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Guidelines

Management of paediatric IBD after the peak of COVID-19 pandemic in Italy: A position paper on behalf of the SIGENP IBD working group ☆,☆☆



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ABSTRACT

Coronavirus Disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2, spreading in Italy during the first months of 2020, abruptly changed the way of practicing medicine in this country. As a consequence of the lockdown, the diagnostic and therapeutic management of paediatric chronic conditions, such as inflammatory bowel disease (IBD) has been affected. During the peak of COVID-19 pandemic, elective visits, endoscopies and infusions have been postponed, with potential clinical and psychological impact on disease course and a high likelihood of increasing waiting lists. While slowly moving back towards normality, clinicians need to recognize the best ways to care for patients with IBD, carefully avoiding risk factors for new potential epidemic outbreaks. In this uncertain scenario until the development and spread of COVID-19 vaccine, it is necessary to continue to operate with

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caution. Hereby we provide useful indications for a safer and gradual restarting of routine clinical activities after COVID-19 peak in Italy.

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1. Introduction

Coronavirus Disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), spreading in Italy during the first months of 2020, abruptly changed the way of practicing medicine in this country [1,2]. The conversion of many hospitals into COVID-19 centres in highly affected regions, such as in Northern Italy, and the government lockdown have suddenly modified access to care for many patients [3–5]. Starting from March 9th, all the national health system services had to postpone scheduled out and inpatients' visits, limiting the accesses to clinical urgencies. As a consequence, the diagnostic and therapeutic management of chronic inflammatory conditions, such as inflammatory bowel disease (IBD) has been significantly affected [6–8]. Indeed, although IBD seems not to increase the risk of severe COVID-19 [9,10], its management requires endoscopic procedures, medical appraisal to monitor complications and hospital admission in case of severe flares. Furthermore, children with IBD are more commonly exposed to combined immunosuppressants and biological therapies requiring accesses to the hospital for parenteral administrations. During COVID-19 peak, elective appointments and endoscopies have been postponed, with potential clinical and psychological impact on disease course and a high likelihood of increasing waiting lists [11,12]. While slowly moving back towards normality, clinicians need to recognize the best ways to care for patients with IBD, carefully avoiding risk factors for new potential epidemic outbreaks [13]. In this uncertain scenario until the development and spread of COVID-19 vaccine, it is necessary to operate with caution. Therefore, the aims of this position paper are to provide guidance for the management of paediatric IBD on the basis of the existing evidences in the phases following the peak of the COVID-19 pandemic in order to ensure quality of care and avoid epidemic outbreaks.

2. Methods

A panel of 26 paediatric gastroenterologists and 2 psychologists (SR and ZG) with expertise in the field of paediatric IBD was selected in May 2020 following an open-call amongst the members of the Italian Society of Gastroenterology, Hepatology and Nutrition (SIGENP) IBD group study. The first webmeeting resulted in organising the position paper into 7 subparagraphs: 1) *general considerations on hospital accesses*; 2) *diagnostic procedures*; 3) *immunosuppressive therapies*; 4) *biologics*; 5) *telemedicine*; 6) *transition*; 7) *psychological issues*. Seven different working subgroups were assigned to each paragraph. Each working group was asked to perform a literature search within their specific topic using Medline-PubMed database with appropriate search strategies (available upon request) using a last search date of May 31st, 2020. Specific recommendation statements were produced by each subgroups and discussed in a second webmeeting on June 17th. Finally, all recommendations were voted and accepted if at least 80% agreement was achieved.

3. General considerations on hospital accesses

3.1. Recommendations

- **During the phases subsequent to the COVID-19 peak we recommend that IBD centres minimize crowding and imple-**

ment anamnestic screening procedures for the identification of suspected COVID-19 cases. [Vote result: Strongly agree: 83.3%; agree: 16.7%, neutral: 0%, disagree: 0%, strongly disagree: 0%]

- **Hospital accesses should be limited with different levels of priority on the basis of COVID-19 spread with the activation of tailored telemedicine programmes.** [Vote result: Strongly agree: 50%; agree: 50%, neutral: 0%, disagree: 0%, strongly disagree: 0%]

