

Case Report

A Major Orthopaedic Surgery in a Hundred-year-old Patient During Pandemic of COVID 19: A Case Report

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ABSTRACT

It has been undoubtedly assumed that COVID-19 imposes an immense economical and psychological trauma to all common people. It is also true that COVID-19 had been appeared like a “world war” for health care workers all over the world. However, either conservative or operative treatment were offered for all trauma patients even during that period. We report a 100 years old female patient with femoral shaft fracture who was treated with intramedullary interlocking nail with full precautions to prevent virus transmission during lock down period. The post and perioperative complications were uneventful and she was walking comfortably after surgery.

Keywords: COVID 19; Femoral fracture; Lock down; Pandemic

INTRODUCTION

It is probably not illogical to say that COVID-19 has been appeared like a “world war” for health care workers all over the world.¹ Performing a major orthopedic surgery in 100 years patient during the peak of second wave pandemic where there was devastating oxygen supply all over the country along with shortage of hospital staffs due to spread of virus, is not easy job for hospital and health care personnel. The purpose of this case report is to inform the successful completion of intramedullary interlocking nail surgery for femoral shaft fracture in 100 years old patient during pandemic of COVID 19.

CASE REPORT

A hundred-year-old female patient strangled in her own house while walking and fell in the ground. After that she was not able to walk and complained severe pain on right thigh region. She was brought in our hospital. Informed consent was taken from relatives of patient before she was enrolled into the study. On examination, right lower limb was externally rotated, there was mild swelling and tenderness in distal thigh region, however bruising was not there. Distal neurovascular examination was normal. She was performed X-ray right whole thigh antero-posterior (AP) and lateral view including X-ray pelvis AP view, however proper lateral view X-ray was not possible because of excruciating pain. There was a long oblique fracture shaft of femur with buttress fragment at junction of middle and distal third. Regarding her past treatment history, she had been admitted in the hospital

20 years before for fever. Except this there was no any major treatment history. There was no history of diabetes mellitus, hypertension, thyroid disorders, coronary heart disease and other allergic disease to the patient and her family also. She did not have any history of allergy to any other drugs. In addition, she was non-smoker as well as non-alcoholic.

Since this is the pandemic situation of COVID 19, she was sent to examine the COVID 19 antibody with Polymerized Chain Reaction (PCR) along with other general investigation. After negative PCR test, she was brought to surgical theatre for closed reduction and internal fixation with intramedullary interlocking (IMIL) nail under fluoroscopy guidance in fracture table. Considering the age of patient with possible hemodynamic instability, all endeavours were focused to quickly finish surgery. Total time to complete the surgery was around one and half hour. There were no undue serious and life threatening postoperative complications noted for this old woman. Dressing was done 48 hours after surgery and patient was allowed partial weight bearing with the help of crutch. After 3 days patient was discharged while sutures were removed 14 days after surgery. There was no major adverse event or complications encountered during intraoperative and postoperative period. Because of pandemic, patient came to follow up only 6 months after surgery walking with the assistance of walker.

DISCUSSION

COVID-19 pandemic is an entirely different and dramatic situation spreading all over the world. It has not only affected huge number of people within a short time interval but also killed high proportion of them like spreading fire in a jungle and destroying trees. The psychological trauma and economic damage caused by the pandemic is unmeasurable. Quarantining of suspected COVID-19

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cases, thorough swab tests of significant number of people including asymptomatic cases and careful tracing may have caused to limit virus spread to some extent.¹



Figure 1. Preoperative X-ray of fracture shaft of femur at junction of distal third and middle third

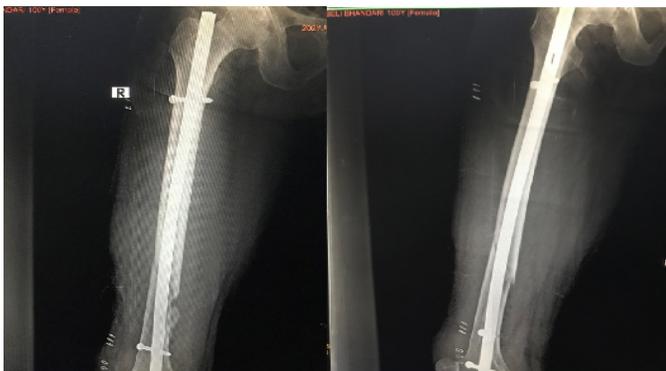


Figure 2. Postoperative AP and Lateral X-ray of femur after fixation with intramedullary nail

Shih et al investigated in order to find reduction of trauma patients during pandemic period in two types of hospital in southern china and found that it could be solely due to fear of virus among common people. Findings further revealed that even though number of hospital admissions and outpatients reduced similarly in both types of hospital, it was number of orthopaedic surgeries performed that reduced significantly in university hospital as compared to community hospital. They also noticed that number of surgeries performed in elderly people for elective surgeries as well as total knee arthroplasty has diminished quite significantly.²



Figure 3. Showing female patient of 100 years old 2 days after surgery walking with crutches

Since orthopaedic trauma patients are considered as emergency cases where immediate intervention if not performed, general condition of patient will deteriorate and even succumb to death. Therefore, only option left for all health care personnel, more specifically for orthopaedic surgeons, is to do surgeries even with the sacrifice of their life. Considering this, femoral shaft fracture of 100 years old patient in this study, if not managed by surgical intervention promptly, is further complicated by respiratory, gastrointestinal, urinary problems including bed sores and psychological upset to patient and further financial burden to family. On the other hand, to perform major surgery in 100 year old patient carries significant orthopaedic and anaesthetic related complications with higher mortality rate as compared to younger patients. Likewise, doing surgery during peak wave of COVID pandemic especially in lock down period, not only carries the risk of spreading virus to health personnel, but also getting hospital acquired infection to the patient herself. Therefore, it is not easy decision to proceed for such major surgery during lock down period.

In such an extreme unfavourable situation, we performed the intramedullary interlocking nailing in 100 years old patient without undue peri and postoperative complications. Two days after surgery, our patient was standing and walking comfortably with use of crutches. We did not use any specific tool for measurement of patient outcome, however patient was able to walk independently 3 days after surgery with the help of walker that definitively shows good outcome. There was no major adverse event or complications encountered during intraoperative and postoperative period. She came to follow up visit 6 months after surgery possibly due to pandemic situation walking comfortably with walker.

Lou TF et al noted that all orthopaedic related elective surgical cases have been recovered well during pandemic and they learnt to live with virus without further damage of their lives.³ Rudolf et al described that intramedullary nail is a support that is applied inside the medullary cavity of femoral bone and helps to enhance the healing of fractured bone. It has been considered that intramedullary nailing is a gold standard technique for management of fracture shaft of femur.⁴

Limitation of the study: Since this was the study in COVID 19 pandemic, we were not able to do the regular follow up. Patient came to hospital for removal of suture in 2 weeks and then 6 months after surgery.

CONCLUSION

Physiological age and COVID pandemic itself are not the contraindications for surgical intervention in trauma patients especially long bone fracture like femur. However, we should extensively counsel the patient's relatives regarding the pandemic situation and possible complications after the surgery. Similarly, health personnel should be very cautious to prevent the COVID 19 themselves.

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