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ROUTINE SCREENING OF ACUTE SURGICAL ADMISSIONS FOR COVID-19 AT A SCOTTISH TEACHING HOSPITAL

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The coronavirus pandemic is a global emergency that has led to significant changes in the provision of both elective and emergency surgical care.[1] To-date, Tayside region has had a total of 1470 confirmed cases of COVID-19 in a population of 417470 people (0.35%).[2]

The practice of general surgery has rapidly adjusted with screening of hospital admissions and the placement of patients in appropriate clinical pathways based on their COVID-19 status, to mitigate nosocomial spread.

All regional acute general surgical patients admitted to Ninewells Hospital, Dundee have been swab screened for COVID-19 since the 11th April 2020, and then triaged to either COVID-19 negative or COVID-19 positive wards. All patients who require a CT abdomen as part of their routine acute surgical workup also undergo a CT chest to screen for COVID-19 pulmonary changes as per current national recommendations.[3]

We aimed to quantify the rate of positive swab PCR tests among all patients admitted to our acute surgical unit from 11th April until 6th May 2020 retrospectively. We examined the number of patients admitted and screened, their demographics, the percentage of positive swabs, whether those patients who had positive COVID-19 swabs had associated symptoms, and the clinical course of all COVID-19 positive patients. We also studied the level of agreement of CT chest with PCR swab test in screening for COVID-19.

There were 251 patients admitted to our acute surgical unit during the study period, 138 (55%) admissions were female with overall age range of all patients 15 to 99 years. 6/251 (2.4%) patients were swab test positive for COVID-19. 21/251 (8.4%) had symptoms consistent with COVID-19, of which 4/21 (19%) were tested positive. 2/251 (0.8%) of patients were asymptomatic for COVID-19 but were swab test positive. Presenting symptoms for patients testing positive were upper abdominal pain, pyrexia and/or cough. 156/251 (62%) of patients underwent CT chest of which 144/156 (92%) were reported as normal (all patients in this subgroup were also negative on swab test), 7/156 (4.4%) of scans were indeterminate (all negative on swab test), and 5/156 (3.2%) of scans were reported as positive for COVID-19 pulmonary changes (all positive on swab test). One of six COVID-19 positive patients died of COVID pneumonia; the remaining five were managed conservatively and subsequently discharged home.

Routine swab screening of all acute general surgical admissions appears to detect a small but potentially significant number of patients with COVID-19. There were very few asymptomatic swab-positive patients (asymptomatic carriers). CT chest demonstrated high degree of agreement with PCR swab test for COVID-19. These findings could be important in validating current in-hospital screening strategies for COVID-19, and for allocating appropriate level of resources for different patient pathways.

1. https://www.sages.org/recommendations-surgical-response-covid-19/.
2. https://www.arcgis.com/apps/opsdashboard/index.html#/33469f75596241648f8e7908555a2a36.
3. https://www.rcsed.ac.uk/media/564199/protocol-for-pre-op-ct-during-covid19-pandemic-pdf.pdf.