

Impact of the COVID-19 pandemic on acute adult surgical admissions- a single centre experience

Editor

The management of acute surgical emergencies has changed dramatically as emerging data demonstrated the serious ramifications of COVID-19 in respect of postoperative recovery¹. Concerns regarding clinician exposure during gastrointestinal procedures have resulted in an increase in the complexity, duration of decontamination procedures required and perioperative stress^{2,3}. An additional challenge has been the availability of high dependency unit beds for major cancer resections due to increased ventilator demand and the need to isolate affected patients. In line with other units, Leicester has

adopted a much more reserved approach to surgical pathology which previously had usually been managed operatively.

All non-elective and elective admissions underwent nasopharyngeal swab testing for SARS-CoV-2. Following discussion with the local infection prevention committee, Leicester became an early adopter of swabbing non-elective admissions (3 weeks prior to Public Health England guidance). Patients with upper respiratory tract symptoms or COVID-19 positive surgical patients were isolated in a designated COVID-19 bay/ward to UHL Trust policy (Fig 1).

In all, 332 patients were admitted through the acute surgical admission unit between the 29 March and 30 April 2020. Of the 332 patients (6.6 per cent) 22 were COVID swab positives. Two of 22 patients with COVID-19 positive

swabs had GI symptoms concomitant with COVID-19. The remaining swab-positive patients did not have typical COVID-19 symptoms. CT Chest COVID-19 features were present in 23 out of 246 patients (9.4 per cent). Eighty of the 332 admissions (24 per cent) underwent surgery or an invasive intervention during their hospital stay (Table 1). These results are supported by data that COVID-19 patients can present with GI symptoms^{4,5}.

Overall rates of emergency operating fell, as did theatre utilization due to dramatically prolonged anaesthetic, operating and recovery times. Procedure times were prolonged as a consequence of staff personal protective equipment (PPE) requirements, more complex anaesthetic protocols, the need for enhanced cleaning and passive

Fig. 1 Algorithm demonstrating the 'zoning' of emergency general surgical patients presenting on call

