean± SD)	73.78±7.64 Years	66	
BMI (Mean± SD)	30.34±6.52 Kg/m ²	66	
Arm	Left	29	43.94%
	Right	37	56.06%
Gender	Male	17	25.75%
	Female	49	74.25%
Condition	Rotator Cuff Tears	12	18%
	Glenohumeral Osteoarthritis	14	21%
	Acute Proximal Humerus Fractures	17	26%
	Proximal Humerus Malunions & Non union	17	26%
	Others	6	9%
Comorbidities	High Blood Pressure	41	62%
	Rheumatoid arthritis	6	9%
	Smoking	9	13%
	Kidney disease	4	6%
	Diabetes	7	10%
	Previous trauma	16	24%
	Anti-coagulants	14	21%
	No Comorbidities	7	10%

The mean age of patients is 74 years (58-88 years). The majority of patients were females 49 and the right side (37) was operated upon more than the left side. The distribution of BMI showed that the mean was distributed slightly more towards overweight patients.

Table 2. Demographic Characteristics And Diagnosis Of The Patients:

Variables	Rotator Cuff Tears (N=12 ¹)	Glenohumeral Osteoarthritis (N=14 ¹)	Other (N=6 ¹)	Acute Proximal Humerus Fractures (N=17 ¹)	Proximal Humerus malunions and non-unions (N=17 ¹)	p value ²
Age (Median, IQR)	78(75, 83)	78 (71, 80)	74 (64, 78)	74 (69, 75)	73 (65.80)	0.11
Female	6 (50%)	11 (79%)	4(67%)	15 (88%)	13 (76%)	0.2
Male	6 (50%)	3 (21%)	2(33%)	2 (12%)	4 (24%)	

BMI (Median, IQR)	29 (25,31)	29 (27, 32)	29(28, 34)	30 (27, 33)	30 (27,35)	0.8
Left Arm	7 (58%)	6 (43%)	2 (33%)	8 (47%)	6 (35%)	0.8
Right Arm	5 (42%)	8 (57%)	4 (67%)	9 (53%)	11 (65%)	
Comorbidities	11 (92%)	14 (100%)	5 (83%)	17 (100%)	12 (71%)	0.022

¹n (%); Median Inter Quartile Range (IQR). ²Fisher's exact test; Kruskal-Wallis rank sum test

Patients were operated for a variety of conditions, the most common indication for surgery was Proximal Humerus Fracture, Malunion or Nonunion. Other causes included AVN secondary to Proximal Humeral Fracture Fixation, unstable arthroplasty, and dislocation. Rotator cuff tears include patients with rotator cuff tears and patients with cuff tear arthropathy. Analysis of demographic data was done for each of the conditions and statistical evaluation using Kruskal-Wallis and Chi-Square tests, which revealed no significant differences between the two groups.

Table 3. Patient Reported Outcome Measures As Per Different Conditions, Pre-treatment, 26 weeks and 52 weeks:

Parameter		OS Score PRE	Wk 26	Wk 52	QDD Score PRE	Wk 26	Wk 52
Rotator Cuff Tear	Mean	17	35	30	61	35	45
	1 st IQR	13	28	28	41	28	23
	3 rd IQR	25	38	43	70	43	52
Glenohumeral Osteoarthritis	Mean	14	27	25	73	38	56
	1 st IQR	9	17	14	61	27	46
	3 rd IQR	22	35	33	77	69	70
Other	Mean	20	36	35	64	23	32
	1 st IQR	11	19	16	41	20	25
	3 rd IQR	28	41	37	84	55	75
Acute Prox. Humerus Fractures	Mean	16	20	24	68	63	59
	1 st IQR	9	14	17	57	41	41
	3 rd IQR	22	29	29	80	68	66
Prox. Humerus Malunions and non-unions	Mean	11	21	23	70	52	50
	1 st IQR	8	15	16	56	34	32
	3 rd IQR	17	31	34	80	64	58
p value		0.7	0.2	0.8	0.8	0.3	0.9

OS Score: Oxford Shoulder Score, QDD: quick DASH Score, PRE: Pre-operatively WEEK26: at 26 weeks, WEEK52: at 52 Weeks

The distribution of the various clinical outcome measures was compared with normal distribution by the Kolmogorov-Smirnov Test with Lilliefors correction.

