

00135 Negative Appendectomy Rates and Cost Implications With Increased Use of Abdominal Imaging in Children With Appendicitis

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Aims: While traditionally taught to be based on clinical criteria, diagnosing appendicitis now relies heavily on imaging. We evaluate the impact of abdominal imaging utilization on negative appendectomy rates in children with suspected appendicitis, and cost implications.

Methodology: This is an ethically approved single institution retrospective study analyzing data collected via electronic medical records from 2013 - 2017. Cases of operated appendicitis were identified from operative logs. We did not include non - operated cases. Patient records were reviewed on whether ultrasound and/or computed tomography (CT) was performed. 'True appendicitis' was defined as histologically proven appendicitis. Cost of imaging modality was taken as private rate cost charged to patient: approximately 146 American dollars (USD) per abdominal ultrasound and USD703 per CT abdomen. Year on year trends were evaluated.

Result: A total of 826 children were included, with median age 10.98 years (range 2.33 - 16.52), 514(62.22%) male.

There was an increasing trend in proportion of children with appendectomy undergoing ultrasound and CT. When analysed according to cost per true appendicitis diagnosed, this exceeded the cost per ultrasound in 2017. Overall, negative appendectomy rates were stable.

Conclusion: Increased utilization of abdominal imaging did not lower negative appendectomy rates but was associated with higher costs per true appendicitis. Surgeons and patients must be aware of the limitations of radiological investigations.