INTRODUCTION

• Proximal femoral fractures are a major cause of morbidity and mortality in the ever increasing elderly population.

• Most hip fractures are due to low energy injuries such as a ‘fall from standing height’.

• 3-4% fractures are missed as they are not evident on routine hip X-rays. These are called ‘occult’ fractures.

• MRI scan is recommended for the diagnosis of ‘occult’ fractures.

AIMS & OBJECTIVES

• To create a database of all patients who underwent an MRI scan for suspected femoral neck fractures.

• To assess the outcome in this particular cohort of patients.

MATERIALS & METHODS

• Using the Radiological Information System (RIS), a total of 261 patients identified who underwent MRI for suspected femoral neck fractures.

• Patients with low impact injury and isolated hip fracture included and those with multiple injuries excluded.

• 1.5 Tesla, Siemens MRI machine used for scanning. T-1 coronal sequence employed.

• Demographics data such as age, sex, side of injury analysed.

• Various categories defined such as ‘MRI < 24 hrs’ and ‘MRI > 24 hrs’, for the ease of comparison.

• Analysis ToolPack on Microsoft 2010 used for statistical analyses.

RESULTS

• 111 patients with femoral neck fractures. 70 met inclusion criteria.

• Comparable demographic data, however right sided fractures significantly more in females ($p=0.027$).

• Majority of patients (66%) discharged home as opposed to going for rehabilitation on comparing with NICE 2012 guidelines ($p=0.002$).

• Patients with internal fixation had lesser mortality as compared to those who underwent joint replacement ($p=0.056$).

DISCUSSION

• MRI is the preferred modality for the diagnosis of ‘occult’ hip fractures. The T-1 sequence has a sensitivity of 100%.

• No difference noted in patients with early diagnosis vs. late diagnosis.

• Greater trochanter (GT) fractures to be evaluated carefully. What may appear to be an occult fracture may be in fact an incomplete fracture.

• Better outcome in internal fixation group and most patients went back to their homes.

CONCLUSION

• MRI detected ‘occult’ fractures are essentially un-displaced, sustained after a low energy injury.

• The associated soft tissue damage is significantly low as compared to a displaced femoral neck fracture.

• Most patients underwent internal fixation and early mobilisation in our study.

• Better outcome is reflected in most patients returning to their homes rather than going for rehabilitation.

REFERENCES
