ORIGINAL ARTICLE

Urgent and elective proctologic/anorectal interventions in the COVID-19 pandemic: A practical guideline for treatment safety

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ABSTRACT

BACKGROUND: This article aims to give practical information and concrete suggestions on what should be considered in emergency, semi-urgent and elective settings for common anorectal diseases in the hectic period of the COVID-19 pandemic, based on early results of a series of anorectal interventions.

METHODS: Referring to other related guidelines, general considerations specific to the diagnosis and treatment of highly prevalent anorectal diseases were developed to target the correct patients, evaluate and orientate by telemedicine, adapt the Proctology Unit to the new pandemic, and control contamination and infection. Specific considerations for common anorectal diseases were cited, and our initial results were retrospectively documented.

RESULTS: From March 1 to April 10, 2020, we contacted 240 patients with anorectal diseases in two centers. We evaluated the results retrospectively on 16–17 April. At the end of this survey, 14 patients (5.8%) were lost for further contact and follow-up. Thirty-one patients (12.9%) were evaluated as nondeferrable cases and invited to the Proctology Unit. Twenty-eight patients required interventions at the same session. Adhering to the principles described here, more than 90 percent of benign anorectal disorders could be treated successfully, with 2.1 percent of suspected contamination and no confirmed cases. None of the Proctology personnel or their close contacts developed COVID-19, either.

CONCLUSION: By adhering to the principles outlined in this practical guide, it was possible to treat most of the benign anorectal diseases safely in the initial, hectic period of the COVID-19 pandemic.

Keywords: COVID-19; urgent proctology; practical proctology guide

"Primum Non Nocere"
"If you can smell the bowel content, you might be inhaling the virus".

INTRODUCTION

Over the past six months, the new coronavirus, named SARS-CoV-2, has spread rapidly from China to Europe and then to the American continent to cause the COVID-19 pandemic. Since the World Health Organization (WHO) declared COVID-19 as a pandemic on March 11, 2020, the number of tests performed, the number of COVID-positive patients and the mortality rates have drastically increased. The disease

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is mainly transmitted by respiratory droplets, and protective measures as "droplet precautions" are undertaken. Close contact with infected people and environmental contamination, as in all contagious diseases, remain as the key factors. Therefore, hospitals carry the highest risk of infection both for healthcare workers (HCW) and patients. In this respect, most elective procedures have been deferred and surgical services are planned in accordance with the pandemic responses.[1] Only recently, some countries are reconverting discreetly to normal clinical practices.

Proctologic diseases belong to a special clinical practice group in colorectal surgery mainly because i) they are one of the most common disease entities in surgical practice, ii) they are usually diagnosed and treated on an outpatient basis, iii) although they are most commonly benign anal disorders, such as hemorrhoidal disease, anal fissures, or anal abscess/fistula, patients seek urgent care due to the offending pain and/or bleeding. An additional threatening factor regarding this highly prevalent patient group is the presence of coronavirus RNA in stool samples and intestinal biopsy specimens of infected individuals.[2–6] Although no cases of fecal-oral infection have been described yet, special precautions are needed in all circumstances, given that the transmission mechanisms are not yet fully understood.[7] Therefore, endoscopic procedures and proctologic interventions potentially have an additional high risk for contamination.

Guidelines have been published for colorectal cancer cases in the pandemic era to prevent COVID-19-related complications and mortality.[8–14] Some other colorectal directives have been released; however, the guidance specifically targeting interventions for proctologic conditions and based on experience with the suggested recommendations, have not been shared in detail yet.[11,15–17] This article aims to give practical information about and concrete suggestions on what should be considered in emergency, semi-urgent and elective settings for common anorectal diseases in the COVID-19 pandemic.

MATERIALS AND METHODS

From March 1 to April 10, 2020, surgeons of two Proctology teams from Turkey and Spain (including colorectal-dedicated surgeons, proctology nurses, pelvic physiotherapists, and enterostomal therapists) contacted 240 adult patients. We evaluated the results retrospectively on 16–17 April. Patients from the department of emergency were not included in this study. We had treated our patients with the sequent principles, although some precautions might not be perfect in either group initially before March 11 (when the condition was declared as a pandemic) because the necessary arrangements took time and our staff was not so informed and prepared. These principles evolved to become a guideline, and they will be stated as suggestions in the following sections. The guideline followed is shown in Figure 1. At the end of the survey, we asked the 226 followed patients if they or any of their close contacts had developed any symptoms of COVID-19 and/or if any of them had undergone testing. All interventions were planned with the consultation of infectious diseases and in accordance with the pandemic preparation. Proctology teams must be well aware of symptoms of COVID-19, given that gastrointestinal symptoms were shown to exist in 18 percent of the patients overall, with diarrhea, nausea/vomiting, or abdominal pain reported in 13, 10, and 9 percent, respectively.[18,19] The following principles were applied, and they eventually became a guideline for us, as also suggested in this report.

Target the Correct Patients to Prevent Repeated Admissions

Postponing the examination of anorectal diseases and the resultant delay in correct diagnosis and treatment may aggravate the problem. Moreover, delay of treatment of perianal sepsis (perianal, ischiorectal abscesses) may lead to severe soft-tissue infections. We know that conditions, such as rectovaginal fistula, anal abscess/fistula, obstetric injuries, sexually transmitted diseases, or anal stenosis, may cause a dramatic psychosocial burden.[11] Another issue is that social isolation and immobility during the pandemic, as well as changes in nutritional habits, may cause constipation. On the flipside, diarrhea has been detected in 3.8–28 percent of the patients with COVID-19.[20,21] Such alterations in bowel habits may provoke underlying anal problems or cause new ones. Patients with chronic benign proctologic problems are not likely to be critically harmed by postponement. However, we have to select those patients with the current or highly possible future need for repeated admission to provide the safest and shortest exposure.

Evaluate and Orientate by Telemedicine

Although proctologic examination is more irreplaceable, making things harder in the COVID-19 era compared with some other clinical branches, detailed questioning may still be suggestive in a considerable number of cases. The treatment should proceed with the same rationale. Suggest them to keep themselves immediately in quarantine because they may need to come to the hospital in the near future. Patients should be provided with lifestyle measures recommended according to their specific condition and with hygiene measures to prevent COVID-19. Decision making and verbal consent sections of this telecommunication should be recorded and saved. Ask your patients if they are satisfied with this paradigm or if they feel like searching for another health service. As recommended by available guidance,[11,15–17] most surgeons are providing telephone counseling. The role of telemedicine in coloproctology during disasters is now well-recognized.[21–24]

Isolate your Proctology Unit

Unless your hospital is expected to become soon overwhelmed by patients with COVID-19, an ideal scenario would be to behave as if your Proctology Unit (PU) was an independent system. Isolation of the unit and staff will reduce

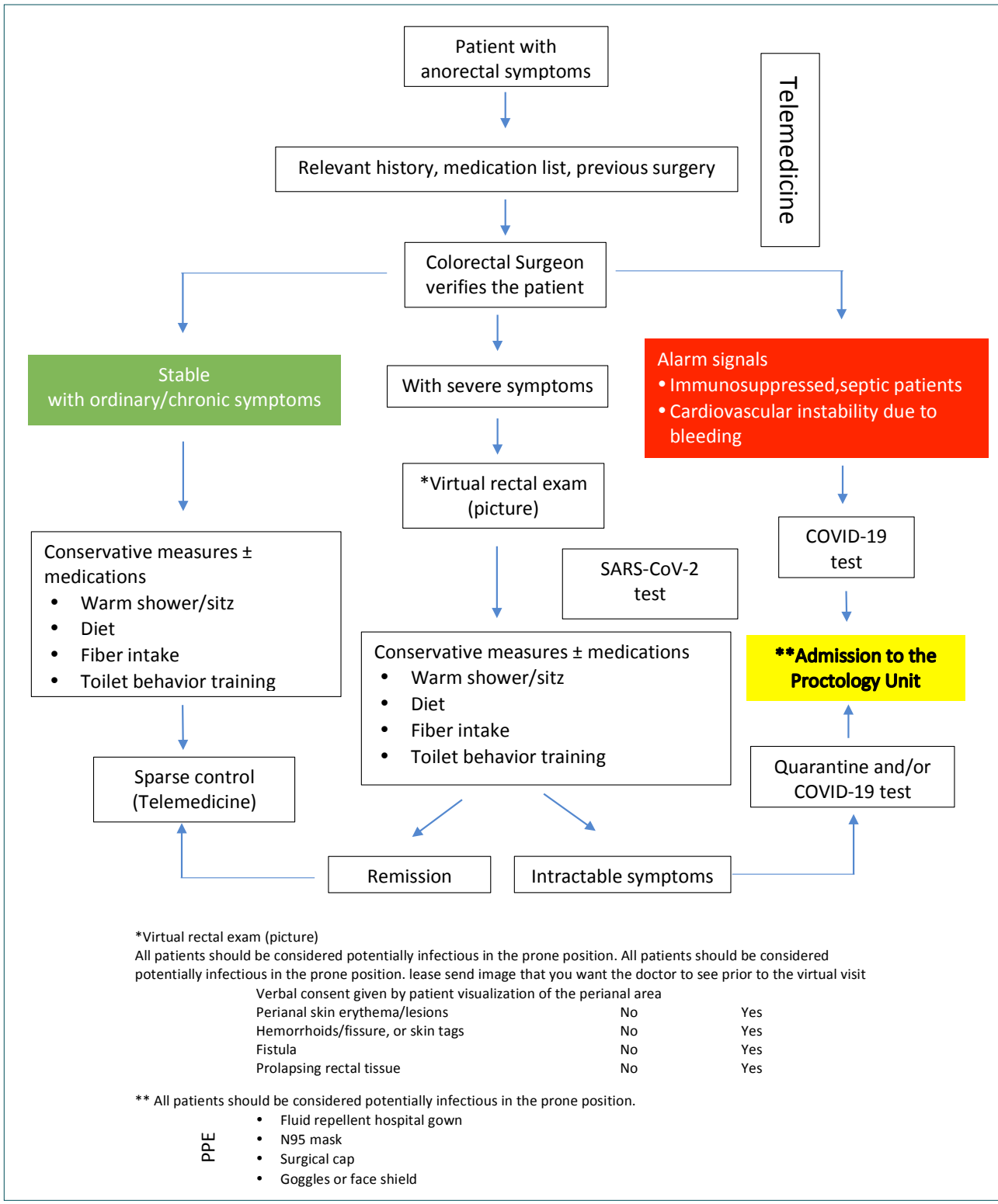

Figure 1. The practice parameters followed in this study.

cross-contaminations, and it will help trace any possible future infections. Whenever possible, the PU personnel should be tested for SARS-CoV-2 periodically. In a study based on SARS experience, the risk of infection was 5 percent for doctors and 8 percent for nurses and other HCW.[25]

Control Infection in Parallelism with the Current Guidelines

The basic principles of endoscopy and surgery are generally valid for proctology. Our suggestions specific to proctology are also in accordance with the current American College of

Surgeons (ACS) and American College of Gastroenterology (ACG) guidelines in the pandemic era.[9,26] The Spanish Association of Coloproctology (AECP) recommends avoiding rigid proctoscopies and transrectal/anal US and defecography because these are aerosol-generating procedures.[16,17]

Evaluate the risk before proctologic examination and intervention… For patients suspected of contact or thought to be asymptomatic, testing is imperative before admission to the PU. Ideally, all patients are tested outside the hospital after contact by telemedicine and before they come to the hospital for the procedure. For all suspected or confirmed cases, inform the pandemic team for additional tests or interventions to be undertaken before and/or after the nondeferrable proctologic problem is solved. The practical issue is that we lack a rapid test, its sensitivity is low, and temperature checking is not a valid alternative.

Provide HCW with the necessary medical equipment and infection control training… For patients identified as suspicious, probable, or validated COVID-19 and as listed by WHO,[27] fluid repellent hospital gown, N95 mask, surgical cap, and advanced PPE with protective goggles or face shield should be used during all proctology exams/interventions. For patients who have a negative test and are not suspected of having COVID-19, HCW must use goggles or face shield, surgical masks, and fluid repellent hospital gowns. If a patient could not be specifically tested, he or she should be accepted to be potentially infectious because the prone position is accepted as a specific transmission circumstance through aerosol.[28] Except for the patients known to have negative tests, airborne precautions should be applied.[29]

Follow standard and additional infection control policies for proctologic interventions… It may take hours or days for viruses to remain viable on metal surfaces.[30] All surgeons, nursesand healthcare professionals should be trained in infection control and proper use of the PPE for proctology examinations and interventions.[31–33] Relevant surfaces must be cleaned after each patient. After each patient, the medical waste basket should be renewed. Wait for at least 30 minutes for room cleaning and material disposal between two processes. Each patient should be examined and treated with disposable devices or with a sterile set of instruments, to be sent for cleaning policies. All specimens and samples obtained from COVID-19-positive or untested patients should be regarded as infected samples and handled accordingly.[16,17]

Special Considerations

The main idea is that elective proctologic examinations and interventions should be reduced until normalization is achieved in the COVID-19 pandemic. The risk of contamination must be weighed against the possible harm that arises from postponing the case; however, well-defined disease-based strategies must support this judgment and decision.

