CASE REPORT

ONE STAGE BILATERAL KNEE AND HIP ARTHROPLASTIES IN 42 YEARS OLD FEMALE

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Knee and hip joint replacement surgeries are the mainstay of treatment in patients having grade 3 or grade 4 arthritis either due to degenerative process, rheumatoid disease or due to some other disease process. The main aims of these surgeries are to decrease the morbidity, early rehabilitation and decrease management costs of such patients. We report the first case in which bilateral total knee and total hip replacement surgery were done in single anaesthesia in 42 years old female patient suffering from Rheumatoid Arthritis.

Keywords: Rheumatoid Arthritis; Arthroplasties; One Stage; Bilateral.

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INTRODUCTION

Rheumatoid arthritis (RA) is an inflammatory arthritis that affects nearly 1% of the world's adults.[1–3] It causes pain, stiffness, swelling, joint instability and muscle weakness, all of which can lead to impaired physical function and reduced quality of life.[1,4] and joint arthroplasty represent a large part of day-to-day orthopaedic routine for theses arthritic joints.[5] Regarding bilateral joint replacement surgeries difference of opinion exists between whether to do in one stage or in two same stages. Advantages of single stage bilateral Total knee replacement (TKR) over leads than disadvantages. The common advantages of one-stage bilateral joint replacement are single anaesthetic, decrease hospital stay and early mobility. The disadvantages include more blood loss, a higher incidence of heterotopic ossification and deep-vein thrombosis.[6] Most of the Studies prefer one stage bilateral total knee replacement surgery than interval arthroplasties.[7–10]

Bilateral simultaneous total hip Replacement (THR) was first reported in 1971 and as an option for younger, healthier patients who could sustain undergoing a larger surgery.[11] Literature revealed that there is no significant difference in one stage or two stage bilateral replacement surgery in terms of complications. However with one stage surgery, like one stage bilateral TKR surgery, the patients are early mobilized, pain free, low cost and hospital stay.[5,11]

We are reporting the first case, to best of our knowledge, of one stage bilateral TKR and THR in 42 years old patient with bilateral hip and knee arthritis. The rationale behind one-stage bilateral TKR and THR surgery is the reduced hospitalisation, the reduction in cost, early mobilization, and the need for only one anaesthesia.

CASE REPORT

A 42 years old female presented to Orthopaedics OPD at Ghurki Trust Teaching Hospital, Lahore, Pakistan with pain at both hips and knee joints since last 12 years. Patient was known rheumatoid patient since last 15 years and were on DMARDs (Disease modifying anti rheumatic drugs). She was restricted to wheel chair from last 8 years. Her examination showed limited range of motion at both hips and knee joints. She had no previous history of trauma or any other co-morbidity.

Complete laboratory work up were done, including blood counts, ESR, serum electrolytes, blood glucose, renal profile, bleeding profile and liver function tests. RA factor were positive. X-Ray Anteroposterior and Lateral views of both hips and knee joints showed severe arthritic changes. After counselling and consent from the patient, bilateral THR and TKR were done. Intra operative findings correlate with pre-operative diagnosis. 2 pints of blood were transfused during surgery and 2 pints after surgery. Patient was kept at ICU for the first four days and then shifted to ward. Initially for first two days during ICU stay, bed side mobilization was done and on third day, mobilizations with crutches were done.

Patient was discharged on 7th post-operative day and was followed for any type of infection and proper physio-therapy were done. During hospital stay patient was on iv antibiotics and on oral antibiotics for 2 weeks after discharge from the hospital. After a follow up of 1 year, patient is now pain free, having walking capacity of more than 1 hour, almost normal range of motion at all four joints and doing normal daily activities.

Figure-1: Both knee joints showing valgus deformity.

