Are guidelines being adhered to in the radiological investigation of acute appendicitis?

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Introduction
Acute appendicitis is the most common cause for emergency surgery [1]. It is important that patients with suspected appendicitis undergo the correct mode of imaging, if required at all, based on history, examination, age, sex or body habitus. Ultrasound and CT have been proven to reduce false appendicectomy rate however this must also be weighed against the potential delay to surgery with ultrasound and also radiation dose of CT especially in this mainly young population group [2]. Our aim is to ensure that patients, especially young females are not exposed to radiation unnecessarily and surgeons can access the correct imaging advice and investigation.

Aims
The aim of this audit is to establish as a hospital are we adhering to national guidelines with regards to the investigation of suspected acute appendicitis

Standard

Target - Adherence to guidelines in 75% of patients

Methodology
• Retrospective study of 215 patients over a 1 year period
• Inclusion – All age groups who underwent appendicectomy
• Exclusion – if patients proceeded to full laparotomy & incidental finding of appendicitis on CT renal tract
• Note – ≥ 40 yrs classed as older patient

Results
- 147/213 (69%) of patients followed pathway
- 66/213 (31%) of patients did not follow pathway

Of those that did not follow pathway (66 patients):
• Young male got CT instead of USS/straight to theatre 15/66
• Young female got CT instead of USS – 8/66
• Young female no imaging, straight to theatre – 35/66
• Older patient taken straight to theatre instead of imaging first - 6/66
• Pregnant patient straight to theatre, no USS – 2/66

Conclusion
• In conclusion there is a 69% adherence to national guidelines in the investigation of acute appendicitis, this fell short of the target set at >75%
• We allow for clinical judgment to prevail and the availability of imaging out of hours
• However there are areas of improvement to ensure that patients do not undergo surgery or young females are not exposed to radiation unnecessarily

Action Plan
• To increase awareness of RIF pain pathway amongst A&E and surgical teams
• Aim to train sonographers in ultrasound appendix to increase availability of such, and to avoid unnecessary CT, enhancing departmental skills mix.
• Discuss with gynaecology regarding documentation of their transvaginal USS scanning

References