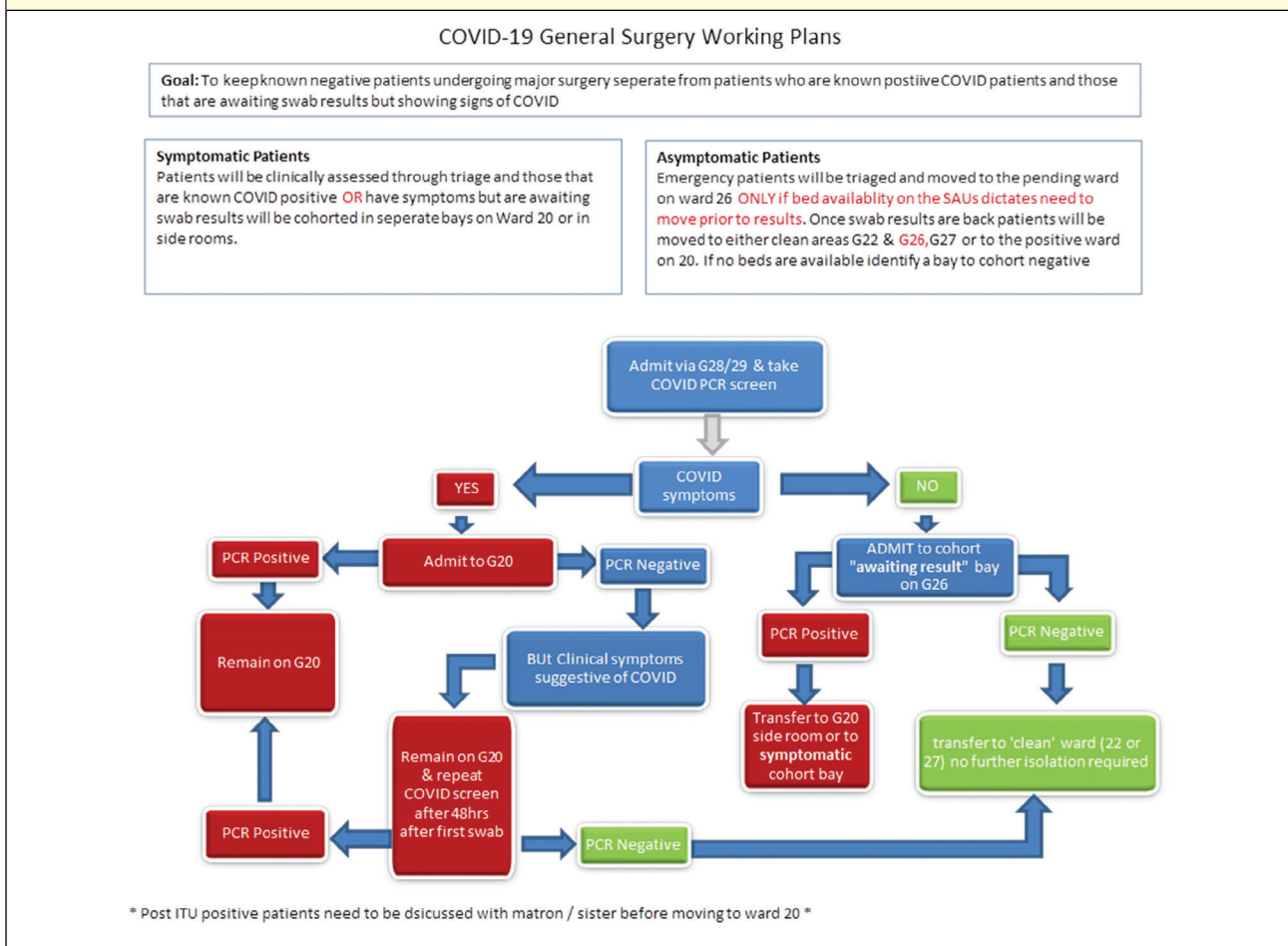


Table 1 Diagnoses and management (surgery or conservative)


Diagnosis	All patients (n = 332) intervention*/ conservative	COVID-19 patients (n = 38) intervention*/ conservative
Appendicitis	6/37	0/2
Bowel obstruction	7/32	1/0
Abscess	12/1	2/0
Cholecystitis	0/17	1/4
Perforated gallbladder	3/1	2/0
Pancreatitis	7/25	1/5
Postoperative complication	3/16	1/1
Incarcerated hernia	4/0	
Diverticulitis	0/20	0/1
Bowel perforation	1/5	0/3
Colitis	0/12	0/3
PR bleed	0/4	
Proctitis	1/0	
Sigmoid volvulus	2/0	
**CBD stones	19/4	
Block CBD stent	2/0	2/0
Biliary colic	0/11	
Liver abscess	3/0	
Cancer	5/11	0/1
? Caecal mass	2/0	
***Others	2/10	2/0
No acute abdominal finding (non-specific)	0/47	0/6

*Intervention includes laparotomy, laparoscopy, incision + drainage, drain insertion, flexi-sigmoidoscopy, endoscopic retrograde cholangiopancreatography (ERCP). **CBD (common bile duct). ***Others: splenic injury, liver cirrhosis, foreign body, pleural empyema, Crohn's disease, urology.


ventilation between cases and the change of location for delivery of care.

As well as significantly prolonging the usual time taken for the majority of procedures (a major issue for multiple small procedures where the additional precautions represented a significant proportion of overall theatre time), the need for extended PPE also affected the ability of staff to communicate (a key component of safe surgical practice). The need for the segmentation of rooms as well as the use of full face makes made

clear and unambiguous communication between team members extremely challenging.

W. Y. Chung¹ ,
J. Winyard¹, G. R. Layton¹,
J. Isherwood¹, E. Issa¹, A. Radjendrin²,
S. Sangal², A. R. Dennison¹ and
G. Garcea¹

¹Department of Hepatobiliary and Pancreatic Surgery, and ²Department of

Colorectal Surgery, Leicester General Hospital, Leicester, UK
 Chung@WenChung10

DOI: 10.1002/bjs.11807

- 1 Balibrea JM, Badia JM, Rubio Perez I, Martin Antona E, Alvarez Pena E, Botella SG *et al*. Surgical Management of Patients With COVID-19 Infection. Recommendations of the Spanish Association of Surgeons. *Cir Esp* 2020; **98**: 251–259.
- 2 Spinelli A, Pellino G. COVID-19 pandemic: perspectives on an unfolding crisis. *Br J Surg* 2020; **107**: 785–787.
- 3 Mowbray NG, Ansell J, Horwood J, Cornish J, Rizkallah P, Parker A *et al*. Safe management of surgical smoke in the age of COVID-19. *Br J Surg* 2020; <https://doi.org/10.1002/bjs.11679> [Epub ahead of print].
- 4 Nobel YR, Phipps M, Zucker J, Lebowitz B, Wang TC, Sobieszczyk ME *et al*. Gastrointestinal Symptoms and COVID-19: A Case-Control Study from the United States. *Gastroenterology* 2020; <https://doi.org/10.1053/j.gastro.2020.04.017> [Epub ahead of print].
- 5 Luo S, Zhang X, Xu H. Don't Overlook Digestive Symptoms in Patients With 2019 Novel Coronavirus Disease (COVID-19). *Clin Gastroenterol Hepatol* 2020; **18**: 1636–1637.