The change in scores from pre-treatment to 26 weeks and from pre-treatment to 52 weeks were compared for statistical significance using the Paired T test and the ANOVA test. The OSS showed improvement from the pre-treatment score compared to scores at 26 and 52 weeks. For RCTs and Glenohumeral arthritis the OSS initially improved from pre-treatment to 26 weeks and subsequently declined minimally at 52 weeks, which was clinically insignificant as evidenced by the p value (0.13 and 0.6).

Similarly, the quick DASH score showed significant improvement from pre-treatment to scores at 26 and 52 weeks (61, 34, 45). It showed a slight deterioration from 26 weeks to 52 weeks, but this was clinically insignificant.

Follow Up Of Variations In Patient Reported Outcome Measures (PROMs) As Per Different Conditions.

The PROMs were analyzed after the first year of surgery at year 02 to year 05 using the OSS and quick DASH. Patient satisfaction scores at the end of year 2 to year 5 have also been used to evaluate PROMs. The OSS has increased significantly from the pre-treatment to week 26 through to year 05. The most significant improvement in OSS is seen in the Other conditions group with the mean of score improving from pre-treatment 20 to 44 at year 05. The Rotator Cuff tear group also has shown significant improvement with the mean pre-treatment score improving from 17 to 41 at the end of year 05.

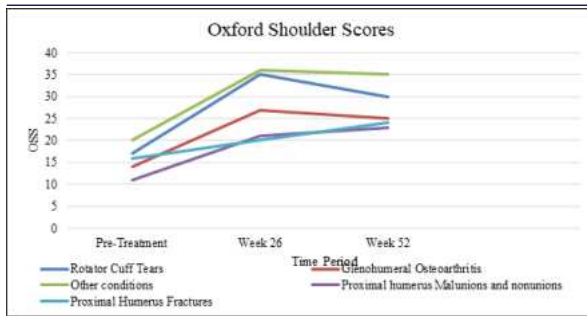


Figure 2. Mean OSS for different conditions:

OSS for different conditions from pre-treatment to week 52 with a reading at week 26. Fractures of the proximal humerus show the most consistent improvement in OSS whereas other conditions, RCT's, Glenohumeral osteoarthritis show an initial improvement and then a slight dip at week 52.

Mean QDD Scores For Different Conditions:

QDD for different conditions from pre-treatment to a week 52 time period. The most consistent improvement is seen in the proximal humerus fracture conditions, whereas the qdd score for various indications shows an initial improvement at week 26 and then a slight decline at week 52.

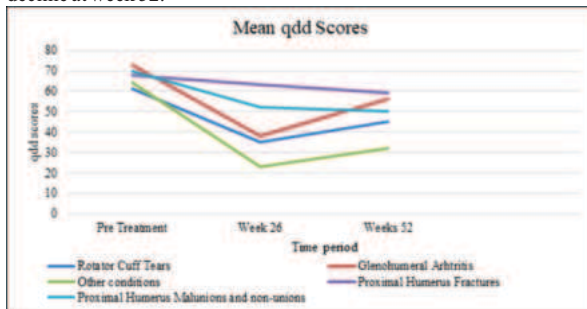


Figure 3. Mean QDD Scores for different conditions:

PROMs for RCT

PROMs (OSS and qdd) for RCT's from pre-treatment to a 5-year period where the OSS has consistently improved with the best scores at year 02 (41) with a slight dip at year 04 (29) then again, an improvement in the score at year 05 (41). Whereas the qdd has been reported to be the best at year 02 (17) and has increased at year 05 (30). Surgery for RCT leads to significant functional and subjective improvements, especially noticeable by 26 weeks to 02 years post-operatively. Some patients may experience fluctuations around Year 4, but many regain or maintain good outcomes by Year 5.