Try to abstain from general anesthesia, if possible. Intubation and extubation facilitate the spread of viral particles. Intravenous sedation may also bring about such risks to a lesser extent. If mandatory, regional anesthesia is the method of choice, and it is also effective in the treatment of postoperative pain.[34] Using telemedicine, start with a high-fiber diet, regular bowel movements, and warm shower/sitz applications. For anal fissure, Botulinum toxin injection is a good option in COVID-19 pandemia if intractable pain and stay away from work because of the ongoing symptoms are noted. For hemorrhoidal disease, the bleeding must be followed but tolerated unless it causes anemia. Contrary to the conventional strategy, let thrombosed hemorrhoids cool down and let the patient know that pain usually subsides in 72 hours. For patients taking anticoagulants, ask them to contact their cardiologists for possible cessation or tapering off the drugs. Only if bleeding of hemorrhoids causes apparent anemia or cardiovascular instability, admit to the PU. Gangrenous hemorrhoids also need to be treated urgently. Once again, prefer regional anesthesia and day-case surgery.

Unless complicated by recurrent abscess formations, anal fistulas are considered deferrable. If the patient's story is suggestive of an anal abscess, invite to the PU and drain. Especially, beware of immune-compromised or diabetic patients who may develop severe infections, such as Fournier's gangrene, if the anal abscess is neglected. If an associated fistula tract is easily identified, a loose seton could be inserted to prevent possible early recurrences.[35] For pilonidal abscess, adhere to the general considerations outlined above. Complete diagnosis and simple drainage at the same session and follow by telemedicine.

Only rapidly progressive anal warts, bleeding lesions, or cases of condyloma acuminata might require admission to the PU.

If asked for help, we must repair grade 4 vaginal tears. However, most cases of obstetric anal sphincter injury consult months to years after vaginal delivery. We have to postpone these cases because the work-up and treatment are long and complicated. All other pelvic floor disorders should be handled by telemedicine till the pandemic disappears.

RESULTS

Adhering to the principles outlined in this practical guide, we were able to treat most of urgent and elective benign anorectal diseases safely in the COVID-19 pandemic. We contacted 240 adult patients initially by telemedicine. Their demographics are irrelevant to the end points, and they are not given. At the end of this survey, 14 patients (5.8%), most of whom had declared to be unsatisfied with our approach, were lost for follow-up. Interestingly, all of these unsatisfied patients belonged to the Turkish series (9% vs. none in the Spanish series). Thirty-one patients (12.9%) were invited to the PU. The ratio of nondeferrable cases also differed between the two

series (16.7 vs. 5.9%). Most of the cases were anal abscess/fistula, bleeding hemorrhoids, or intractable anal fissures. Other cases were bleeding anal warts, pilonidal abscess, postoperative bleeding, rectal cancer, or ulcerative colitis. Twenty-eight patients required interventions at the same session, namely Botox injection, band ligation or infrared coagulation, anal abscess drainages ± seton placement (including 2 deep postanal abscesses), anal wart excision + reconstruction, pilonidal abscess drainage, and surgical hemostasis.

At the end of the survey, we searched for any COVID-19 contamination during the study period. As testing became more available as the pandemic progressed, we could test only eight nondeferrable patients (25.8%), all of whom resulted negative. We asked the 226 followed patients if they or any of their close contacts had developed symptoms of COVID-19 and/or if any of them had undergone testing. Two patients declared flu-like symptoms which disappeared shortly. Only one of them underwent COVID-19 test, and it was negative. Cumulatively, three close contacts of our patients developed symptoms of upper respiratory tract infection. Only one of these contacts was confirmed to be COVID-19, but this relative had another suspect contact, and the time of infection/incubation did not comply with our admission. Therefore, adhering to the practical guidelines described here, more than 90 percent of anorectal disorders could be treated or palliated within the time limits, with 12.9 percent of nondeferrable admissions, 2.1 percent of suspected contamination and no confirmed cases. Until April 17, none of the proctology personnel or their close contacts has developed COVID-19, either. We cannot contradict that asymptomatic cases may exceed these numbers.

