Assessing the common diagnostic tools in Subarachnoid Haemorrhage

Rani A¹, Kapoor R², Ramnauth R¹, Short B², Hill S¹
¹Department of Acute Medicine, Queen Alexandra Hospital Portsmouth
²Emergency Department, Queen Alexandra Hospital Portsmouth

Background:
Modern generation CT scanners have a high sensitivity for picking up Subarachnoid haemorrhage (SAH) if performed within 6 hours of headache onset. Lumbar Puncture (LP) is increasingly found to be an unnecessary test when performed after a normal CT scan within 6 hours of onset of headache, opposed to most guidelines.

Aims:
• Assess whether patients presenting within 6 hours headache onset undergo CT in a timely manner to rule out SAH.
• Assess usefulness of lumbar puncture (LP) as a diagnostic tool in SAH.

Methods:
1. We did a retrospective analysis of 53 patients from a 3 month period (March 2017 – May 2017) who presented to Emergency Department within 6 hours of headache onset who underwent CT brain for possible SAH.
2. We also report a retrospective analysis of 92 patients with negative CT brain for SAH and underwent LP in AMU/AEC from August 2015 – July 2015

Results:

Conclusion:
33% of patients presenting with 6 hours of onset of headache had CT brain in a timely manner. Average wait to see clinician in ED was 1 hour 40 mins and average wait for CT brain from arrival was 3 hours 40 mins.

LP was found to have significantly low diagnostic yield in patients with negative CT brain for SAH - comparable to data obtained from larger studies.

Recommendations:
Improvement in service provision was required to facilitate diagnostic test in a timely manner.

Need for further QI project following implementation of SAH pathway with the aim to reduce the amount of unnecessary LP and increase safe discharge rates from ED.

References:
2. Edlow JA, Fisher J. Diagnosis of subarachnoid hemorrhage: time to change the guidelines? Stroke 2012; 43:203