Results and Conclusion Results  Rate of manipulations in PED increased from 41% to 78% in the 3rd cycle; improving to 86.36% after interventions stopped. Of those manipulated in PED, 73.68% were discharged from the department. Admissions for MUA decreased from 85% to 70% in the 3rd cycle; decreasing to 36.36% after interventions stopped.

The project showed success in improving management of paediatric angulated upper limb fractures. By identifying appropriate fractures, involving the senior orthopaedic team and providing adequate analgesia, admission for general anaesthesia can be avoided.

RCEM Free Papers

1480  THE APPLICATION OF AN AGE ADJUSTED D-DIMER THRESHOLD TO RULE OUT SUSPECTED VENOUS THROMBOEMBOLISM (VTE) IN AN EMERGENCY DEPARTMENT SETTING: A RETROSPECTIVE DIAGNOSTIC COHORT STUDY

Aims, Objectives and Background Venous Thromboembolic disease (VTE) poses a diagnostic challenge for clinicians in acute care. Over reliance on reference standard investigations can lead to over treatment and potential harm.

We sought to evaluate the pragmatic performance and implications of using an age adjusted d-dimer (AADD) strategy to rule out VTE in patients with suspected disease attending an emergency department setting.

We aimed to determine diagnostic test characteristics and assess whether this strategy would result in proportional imaging reduction and potential cost savings.

Method and Design Single centre retrospective diagnostic cohort study.

All patients >50 years old evaluated for possible VTE who presented to the ED over a consecutive 12-month period between January and December 2016 with a positive D-dimer result.

Clinical assessment records and reference standard imaging results were followed up by multiple independent adjudicators and coded as VTE positive or negative.

Results During the study period, there were 2132 positive D-dimer results. 1236 patients received reference standard investigations. A total increase of 314/1236 (25.1%) results would have been coded as true negatives as opposed to false positive if the AADD cut off point had been applied, with 314 reference standard tests subsequently avoided.

The AADD cut off had comparable sensitivity to the current cut off despite this increase in specificity; sensitivities for the diagnosis of DVT were 99.28% (95% CI 96.06–99.98%) and 97.72% for PE (95% CI 91.94% to 97.72). There were 3 potential false negative results using the AADD strategy.

Conclusion In patients with suspected VTE with a low or moderate pre-test probability, the application of AADD appears to increase the proportion of patients in which VTE can be excluded without the need for reference standard imaging. This management strategy is likely to be associated with substantial reduction in anticoagulation treatment, investigations and cost/time savings.