The Use of Impacted Cancellous Bone Grafting With Augmentation In Recurrent Periprosthetic Femur Fracture – A Case Report

Jamat MA, Ishak A, Adzuar M, Kamalruzaman MA, Rauf A

Department of Orthopaedic, Hospital Enche Besar Hajjah Khalsom, KM 5, Jalan Kota Tinggi, 86000 Kluang, Johor

INTRODUCTION:
The number of total hip arthroplasties performed continues to rise annually, therefore the complications, which include periprosthetic fractures, will also become more common. Treatment option always possess a challenge to the orthopaedic surgeons as it is a technically demanding procedure. We present the case of a patient with a recurrent periprosthetic fracture of left femur following THR which was treated with a cable and plate fixation system together with impacted cancellous bone grafting.

CASE REPORT:
A 65 years old non-smoker gentleman presented in May 2017, with complaints of sudden onset severe pain over his left hip and left upper thigh region for 2 days after getting up from a bed which was associated with a cracking sound. He denied any history of fall or trauma. The patient had undergone right total hip replacement in 2013 and left total hip replacement in 2004 due to severe osteoarthritis. He sustained 2 episodes of left periprosthetic fractures in February and April 2017 which was treated with a cable and plate system. The patient was proceeded with revision of cable and plate system together with impacted cancellous bone grafting. Post-operatively, the patient was put on dynamic skin traction for 2 weeks and changed to high groin cast for 3 months of post-operative period. Patient was ambulated with full weight-bearing 3 months after the surgery.

DISCUSSIONS:
Femoral impaction cancellous bone grafting is an attractive option for restoring femoral bone stock. It is a technically demanding and time consuming procedure, but if performed well, it has a high rates of graft incorporation. The long-term survivorship of the prosthesis depends on the success of graft incorporation. Despite the potential drawbacks of impaction grafting, this technique is associated with high survivorship rates at ten-year follow-up.

CONCLUSION:
Although femoral cancellous impaction grafting is a technically demanding and time consuming procedure, it yielded a good outcome if performed well especially in those patients in which restoration of femoral bone stock is required. With a good surgical technique and a stable graft construct, femoral cancellous impaction grafting can restored the femoral bone stock and promote union.

REFERENCES: