

Surgery in the Era of COVID-19 Pandemic

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Abstract:-The United Kingdom was one of the countries hardest hit by the global COVID-19 pandemic, with the second highest death rate reported in early June 2020. However, regardless of this, 32% of patients underwent to a smear for COVID-19 in the presentation. No local regulations on swabs were reported and it is very likely that they will differ in the UK during the early stages of the pandemic. Later work may show better test results. About 4% of positive test results for the virus were never published, either through surgery or careful treatment. This is in contrast to previous data on increased mortality even after mild to moderate surgery. However, most patients are young and otherwise healthy, predisposing them to better results than reported with a wide range of surgical procedures. In the end, several surgical societies have developed their guidelines on how to deal with the impact of the COVID-19 pandemic in daily clinical practice. Recommendations for emergency surgery have caused controversy among surgeons internationally.

I. INTRODUCTION

Acute appendicitis (AA) is a worldwide emergency surgical treatment. Women and men have an increased risk of developing AA, respectively. Mortality increases with delayed circulation. The risk of appendicitis is greatly increased 36 hours after symptoms appear. Appendicitis gangrene occurs in 10 per cent of patients, while perforation or abscess occurs in the fifth, both of which are associated with increased complications. In the UK, AA is recommended for surgery within 48 hours of treatment. Laparoscopic appendectomy has distinct advantages over open appendectomy, including less postoperative pain, fewer surgical site infections, and fewer hospital stays. The effects of COVID-19 and recommendations for surgery in the UK have not yet been fully analysed. Changes in standard UK practice should be initially evaluated to assess safety on foot away from AA frontline operational controls. This would inform practice during and after the rest of the COVID-19 outbreak. There is an opportunity to see if AA, safe, effective and conservative management is already seen in randomized controlled trials and meta-analyses in Europe and the United States, which are common in the UK. United The purpose of this interim analysis of our study is to understand the management of AA in the first weeks of UK COVID-19 pandemic lockdown and to assess outcomes in 30 days.

II. METHODS

• How to select patients

Patients should be classified according to their symptoms. The study included patients who were in the emergency department with acute appendicitis at the time of the study. We included cases of acute appendicitis by computed tomography (CT) and ultrasound. Conditions for exclusion:

- 1) Hospitalization for periodic appendectomy,
- 2) Acute appendicitis after hospitalization for other medical conditions,
- 3) Acute appendicitis in colorectal cancer (CKM cancer or appendix cancer),
- 4) Acute appendicitis Pelvic inflammatory disease or colitis.

• Process

If acute appendicitis is diagnosed clinically, a preoperative CT scan or ultrasound is performed for pregnant women to confirm the diagnosis. When acute appendicitis was reported, emergency surgery was performed before the CVD-19 outbreak. In the case of peri-appendicular abscesses where drainage has occurred, a variety of antibiotic treatments were available during percutaneous drainage before the inflammation increased. Patients with early appendicitis or inadvertent appendicitis with poor general condition were treated with antibiotics only at the discretion of the attending physician. After an epidemic of COVID-19 outbreak, COVID-19 polymerase chain reaction (PCR) was tested using samples obtained from nasopharyngeal / oropharyngeal (throat) swabs. In all hospitalized patients with acute appendicitis and after the negative result was confirmed the patients were hospitalized. The result of PCR testing lasted 6 to 8 hours. If the result of the COVID-19 test was positive, the patient was referred to a hospital capable of treating COVID-19. In the case of possible sepsis due to general peritonitis, emergency surgery was performed while wearing personal protective devices in the negative pressure operating room before the results of the PCR examination. COVID-19. Patients were discharged after surgery when abdominal pain subsided and oral ingestion was required. An outpatient follow-up appointment was scheduled 7 to 10 days after surgery to monitor for wound problems.

• Variables

Clinical variables prior to surgery (sex, age, white blood cell [WBC], C-reactive protein [CRP], neutrophil count segment), factors related to surgery (operation name, appendix anatomy, length of operation), post - operative clinical conditions (hospital duration, postoperative

complications) were examined. The appendix anatomy was categorized as follows: hyperemic, suppurative, gangrene and perforated.

- Statistical analysis

This research was carried out with improvements in the documents of observational studies in epidemiological (strobe) recommendations for observational studies. Descriptive data is called the required [periodic range (IQR)] or number / total (percentage) as needed. For all results, the proportion of incidents / total number of patients was recorded with the data due to lack of data for some results.