Figure-2: Patient with rheumatoid hands

Figure-3: Pre-operative X-ray AP view of both hip joints

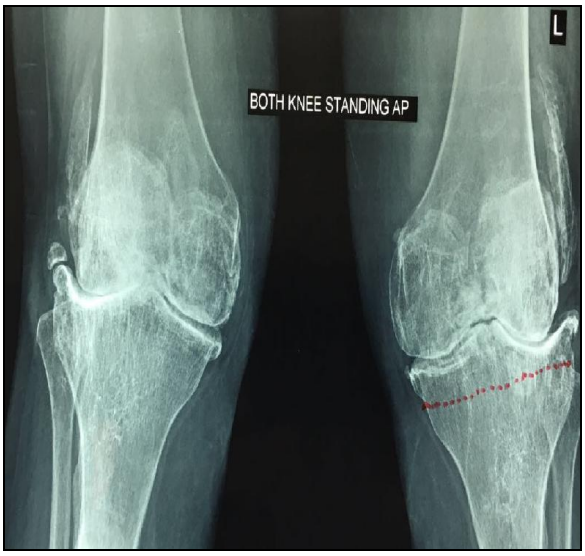

Figure-4: Pre-operative x-ray AP view of both knee joints

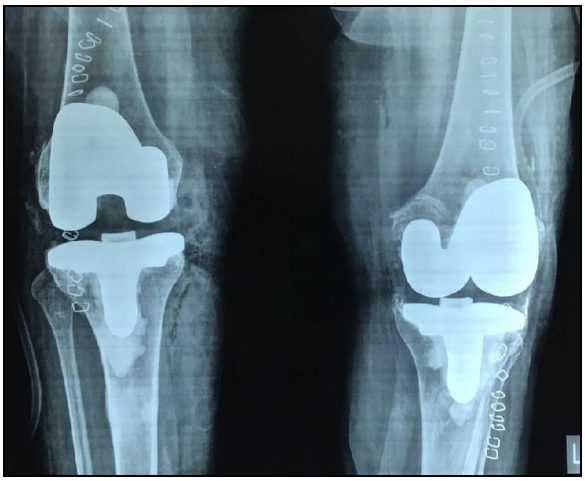

Figure-5: Post-operative x-ray AP view of both knee joints

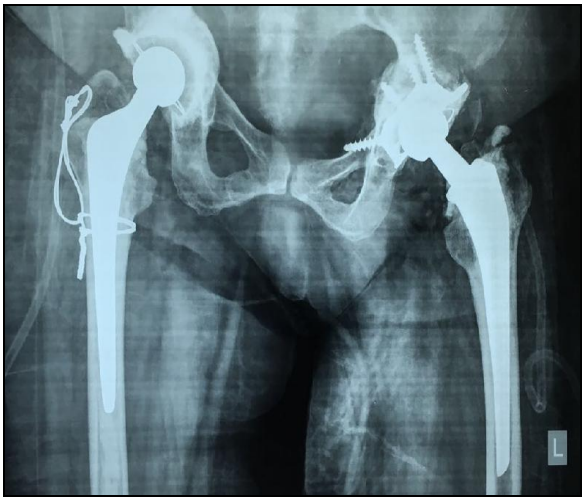

Figure-6: Post-operative x-ray AP view of both hip joints

DISCUSSION

Rheumatoid arthritis is the most commonly found systemic inflammatory arthritis. Females, smokers, and those with a positive family history of the disease are most commonly affected.[8] Joint replacement is indicated in those patients whom having severe joint damage or whose symptoms are poorly controlled by medical management.[8,9] Despite extensive research there is considerable debate about the risks of performing simultaneous bilateral replacement surgeries under the same anaesthesia. Bilateral TKR and THR surgeries are effective in terms of improving symptoms and health-related quality of life post-operatively in these patients.[7] Hashmi *et al* in their study were in opinion of doing bilateral knee and hip replacement surgeries with an interval of 7–10 days rather than doing in same anaesthesia or after few months, so to decrease the risks of complications of anaesthesia. One stage surgery increases morbidity in form of wound infection only, however there is no difference in mortality rate in one stage or two stage surgeries[6] Jason *et al* in their study concluded that patients with bilateral TKR are more satisfactory and happy as compared to those who undergone unilateral TKR.[9] Similarly C. Trojani and Seol *et al* in their studies were in favour of simultaneous bilateral arthroplasties.[7,10]

Murat *et al* study concluded that Bilateral TKR performed during the same session had greater morbidity and gave poorer functional results after one year follow up as compared to staged bilateral TKR.[2] Similar findings were noted in other studies.[5,11] However in our case report we found good functional outcome and no morbidity even after 1 year follow up. Similar to our findings Garland *et al* in their study found that there were no clinically relevant differences in early postoperative mortality between simultaneous and staged bilateral surgery in healthy patients. However there may be an issue with enhanced risk of implant revision in patients with simultaneous bilateral THR.[12]

CONCLUSION

Knee and hip arthritis is not uncommon in this era. Patient with no co-morbidity having ASA 1, bilateral TKR and THR can be done easily without any adverse event in one stage, so the patient get optimal benefit.

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