

TP10.2.10**A Prospective Analysis of Imaging Modalities in Appendicitis during the COVID-19 Pandemic**

Nivetha Saravanan¹, Hannah Javanmard-Emamghissi², Jonathan Lund², Gillian Tierney¹

¹Royal Derby Hospital, ²University of Nottingham

Aims: Acute appendicitis is a common general surgical emergency, occurring in 90-100 per 100,000 patients per year. Clinical practice in the UK involves either a clinical or ultrasound (US) diagnosis, with computed tomography (CT) reserved for cases of suspected complicated appendicitis. Due to the COVID-19 pandemic management pathways were altered, this study sought to capture that.

Methods: This prospective study included adult patients with suspected appendicitis at a single UK centre from March-June 2020. The primary outcome measures were rates of US and CT imaging. Secondary outcomes included subsequent operative and histological findings.

Results: Seventy-five patients were included. A clinical diagnosis of appendicitis was made in 11 (15%). Thirty-five (47%) patients had CT, 22 (29%) had an US and 7 (9%) had both. The appendix was visualised in only 10 patients and a radiological diagnosis of appendicitis was made in 6 cases. Appendicitis was confirmed on histology in 67% of subsequently operated cases.

CT evidence of appendicitis correlated with operative appendicitis in 93% (28/30) of cases. There were two cases of appendiceal malignancy not demonstrated on CT. Correlation of complicated appendicitis between CT and operative findings was poor; one third (10/28) of patients had appendiceal perforation not identified on CT.

Conclusions: The use of CT for diagnosing appendicitis was markedly increased during the first wave of the pandemic. The appendix was visualised infrequently on ultrasound, but when seen correlated well with histological findings. CT was superior at detecting appendicitis but failed to differentiate well between complicated and uncomplicated disease.