III. DISCUSSION

The disruption caused by Covid-19 has rapidly changed the administration of the AA in the UK, leading to a strong transition to conservative management. Although rarely used in the past, AA's conservative treatment, whether with antibiotics or with IR drain, was successful in most patients. With the need for this type of treatment and surgery compared to those with early surgery, a short LOS and less than 10% failure in complications, this interim study confirms previous studies that have made non-surgical treatment of AA safer Recorded as a successful alternative. . This study reassures surgeons about their decision-making during epidemic diseases, encourages CT imaging to regularly reinforce these decisions, and shows that this choice is common in UK practice. And that's why she's proposing to re-examine First Line AA Care. Outbreaks appear to be exacerbated during this time

- Maintenance of AA in the United Kingdom:

As a direct result, the standard practice of early laparoscopic appendectomy in adult AAs in the UK is suddenly performing surgery on more than half of the patients and others receiving conventional treatment while the rest were open procedures. This advice is reinforced by the strong short-term effects of empirical management by increasing the proportion of imaging patients. As the epidemic spreads, trade unions want to provide new guidelines. This may be reflected in further changes in management that will be evident in the long-term follow-up to this report.

- Operative and non-operative management of AA

There are still no differences in the characteristics of the reported patients, other than age, both in the early surgery category and in the conservative category, and the clinical decisions of these patients are based on current recommendations, community images and the theater environment. We recognize that it may be multifactorial, including individual interpretations of surgical experience and selection of patients. However, 9 out of 10 people infected with antibiotics alone did not require treatment and were hospitalized for a shorter period of time, confirming previous evidence for non-surgical AA technique.

IV. CONCLUSION

The COVID-19 epidemic has interrupted routine surgical treatment of acute appendicitis in the United Kingdom, with careful treatment being preferred. Under these conditions, non-surgical AA control is usually a successful first-line therapy, regardless of gender, comorbidity, or fragility, and some require second-line surgery. Disintegration improves the situation, and these early observations should guide the continued fight against the COVID-19 epidemic and beyond.

REFERENCES

- [1]. Collaborative GlobalSurg (2006) Mortality of emergency abdominal surgery in high-, middle- and low-income countries. *Br J Surg* 103:971–988
- [2]. NHS Digital. Hospital Admitted Patient Care Activity 2018–2019 [Internet]. 2019 [cited 26 May 2020]. <https://digital.nhs.uk/data-and-information/publications/statistical/hospital-admitted-patient-care-activity/2018-19#resources>
- [3]. Bickell NA, Aufses AH, Rojas M, Bodian C (2006) How time affects the risk of rupture in appendicitis. *J Am CollSurg* 202:401–406
- [4]. The Association of Surgeons of Great Britain and Ireland (2014) Commissioning guide: Emergency general surgery (acute abdominal pain)
- [5]. RIFT study group (2019) Evaluation of appendicitis risk prediction models in adults with suspected appendicitis. *Br J Surg* 107:73–86
- [6]. De Simone B, Chouillard E, Di Saverio S et al (2020) Emergency surgery during the COVID-19 pandemic: what you need to know for practice. *Ann R Col SurgEng* 102:323–332
- [7]. COVIDSurg Collaborative (2020) Mortality and pulmonary complications in patients undergoing surgery with perioperative SARS-CoV-2 infection: an international cohort study. *Lancet*. [https://doi.org/10.1016/S0140-6736\(20\)31182-X](https://doi.org/10.1016/S0140-6736(20)31182-X)
- [8]. Snapiri O, Rosenberg Danziger C, Krause I, Kravarusic D, Yulevich A, Balla U, Bilavsky E: Delayed diagnosis of paediatric appendicitis during the COVID-19 pandemic. *ActaPaediatr* 2020, 109(8):1672-1676.
- [9]. Abu Foul S, Egozi E, Assalia A, Kluger Y, Mahajna A: Is early appendectomy in adults diagnosed with acute appendicitis mandatory? A prospective study. *World J EmergSurg* 2019, 14:2.
- [10]. COVIDSurg Collaborative (2020) Global guidance for surgical care during the COVID-19 pandemic. *Br J Surg*. <https://doi.org/10.1002/bjs.11646>
- [11]. Association of Upper GI Surgery of Great Britain and Ireland (2020) AUGIS Guidelines: management algorithm for patients with clinically suspected appendicitis during Covid-19 pandemic. AUGIS. <https://www.augis.org/augis-guidelines/>