Providing surgery for cancer during the COVID-19 pandemic: experience of a northern Italian referral centre

Editor

Italy is one of the countries worst hit by the COVID-19 pandemic with more than 31 000 deaths.

On 13 March, the Italian Ministry of Health published a statement for reorganization of elective procedures. Anticipating these indications, only urgent/oncologic cases were done at our hospital, starting 5 March.

Reduction in surgical activity allowed retrieval of resources for dedicated COVID-19 wards, and sub-intensive and intensive care units (ICU). Notably, sub-intensive beds increased by 168 per cent (from 29 to 78) and ICU beds by 72 per cent (from 29 to 50); of these 128 beds, 117 (91·40 per cent) were dedicated to COVID-19 patients and 11 ICU beds to non-COVID postoperative patients (oncologic, transplants and urgent/emergent patients) along with four ordinary post-anaesthesia care unit (PACU) beds. These postoperative ICU and PACU beds would have been dedicated to COVID-19 in case of pandemic escalation.

While all patients with benign diseases were deferred, all oncologic patients were treated according to our schedule. We didn't modify our practice, neither in terms of indications nor surgical timing. The sole exception was not to perform minimally invasive procedures.

From 5 March to 27 April, 18 patients underwent surgery for upper GI cancer with curative intent. Patients were triaged before admission for COVID-19 risk (symptoms, close contacts with confirmed cases, imaging): no patients had symptoms, five patients (27·77 per cent) underwent nasopharyngeal swab for 'epidemiological' reasons. None resulted positive for SARS-CoV-2; mortality was null and morbidity rate was 27·78 per cent. One patient developed a severe complication: contrast swallow was negative for leaks, but upon oral feeding the patient developed fever and pneumonia for which he underwent SARS-CoV-2 testing. After ruling out COVID-19, the patient underwent bronchoscopy, CT scan and esophagogastroduodenoscopy, which revealed an anastomotic leak with right bronchus fistula. We questioned our choices whether in a non-pandemic period we would have waited this long to proceed with esophagogastroscopy and CT scan.

Table 1 Surgery for cancer during COVID-19. Patients and results

Variable	Patients (n = 18) (n, % when not otherwise indicated)
Sex	
M	13, 72·22 %
F	5, 27·78 %
Age (mean, range)	66·77 (48-85) yrs
COVID-19 risk assesment	
Symptoms	0, 0 %
Epidemiological risk	5, 27·78 %
Pulmunary imaging	1, 5·56 %
Nasopharingeal swab test	5, 27·78 % (0% positive)
cTNM*	
cT2	3, 16·66 %
cT3	14, 77·78 %
cT4a	1, 5·56 %
cN0	4, 22·22 %
cN+	14, 77·78 %
Tumour location	
Middle	4, 22·22 %
Lower-cardia	12, 66·66 %
Stomach	2, 11·12 %
Histology	
Adenocarcinoma	15, 83·34 %
Squamocellular carcinoma	3, 16·66 %
Surgery	
Ivor Lewis	13, 72·22 %
Gastrectomy	2, 11·12 %
Exploration	3, 16·66 %
Anastomotic leaks**	
Grade I	1, 5·56 %
Grade III	1, 5·56 %
Pulmunary***	
Grade 2	1, 5·56 %
Fever***	3, 16·66 %
Grade 1	2, 11·12 %
Grade 4	1, 5·56 %
Bleeding***	2, 11·12 %
Grade 2	1, 5·56 %
Grade 3	1, 5·56 %
Intra-abdominal collection***	1, 5·56 %
Grade 3	1, 5·56 %
Postoperative COVID-19	
Suspected	4, 22·22 %
Positive	0, 0·00 %

*According to AJCC 8th edn. **Leak grade according to Esophagectomy Complications Consensus Group. ***Grade according to Clavien-Dindo.

Overall, we recorded an incidence of anastomotic leaks above our standards (historic data 8 per cent), but the sample size is not such as to be able to draw conclusions.

In the postoperative phase, four patients developed COVID-19-like symptoms, but none resulted positive to RNA-extraction. No attending medical staff were positive to screening whereas

one resident with mild symptoms tested positive and was quarantined (*Table 1*).

Reserving ICU beds for non-COVID-19 patients has proved successful and has allowed us not to reschedule operations for which the possible negative impact of a delay is not clear.

The security measures recommended by the WHO and the Italian Ministry of Health, along with the regional large-scale testing, have proven effective in safeguarding the healthcare system and in preventing escalation of the local epidemic.

Have we exposed our patients and staff to unnecessary risks? We are still trying to meditate on this uncomfortable question. Knowledge about this new virus is limited[1–4] and, to a certain extent, is the biology of esophago-gastric cancer; we tried to combine the knowhow with the available resources in order to balance the risks and benefits. Only time and others' experiences will tell.

M. Valmasoni, E. S. Pierobon, G. Capovilla, A . Piangerelli, L. Moletta, M. Costantini, R. Salvador and S. Merigliano

Padova University Hospital, Center for Esophageal Diseases, Department of Surgical, Oncological and Gastroenterological Sciences, Padova, Italy

DOI: 10.1002/bjs.11780

1 Spinelli A, Pellino G. COVID-19 pandemic: perspectives on an unfolding crisis. *Br J Surg* 2020; https://doi.org/10.1002/bjs.11627 [Epub ahead of Print].

2 Soreide K, Hallet J, Matthews JB, Schnitzbauer AA, Line PD, Lai PBS *et al.* Immediate and long-term impact of the COVID-19 pandemic on delivery of surgical services. *Br J Surg* 2020; https://doi.org/10.1002/bjs.11670 [Epub ahead of print].

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 COVIDSurg Collaborative. Global guidance for surgical care during the COVID-19 pandemic. *Br J Surg* 2020; https://doi.org/10.1002/bjs.11646 [Epub ahead of print].