As previously outlined, COVID-19 outbreak forced a sudden general reorganization of hospital services and gastroenterology departments [3–5]. Paediatric IBD units experienced a global reduction in the number of hospitalizations, outpatient visits and routine endoscopies [11,12]. Limiting as much as possible hospital admissions remains a crucial rule to prevent unnecessary exposure of IBD patients to the risk of SARS-CoV-2 infection. As suggested from An et al., the continuous assistance to many IBD patients can be ensured at home [14]. Patients with stable disease on maintenance therapy can be adequately followed in a scheduled program of telemedicine [15]. Home patients management could be a valid alternative to improve the quality of care during the COVID-19 outbreak [16]. However, access to hospitals must be granted for patients with severe disease flare-up or with symptoms or signs suggestive of new onset IBD. A proper organization of gastroenterology departments after COVID-19 peak is therefore essential to ensure an adequate management. The infusion service must be a priority area and it should possibly moved to a “clean area” with alternative access, avoiding the passage through the main hospital. If capacity is reduced due to staff shortages, daily/weekly triage of infusions should take place. The presence of only one accompanying person for children will be allowed. Patients must be clearly and continuously informed regarding the importance of social distance and hygiene measures, enforcing a strict hand washing upon arrival. Two-metre spacing should be employed between patients with a dedicated separate waiting area. A telephonic triage the day before admission for endoscopy or biological infusion is recommended to exclude symptoms suggestive of COVID-19, and patients should be screened on arrival for symptoms and fever. Finally the reorganization of endoscopy units, according to the recently published recommendations from international and national societies is strongly suggested for a safer management of IBD patients [17].

3.2. Diagnostic procedures

3.2.1. Recommendations

- **We recommend obtaining naso-pharyngeal swab test in all the cases in which endoscopic procedures are performed under deep sedation and/or general anaesthesia.** [Vote result: Strongly agree: 62.5%; agree: 33.3%, neutral: 0%, disagree: 4.2%, strongly disagree: 0%]
- **We recommend maintaining endoscopic procedures in all the clinical settings that will lead to therapeutic changes, including new diagnosis, relapses and complications.** [Vote result: Strongly agree: 83.3%; agree: 16.7%, neutral: 0%, disagree: 0%, strongly disagree: 0%]

Due to the supposed evidence of SARS-CoV-2 faecal-oral transmission digestive endoscopy is considered as an at risk procedure [18,19]. Therefore, health institutions and major non-profit scientific societies recommended limiting endoscopic procedures in IBD

Table 1
Personal protective equipment to be used in the paediatric IBD endoscopic unit in COVID-19 high-risk areas.

Hairnet
Goggles or facemask for eyes protection
N95 or FFP2 masque
Long-sleeve, water resistant gown
Two pairs of gloves

patients to urgent indications, such as confirmation of new diagnoses, severe acute flare-ups in UC patients, or occurrence of complications [20,21]. Selection and stratification of patients based on clinical symptoms, blood test results, non-invasive inflammatory markers, drug history and recent bowel surgery is strongly recommended [20,21]. Whenever possible, and according to clinical indications, alternative disease assessment methods can be considered, including radiologic study, bowel ultrasound, magnetic resonance enterography, and indirect tools, such as faecal calprotectin (FC) [22]. On the other hand, performing bowel cleansing at home, can be taken into consideration based on patient age (≥ 10 years), compliance and family convenience. Overall, endoscopy should not be deferred any further in case of: (i) mild-to-moderate flare-up with altered blood tests; (ii) symptoms of mild sub-acute obstruction already confirmed by a magnetic resonance or computed tomography scan, or bowel ultrasound; (iii) new diagnosis; (iv) surveillance of post-operative recurrence within 1 year of surgery if the patient is symptomatic or FC and blood tests are worsening; (v) moderate pouchitis with symptoms and altered blood test results; (vi) endoscopic reevaluation after 6 months of biological therapy in symptomatic patients with altered FC or blood tests [20,21]. In all the other non-urgent procedures, the decision of postponing will be left to the caring physician on the basis of SARS-CoV2 spread and the limitation of each specific hospital setting. Before performing the procedure, and preferably at hospital admission, all patients should undergo an epidemiological investigation. It is suggested to obtain naso-pharyngeal swab test for SARS-CoV-2 24–48 h prior to all the procedures under deep sedation and/or general anaesthesia [20,21]. Even after COVID-19 peak, especially in the high-risk areas, all endoscopy staff members, especially the operator, have to wear personal protective equipment (PPE) and frequently wash their hands with alcoholic solutions before and after procedures (Table 1) [23]. It is still advisable to reduce the access and personnel density of endoscopy staff in the unit. Appointments for endoscopic procedures must be arranged to avoid crowding in the waiting room. Previous and successive cleaning of the equipment and of the operating room should always be ensured [20,21].