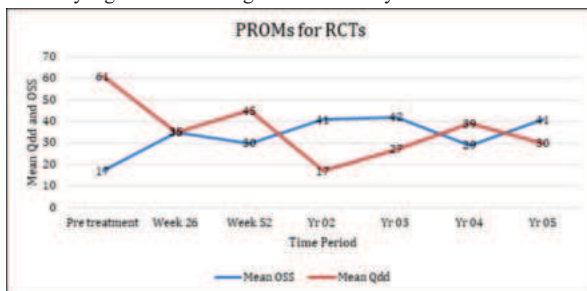


Figure 4. PROMs for RCT

PROMs For GH OA:

The PROMs for Glenohumeral arthritis from pre-treatment to a 05 year follow up where the best results for the OSS has been at year 04 (39), with a slight decline at year 05 (33). The qdd score was high at the end of year 03 (60) but was consistent at the end of year 04 and year 05 (35). Surgery for Glenohumeral arthritis has significant functional and subjective improvements specially at year 04 for OSS and year 05 for qdd.

PROMs For Other Conditions:

The PROMs for Other conditions. Patients with other shoulder conditions show significant improvement following treatment, as

reflected by both OSS and Qdd scores. OSS rises from a mean of 20 pre-treatment to 44 by Year 5, indicating progressive improvement. Notably, most gains occur early (Week 26 = 36), with a slight plateau from Year 2 to Year 3, before a further rise to peak values in Years 4 and 5. In parallel, the Qdd score drops from 64 pre-treatment to 14 by Year 5, showing a substantial improvement in outcomes. The best scores are observed at Year 4 (19) and Year 5 (14).

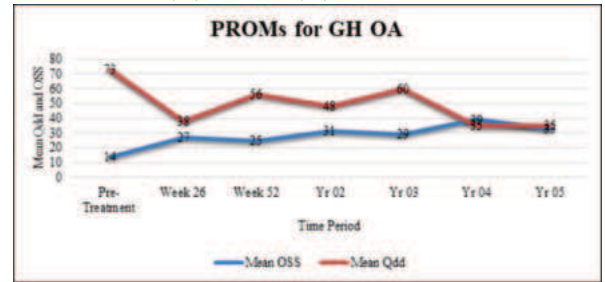


Figure 5. PROMs for GH OA

Unlike the RCT group, this cohort shows a dip in Qdd improvement between Week 52 and Year 3, suggesting some variability in recovery. However, a strong rebound follows. Overall, both scores indicate consistent long-term benefits of treatment in patients with non-RCT shoulder conditions, with peak outcomes seen by Year 5, and particularly robust improvements in later years.

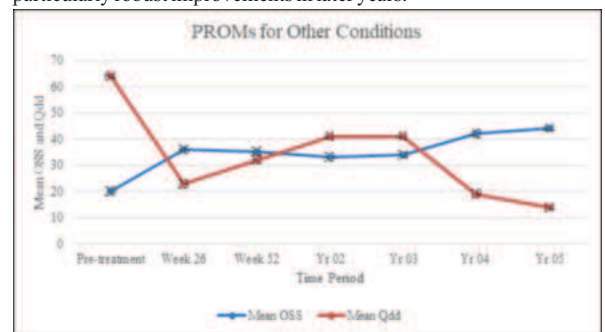


Figure 6. PROMs For Other Conditions:

PROMs For Proximal Humerus Fractures

Patients with proximal humeral fractures demonstrate a more gradual and modest recovery compared to other groups. The OSS begins low at 16 pre-treatment, reflecting poor initial function. There is steady, incremental improvement over time, reaching a peak of 37 at Years 3 and 4, before slightly declining to 35 at Year 5. The early post-treatment period (Week 26 to Year 2) shows slower gains, suggesting that functional recovery in this group is more delayed.

