Clinical Characteristic & Outcome of Total Hip Replacement in Femoral Neck Fracture Treatment in Sarawak General Hospital

[1]LT, Ling; [1]LH, Ong; [2]Faris K

[1]Faculty of Medicine & Health Sciences Universiti Malaysia Sarawak 94300 Kota Samarahan Sarawak, Malaysia;

[2]Orthopaedic Department, Sarawak General Hospital

INTRODUCTION:

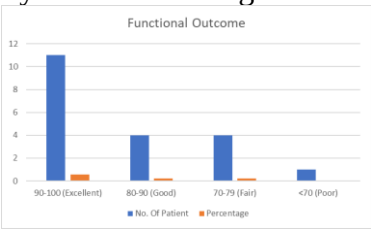
Total hip replacement (THR) is one of the most common operative managements for femoral neck fracture for elderly. However, THR of femoral neck fracture is associated with morbidity. We analyzed clinical characteristic and functional outcome of patients 1 year after total hip replacement in femoral neck fracture in SGH

METHODS:

All patients were admitted to Sarawak General Hospital and underwent total hip replacement for fracture neck of femur following Rogmark et al. criteria.[1] Demographics and peri-operative investigations were recorded from hospital medical records. Statistical data was analyzed using IBM SPSS Statistics Software

RESULTS:

A total of 22 patients with mean age of 74.8 were evaluated. 77.27%. are female with mean time of surgery is 34.41 days post trauma. Among them 59.1% were Chinese, 27.2% Malay, 13.6% were natives. All subjects were premorbid ambulator. Post-operative, 54.5% able to ambulation without aid, 31.8% ambulate with walking aid and 13.6% wheelchair bounded. Functional outcomes were evaluated based on Harris hip scoring system with average score of 84.3



1 year mortality rate was 9.1% (from non-orthopedic causes). Results showed that there was no correlation between gender and survival (p-0.334), between timing of trauma and survival (P-0.457), duration of the hip replacement surgery and outcome of the subjects (p-0.775). There is no increase in mortality if peri-operative Hb is less than 10g/dL (p-0.07), between length of hospital stay and survivalof the subjects (p-0.732). However, there is evidence of correlation between higher Nottingham Hip Fracture Score: NHFS (p-0.036) and Charlson Comorbidity Index: CCI (0.031) in outcome and 1-year mortality of the subjects.

DISCUSSIONS:

Takahashi et al.[2] stated that 70.3% are expected to maintain preoperative walking ability 6 month after surgery, however our data shown only 54.5%. Peri-operative Hb in our patients was not directly related to mortality as opposed to study by Maxwell et al.[3] Both NHFS and CCI use readily available pre-operative data and shown to have reasonable discriminant characteristics for mortality and morbidity which validated by their original cohort.[4]

CONCLUSION:

Evaluation of our local patients with femoral neck fracture had noted that significant patients have multiple co-morbidity. CCI and NHFS can be used as screening tools to predicting 1-year mortality. In conclusion, multidisciplinary approach is required for medical assessment and optimization with correction of deranged parameters to ensure optimal patient's condition and timing for surgical intervention.

REFERENCES:

1. Rogmark, C., Carlsson, A., Johnell, O. & Sernbo, I. (2002) A prospective randomised trial of internal fixation versus arthroplasty for displaced fractures of the neck of the femur: Functional outcomes for 450 patients at two years. Journal of Bone and Joint Surgery, British Volume, Vol.84, No.2, (March 2002), pp. 183-188

2. Takahashi, A., et al., Functional outcomes after the treatment of hip fracture. PloS one, 2020. 15(7): p. e0236652.

3. Development and validation of a preoperative scoring system to predict 30 day mortality in patients undergoing hip fracture surgery.Maxwell MJ, Moran CG, Moppett IK Br J Anaesth. 2008 Oct; 101(4):511-7

4. Radley, D.C., et al., Comorbidity risk-adjustment strategies are comparable among persons with hip fracture. Journal of clinical epidemiology, 2008. 61(6): p. 580-587.