3.3. Immunosuppressive therapies

3.3.1. Steroids

3.3.1.1. Recommendation.

- **Current evidence does not contraindicate the use corticosteroids as induction therapy in IBD children. An accelerated weaning may be considered case by case, particularly in the areas with higher SARS-CoV2 rates.** [Vote result: Strongly agree: 33.3%; agree: 66.7%, neutral: 0%, disagree: 0%, strongly disagree: 0%]

A placebo-controlled randomized trial showed that corticosteroids might reduce coronaviruses clearance [24], whereas other studies suggested a possible positive influence of these drugs on coronavirus infections due to their anti-inflammatory properties [25]. Steroids are currently being used to treat patients with moderate-to-severe COVID-19 and to reduce the signs and symptoms of “super” inflammation in the later phases of the disease.

However, in the early stages their use may increase viral burden. Recent uncontrolled study suggested that COVID-19 patients on high steroid dosage have significantly worse clinical outcomes than those without steroid use [26]. Lately, Brenner et al. published the first data of the SECURE-IBD registry, including both paediatric and adult IBD patients [27]. The analysis included 525 cases of patients with IBD and COVID-19, of whom $29 \leq 19$ years. At the multivariate analysis steroid therapy resulted the most significant factor for the development of severe COVID-19 (aOR 6.87, 95% CI 2.3–20.5) [27]. However, no data on low-dose and short-term steroid use are available. The decision should be made on an individual basis, discussing the benefits and risks with each patient. Steroid tapering should always be conducted under strict medical surveillance [2,28]. Inappropriate cessation of therapeutic agents due to unjustified fear of adverse events may lead to IBD relapse, and consequent hospitalisation with an increase of SARS-CoV2 exposure risk.

3.3.2. Conventional immunosuppressants

3.3.2.2. Recommendation.

- **There is no evidence to support the suspension of an ongoing therapy or not to recommend the start of conventional immunosuppressants.** [Vote result: Strongly agree: 70.8%; agree: 29.2%, neutral: 0%, disagree: 0%, strongly disagree: 0%]

Immunomodulators are commonly used in the management of IBD to maintain remission, as monotherapy or combination therapy with biologics. Most of these agents alter immune function by causing apoptosis of T cells [29]. Thiopurines (azathioprine, 6-mercaptopurine) treatment can potentially reduce the number of activated T cells and affect T-cell activation and effector function. Although no current data is available, thiopurines might affect the course of COVID-19 with lymphopenia being associated with a worse prognosis. Similarly, there is no specific data available on methotrexate [28]. Therefore, in the absence of clear evidences we do not recommend the suspension of immunosuppressive treatment in patients with IBD. Moreover, although thiopurines may increase the risk of serious viral infections, the IOIBD does not recommend treatment discontinuation, taking into account the long washout period of these drugs [28]. In this setting the risk of a disease flare outweighs any estimated risk of SARS-CoV2 infection.

3.4. Biologics

3.4.1. Recommendations

- **The use of anti-TNFs should be continued at the regular intervals and doses.** [Vote result: Strongly agree: 75%; agree: 25%, neutral: 0%, disagree: 0%, strongly disagree: 0%]
- **The beginning of anti-TNF α therapy should not be delayed.** [Vote result: Strongly agree: 70.8%; agree: 25%, neutral: 4.2%, disagree: 0%, strongly disagree: 0%]

The administration of biological drugs during COVID-19 epidemic peak has been an object of concern for patients and physicians in light of the possible infectious risks due to immunosuppression. Anti-TNF α antibodies may interfere with antiviral immunity directly by reducing TNF α levels and indirectly modulating T-lymphocyte activity and interferon-gamma production. However, the risk of increased susceptibility to viral infections and a complicated outcome conferred by anti-TNF α is controversial and strictly related to the specific pathogen [30]. On the other hand, the risks associated with the withdrawal of treatment for IBD must be taken into consideration. It has been reported that 21–23% of the children who delayed or temporarily discontinued infliximab infusions because of the epidemic, experienced a disease exacerbation [11]. To date, therapies targeting TNF α have not been associated with adverse outcomes in IBD patients with COVID-19

[27] and an immediate positive effect of anti-TNF α on the virus-induced cytokine storm has been described both in a children and in an adult with active Crohn's disease and COVID-19 [31,32]. The therapeutic effect of anti-TNF α agents is likely to be exerted both for a reduction in the levels of TNF α , which are increased in patients with severe COVID-19 infection and for the down-regulation of the trans-membrane ACE2 receptors that have been identified as the anchorage site of the virus [27]. Patients with IBD do not seem to have an increased risk of COVID-19 and neither a higher mortality rate for when compared to the general population (OR 0.74, 95% CI 0.70–0.77; $p < 0.001$ and OR 0.95, 95% CI: 0.84–1.06; $p = 0.36$ respectively) [33]. Similarly, Brenner et al. report no significant differences in COVID-19 disease outcome between patients on anti-TNF α monotherapy and general population [27].