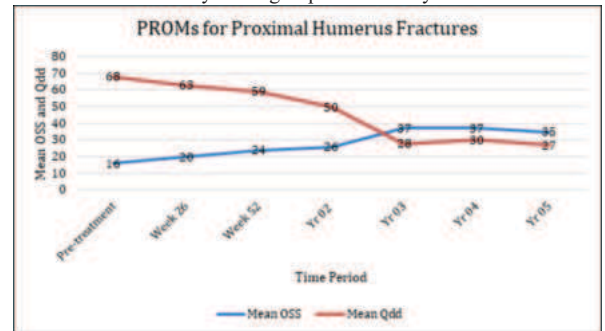


Figure 7. PROMs For Proximal Humerus Fractures

The Qdd score starts high at 68, indicating significant impairment. The Qdd score in this cohort declines slowly, reaching 50 by Year 2, and only shows marked improvement by Year 3 (28). From then on, the scores stabilize around 27–30, suggesting some level of persistent limitation or plateau in recovery. Patients with proximal humeral fractures show delayed but eventual improvement, with maximum functional gains and reduced symptoms appearing around Years 3–5.

PROMs For Proximal Humerus Malunions And Non-unions:

This group shows poor and inconsistent outcomes following treatment, with minimal functional recovery and persistently high Qdd

scores (indicating ongoing symptoms or poor quality of life). Unlike the other groups, there is no sustained improvement over time and in some cases, the scores worsen or return to baseline. Although there's a short-term gain by Week 52, function declines significantly after that, returning close to baseline levels by Year 4 (OSS = 11). The Year 5 OSS = 20 is still far lower than in other groups (which were around 35–44). After a brief early improvement, Qdd scores climb back up, indicating increasing symptoms or decreasing well-being. The Year 5 score of 59 is still very close to the pre-treatment score of 70, showing minimal lasting benefit. Patients with proximal humerus malunions and non-unions experience the poorest outcomes among all groups analyzed. OSS shows only a temporary improvement that declines over time. Qdd scores indicate persistent impairment with no sustained gains post-treatment.

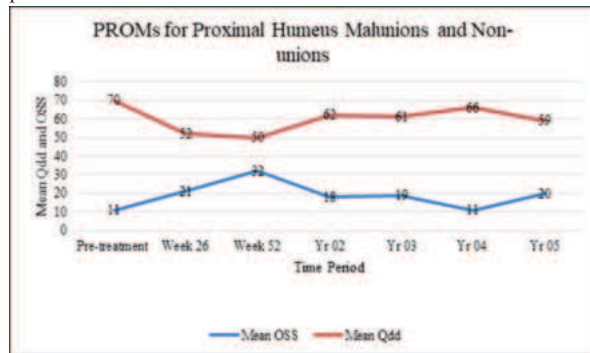


Figure 8. PROMs For Proximal Humerus Malunions And Non-unions:

Complications:

Of the 66 patients that were operated with RSA, 28 patients had no complications. From the remaining cohort of patients, the most common complication by far was dislocation, with 23 recorded occurrences. This was followed by Dissociation of components (10 cases), Periprosthetic fracture (10 cases), Poor function (8 cases), Complex pain (7 cases), 2 patients had superficial infection and only 1 patient had deep infection. Each patient had multiple complications.

When sub-grouped as per diagnosis or condition Proximal Humerus Malunions and non-unions had the highest rate of complications (82%) followed by Proximal Humerus Fractures (59%) followed by Rotator Cuff Tears (50%), then Glenohumeral Osteoarthritis (43%) and lastly Other conditions group (33%) had minimal complications.

As each patient had multiple complications, many of them had minor complications which prolonged hospital stay and arguably delayed rehabilitation. Minor complications like Urinary Tract Infections and urinary problems causing delayed discharge were reported. A total of 9 patients underwent revision surgery due to various reasons the most common being dislocation followed by dissociation of components, and 1 patient underwent revision surgery due to subscapularis/cuff failure. There were a number of other complications which have been reported in the fig below.

Patient Satisfaction:

Patient satisfaction was recorded at 26 weeks, 52 weeks and then yearly for five years. At 26 weeks 22 patients responded as being satisfied, and 32 patients responded as being dissatisfied, the remainder of the patients did not respond to the questionnaire. When analysing the cause of dissatisfaction, the majority of patients reported limited mobility, pain, stiffness, slow progress, muscle problems. When analysing different groups, the highest dissatisfaction at 26 weeks was among the proximal humerus malunion/non-union group and Glenohumeral Osteoarthritis with scores being on the lower end of the spectrum. At 52 weeks Proximal Humerus Fracture group had the lowest satisfaction scores.