DISCUSSION

The principles outlined in this practical guide stem from the shared attitude and results of two different centers. The conditions changed, our attitude matured in time, and we used quarantine and/or testing as much as we could. Although we are now entering a phase of normalization, our results may shed light to safe clinical practice in still epidemic regions and if a second wave might require similar precautions in the future. Although we have always emphasized and taught our students the importance of anorectal examination, we should confess that the leading actor of this scenario is telemedicine. However, the compatibility differed between the two population groups, probably owing to their perception of the severity of the pandemic. This may stem from that the pandemic followed a more dreadful course in southern Europe, resulting in a higher level of awareness. Although the difference between the results of the two colorectal teams was not the aim of this study, a difference in telemedicine policy between the two countries is probable. On the other hand, telemedicine has some disadvantages or pitfalls. The patient should be advised that he/she may have to be explored in the following weeks to reassure diagnosis and treatment. Patients should understand and accept the limitations of telemedicine, and a list of alarm points (signs and symptoms) must be detailed to them.

Many patients are afraid to apply. On the contrary, we have faced some other patients who insisted on being admitted to our PU despite the straight-out information and the evident risks. We have experienced that neglecting or simply refusing patients with benign anorectal disorders may backfire in the near future in the form of secondary admissions. We also shoud consider the possible morbidity and mortality caused by functional, infectious or oncologic complications of such diseases. For the moment, all medicolegal interpretations are based on preventing contamination of COVID-19. However, we need authorized measures to ensure good communication with patients so that the potential rise in medicolegal litigation could be prevented after the pandemic subsides. Each patient, whom we cannot manage in accordance with well-defined, safe practice parameters, may apply to nonscientific methods with worsening of the clinical picture. Besides, the ongoing crisis is forcing the financial limits of many health centers and physicians, and unfortunately, this may lead to concessions that could in the end increase the risk of infection globally. Therefore, we need practical guides to provide a good balance between the two extremes of refusing all non-urgent cases and proceeding with desperate, ill-defined infection control measures. Some disease-specific suggestions have also been cited for practitioners of proctology to follow. In the end, a table which summarizes the main principles of this practical guideline is presented to the practitioners of proctology.

Conclusion

Adhering to the principles outlined in this practical guide, we were able to treat most of the urgent and elective benign anorectal diseases safely in the COVID-19 pandemic. Now, many countries and centers are entering a normalization period, but we still proceed with these precautions until the pandemic disappears. Besides, any second wave may necessitate that these measures are re-considered.

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ORİJİNAL ÇALIŞMA - *ÖZET*

COVID-19 pandemisinde acil ve elektif proktolojik/anorektal girişimler

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AMAÇ: Bu çalışmada amaç, COVID-19 pandemisinde sık görülen proktolojik hastalıklara acil, yarı-acil ve elektif koşullarda nasıl yaklaşılması gerektiğini gösteren pratik bir kılavuz hazırlamaktır.

GEREÇ VE YÖNTEM: Pandemi döneminde ilgili kılavuzlarla ilişkili olarak, sık görülen anorektal hastalıkların tanı ve tedavisinde, hastaları doğru yönlendirmek amaçlı hastane başvuru öncesi teletıp ile değerlendirilmiştir. Aynı zamanda proktoloji ünitelerinde kontaminasyon ve enfeksiyonu kontrol etmek için önlemler alınmıştır. Sık görülen anorektal hastalıkların COVID-19 pandemisinde acil ve elektif koşullarda değerlendirilmesini kolaylaştırıcı kılavuz oluşturulmuş, bu amaca hizmet için pandemi döneminde hastaların erken sonuçları dokümante edilmiş, geriye dönük olarak irdelenmiştir.

BULGULAR: İki merkezde 1 Mart ile 10 Nisan 2020 tarihleri arasında anorektal hastalıkları olan 240 hasta ile iletişime geçildi. Hastalar 16–17 Nisan'da geriye dönük olarak değerlendirildi. On dört (%5.8) hasta ile takip sırasında iletişim kurulamadı. Otuz bir hasta (%12.9) ise şiddetli proktolojik şikayetleri nedeni ile proktoloji ünitelerine davet edildi. Bu hastaların 28'ine aynı seansta acil girişim uygulandı. Hazırladığımız proktoloji rehberi sayesinde %2.1'i şüpheli kontaminasyon olan hastaların anorektal hastalıklarının %90'dan fazlası başarılı bir şekilde tedavi edildi. Proktroloji personelinde ve yakın temaslı olan kişilerde bu pratik proktoloji kılavuzu sayesinde COVID-19 saptanmadı.

TARTIŞMA: Hazırlanan pratik kılavuzda belirtilen ilkelere bağlı kalarak, acil ve elektif selim anorektal hastalıkların çoğunluğu COVID-19 salgınının ilk, telaşlı döneminde güvenli bir şekilde tedavi edilebilmiştir.

Anahtar sözcükler: Acil proktoloji; COVID-19; pratik proktoloji klavuzu.

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