3.4.2. Recommendation

- **Enforced intravenous to subcutaneous switching is not recommended.** [Vote result: Strongly agree: 62.5%; agree: 33.3%, neutral: 4.2%, disagree: 0%, strongly disagree: 0%]

In 2012, Van Assche et al. randomised 73 patients in sustained remission after at least 6 months of infliximab therapy to continue scheduled infliximab infusions or to switch to subcutaneous adalimumab. They found that elective switching from infliximab to adalimumab is associated with loss of tolerance and loss of efficacy within 1 year in 47% of patients [34].

3.4.3. Recommendation

- **Taking into consideration the variability of SARS-CoV-2 spread, we suggest that each centre implement a procedure for the management of the hospital stay of patients who undergo intravenous therapy.** [Vote result: Strongly agree: 41.7%; agree: 58.3%, neutral: 0%, disagree: 0%, strongly disagree: 0%]

Pre-infusion screening protocol to assess for acute respiratory tract symptoms and fever amongst IBD patients and their contacts should be performed.

3.4.3.3. *IBD unit-infusion procedure.* The intravenous administration procedure of anti-TNFs should strictly follow measures to prevent any contaminations [7]:

- Use of surgical masks for clinical staff and patients
- Use of latex (or equivalent) gloves for clinical staff
- Strict hand washing policy on arrival should be enforced
- Two-meters spacing should be employed between patients
- Dedicated separate waiting area if possible
- Infusion chairs should be appropriately cleaned between patients

3.4.4. Recommendation

- **To date there is no evidence to support the addition of mass RT-PCR/serological screening for SARS-CoV-2 in patients who need to start an anti-TNF α therapy.** [Vote result: Strongly agree: 46%; agree: 34%, neutral: 20%, disagree: 0%, strongly disagree: 0%]

There is no evidence to recommend RT-PCR/serological screening for SARS-CoV-2 in patients who need to start an anti-TNF α therapy [6,7]. Asymptomatic patients with a reported close contact with infected subjects should undergo a screening with nasopharyngeal swab for SARS-CoV-2 before entering the gastroenterology unit or performing home therapy. Patients with symptoms compatible with COVID-19, regardless of contacts, should undergo a diagnostic naso-pharyngeal swab [6,7].

In this regard:

- Patients receiving hospital drug administration must go through the screening procedures described above.

- Patients under subcutaneous therapy must be instructed to promptly notify the caring physician of any symptoms related to COVID-19 and/or of any contacts with SARS-CoV-2 infected people.

3.4.5. Recommendation

- **There is no evidence to support the suspension of biological or immunosuppressive agents in case of combined therapy** [Vote result: Strongly agree: 50%; agree: 45.8%, neutral: 4.2%, disagree: 0%, strongly disagree: 0%]

Compared with anti-TNF monotherapy, combination therapy was associated with increased risks of serious infection (hazard ratio [HR], 1.23; 95% confidence interval [CI], 1.05–1.45) and opportunistic infection (HR, 1.96; 95% CI, 1.32–2.91) [35]. However, there is no evidence that combination therapy may increase the risk of COVID-19 worse outcomes. Therefore, the British guidelines recommend that combination therapy with biologics should be carefully discussed on a case by case basis [7].

3.4.6. Recommendations

- **No significant concerns on Vedolizumab and Ustekinumab use for patients with IBD due to the COVID-19 pandemic have been raised.** [Vote result: Strongly agree: 54.2%; agree: 37.5%, neutral: 8.3%, disagree: 0%, strongly disagree: 0%]

Vedolizumab and ustekinumab showed no increase in the risk of viral infections [27,36].