Table 4. Satisfaction Rates:

Satisfied / Dissatisfied	26 Weeks	52 Weeks	02 Years	03 Years	04 Years	05 Years
Satisfied	22	20	14	13	8	8
Dissatisfied	32	26	17	10	11	6

At year 02, 14 patients were satisfied with the procedure and 17 remained dissatisfied. Remaining patients did not respond. Satisfaction scores were lowest for Proximal Humerus Malunion/Non-

union group (5 patients) followed by Proximal Humerus Fracture group (3 patients). Pain seemed to dominate the dissatisfied patients followed by limited mobility and muscle problems at year 02 compared to Week 52 where limited mobility seemed to be the major cause for dissatisfaction.

At year 03, 13 patients reported to be satisfied with the procedure whereas 10 responded as being dissatisfied and the remaining number of patients did not respond to the questionnaire. Proximal Humerus Malunion/Non-union group showed highest dissatisfaction rates with 4 patients scoring between 0-5. Limited Mobility and Pain dominated the dissatisfaction sources at yr 03 followed by Muscle Problems and Stiffness.

At year 04, 08 patients reported to be satisfied with the procedure, 11 patients reported to be dissatisfied and the remaining number of patients did not respond to the questionnaire. Proximal humerus Malunions/non-unions had the highest patient dissatisfaction at Year 4, with 03 patients with low satisfaction scores. Limited Mobility and Pain dominated the dissatisfaction sources at yr 04, followed by Muscle Problems and Stiffness, similar to the year 03 statistics.

At year 05, 08 patients reported to be satisfied with the procedure, 6 patients reported to be dissatisfied and the remaining number of patients did not respond to the questionnaire. Proximal Humerus Malunions/non-unions had 2 patients responding at Year 5, and both gave a low score of 5, resulting in a 100% dissatisfaction rate among respondents.

DISCUSSION:

The present study is an audit of RSA at the hospitals under NHS, Tertiary Care Center. Patients from a wide range of age group and a variety of indications were offered RSA. The primary source of data was the Tertiary care center Upper Limb Audit, which has been functional since 2015. The study is one of the few to report PROMs which were prospectively collected in an independent setting outside the hospital. Patients were sent relevant questionnaires by mail, which they completed at home, minimizing the potential for hospital-related bias or influence from healthcare staff. The effectiveness of the procedure was assessed using validated scoring systems that measured not only the clinical outcome of the shoulder replacement itself, but also the functionality of the entire upper limb, the patient's overall health status, and their level of satisfaction.

Patient Demographics:

In the present study the mean age of patients was more on the elderly side at 73.78 years with the majority of patients being females. The youngest patient operated was 58 years with diagnosis of Proximal Humerus Fracture. The mean age was similar to a study by Bryan Wall (2007)⁽⁶⁾ and Guillaume Bacle (2017)⁽⁶⁾ which was 72.7 years. The oldest patient was 88 years old and had a diagnosis of Proximal Humerus Non-union who had urinary problems causing delayed discharge and also had an episode of dislocation before week 26 for which he underwent revision surgery. At year 05, in the Other Conditions group there was only 1 respondent with a high satisfaction score and also in the Proximal Humerus Fractures group there were 3 respondents with high satisfaction scores, indicating good outcome at 5 years post op, whereas in the Proximal Humerus Malunion/Non-union group there were 2 respondents with both scores being in the lower end of the spectrum.

The overall patient satisfaction rate at five years in the present study was 64.3%, based on known satisfaction scores. This rate appears lower when compared with long-term data from published literature. In a large single-surgeon series by Sheth et al. (2022)⁽⁷⁾, which followed 93 reverse shoulder arthroplasty (RSA) patients for a minimum of 10 years, 82% of patients reported being either "very satisfied" or "satisfied" with their outcomes. Furthermore, 94% of those contacted stated they would undergo the procedure again. On the other hand, Bacle et al. (2017)⁽⁸⁾ reported good long-term functional outcomes and a prosthesis survival rate of 93% at 10 years in a cohort of 87 patients. Although explicit satisfaction percentages were not provided, the maintained Constant scores and low revision rates suggest a generally positive patient experience.

Of the various co-morbidities recorded in the present study, hypertension was the most prevalent with over 62% of patients reported to be hypertensive. It was followed by Previous Trauma 24%.

The diagnosis for which RSA was done was mostly Proximal Humerus Fractures/Malunions & Non-unions (26%) followed by Glenohumeral (21%) Osteoarthritis and RCT (18%). The distribution of indications in a heterogeneous group was fairly consistent with the currently available literature.

Clinical Outcomes And Functional Recovery:

The present study demonstrates that reverse shoulder arthroplasty (RSA) offers consistent improvements in patient-reported functional outcomes across various diagnostic categories. Across the cohort, Oxford Shoulder Scores (OSS) increased significantly from preoperative values, particularly within the first 26 weeks postoperatively. While there was a trend toward plateauing or slight decline in some groups between years 2 and 4, outcomes stabilized or improved by the fifth postoperative year in most categories. The improvement in QuickDASH (QDD) scores further confirms reduced upper limb disability, supporting the efficacy of RSA in restoring shoulder function and quality of life.

Notably, patients with rotator cuff tears and primary osteoarthritis experienced the most sustained gains, with OSS values reaching the 40s by year 5. In contrast, patients undergoing RSA for proximal humerus malunions or non-unions had limited and short-lived improvements. Such differences underscore the importance of careful preoperative assessment and patient counselling based on underlying pathology.

Temporal Satisfaction Trends:

Patient satisfaction generally followed the trajectory of clinical recovery. Initial satisfaction at 26 weeks was low across most groups, reflecting early postoperative challenges such as pain, stiffness, and limited mobility. By year 2, satisfaction improved for many patients, with a more favorable satisfaction-to-dissatisfaction ratio. Satisfaction remained highest in groups with more sustained functional improvements, particularly in patients with rotator cuff tears and those treated for other non-complex shoulder pathologies.

Impact of Comorbidities and Complications:

Comorbidities were prevalent across all diagnostic categories, but statistical analysis revealed that higher body mass index (BMI) correlated negatively with long-term outcomes (OSS) and positively with disability (QDD). This suggests that metabolic and systemic health factors may influence postoperative recovery and overall surgical success.

Complications played a significant role in determining patient satisfaction. The malunion/non-union group, which had the highest complication rate (82%), also had the lowest satisfaction scores and worst PROMs. Meanwhile, the "Other" conditions group had the lowest complication rate (33%) and achieved the best overall outcomes.

Clinical Implications:

The results of this audit support the use of RSA as an effective intervention for a broad spectrum of shoulder pathologies, particularly in patients with irreparable rotator cuff tears or primary osteoarthritis. However, they also highlight the importance of individualized treatment planning. Patients with complex reconstructive needs, such as those with prior fractures or failed surgeries, should be counselled about potentially limited functional gains and the increased risk of complications.

Strengths And Limitations

This study's strengths include its real-world, diverse cohort drawn from multiple surgeons, and the use of validated patient-reported outcome measures over a substantial 5-year follow-up. However, limitations include variable response rates at later follow-up stages and the retrospective nature of the audit.

CONCLUSION:

This study evaluates the early outcomes of the Reverse shoulder arthroplasty performed at NHS Tertiary Care Center from 2015 onwards. This study demonstrates that reverse shoulder arthroplasty (RSA) provides significant functional improvements across a range of shoulder pathologies, particularly in cases of rotator cuff tears and primary osteoarthritis, where patient-reported outcome measures such as the Oxford Shoulder Score and Quick DASH showed sustained gains up to five years postoperatively.

The greatest improvements were observed within the first 26 weeks, with some variability and stabilization in long-term outcomes. Conversely, patients treated for proximal humerus malunions and non-unions consistently reported poorer functional results and higher complication rates, correlating with lower satisfaction scores. Overall, while RSA yields positive outcomes in most diagnostic categories, the variability in recovery patterns and complication rates underscores the complexity of treating certain shoulder conditions.

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