3.5. Telemedicine

3.5.1. Recommendations

- **Telemedicine appears to be a safe and useful tool to evaluate patients in unexpected settings such as the COVID-19 pandemic.** [Vote result: Strongly agree: 70.8%; agree: 20.8%, neutral: 8.3%, disagree: 0%, strongly disagree: 0%]
- **We recommend reinforcing telemedicine services during the phases successive to the COVID-19 peak in order to reduce unnecessary hospital accesses.** [Vote result: Strongly agree: 54.2%; agree: 41.7%, neutral: 4.2%, disagree: 0%, strongly disagree: 0%]

In the last decade an important effort has been made to implement telemedicine in patients with IBD [37]. Randomized control trials conducted on cohorts of over 300 IBD adult patients demonstrated that telemedicine is a well-accepted method for delivering IBD consultation and it seems to increase patients' quality of life (QoL) and to decrease the rate of hospitalisations [38,39]. Furthermore it has a great impact on costs for healthcare system and patients [40]. Regarding paediatric IBD the most interesting experience in telemedicine comes from Denmark. The web-application "young.constant-care.com" used in a randomized clinical trial in IBD children represents an appealing example of a telehealth system integrating measures of disease's activity, QoL, school attendance and compliance to treatment. The symptom score and FC level were combined into the total inflammation burden score. The intervention resulted in no differences between the 2 groups (eHealth vs standard care) in disease activity, treatment escalation, medical adherence and QoL [41]. Additionally, a significant reduction in the number of outpatient visits and IBD-related school absences was observed in the eHealth arm [41]. The same web system was successful used to individualize IFX infusions timing, with no significant development of IFX antibodies [42]. The recent outbreak of SARS CoV-2 has exposed paediatric gastroenterologists to a rapid change in daily practice [43]. Regarding follow-up, IBD experts and international societies recommended minimizing hospital admission by using telemedicine consultation [44]. In Italy, several high volume IBD adult centres tried to change their practice in

Table 2

General indications and questionnaires to be used for telemedicine visits in children with IBD.

Auxological parameters (<i>Weight, Height, Body Mass Index</i>) to be evaluated by general practitioner
Disease activity Indexes
<i>UC</i>
<i>PUCAI</i>
<i>CD</i>
<i>Abbreviated PCDAI</i>
<i>short pcdai</i>
faecal calprotectin at a local laboratory
Blood tests at a local laboratory to be required in case of specific symptoms (e.g. fever, loss of energy, unexplained diarrhoea) or doubtful clinical scenarios (e.g. infectious event, drug side effect) before deciding a face-to-face visit
Quality of life
IMPACT III questionnaire
Compliance to therapy
MARS
VAS line

CD: Crohn's disease; MARS: Medication Adherence Report Scale (MARS); PCDAI: Paediatric Crohn's Disease Activity Index; PUCAI: Paediatric Ulcerative Colitis Activity Index; UC: Ulcerative colitis.

order to face this period with several difficulties [2,4,5]. In the paediatric age the only published experiences of telemedicine for IBD children during COVID-19 pandemic come from the United States [45,46].

3.5.1.4. Remote monitoring of paediatric IBD: surveillance methods. Monitoring children with IBD through a telehealth system should include assessment of: 1) disease's activity and clinical status; 2) quality of life (QoL) and social/psychological issues; 3) adherence to treatment. Symptoms scores including the paediatric Ulcerative Colitis Activity Index (PUCAI) [47] and the non-invasive versions of the paediatric Crohn's Disease Activity Index (PCDAI), including the abbreviated PCDAI (abbrPCDAI) and the short PCDAI (shPCDAI) [48] can be easily reported by patients not requiring blood tests (Table 2). However, the lack of perfect agreement between patient and physician-based shPCDAI and PUCAI should be considered with children tending to score higher shPCDAI compared to physicians [49], making a direct interview preferable. Furthermore, it is worth noticing that while PUCAI showed a good correlation with mucosal healing (MH) [50], none of the PCDAI versions can give a valid assessment of endoscopic healing [51]. Along with symptoms recall it is also important to check a recent weight and height. FC, a non-invasive marker of MH [52], along with blood tests (blood count, ESR, CRP, albumin, liver function tests) can be requested at a local laboratory and results sent to the IBD centre. Home-based measurements of FC through lateral flow-based rapid tests are a promising option [53]. The self-reported IMPACT III questionnaire is a reliable instrument to investigate QoL in IBD children and adolescents, with a higher score representing a better QoL [54] (Table 2). No specific cut-off has been established to indicate an acceptable QoL, therefore longitudinal measures are suggested. School attendance and IBD related school absences, as indicators of general well being, are easily recorded by families, but are clearly not applicable in the pandemic era. A good adherence to medications is indicated from a score of or above 80% in the Medication Adherence Report Scale (MARS) that is a 5 point Likert scale (range 5–25 points) [55] or in the VAS line (a 10cm long line indicating a spectrum from “always” to “never” taking medications) [56]. Patients tend to over-report the degree of adherence by using self-reported scales; therefore, ideally, they should be accompanied by more objective measures such as pill count or blood level of the treatment drug (Table 2).

3.5.1.5. Practical and legislative issues. The primary aim of telemedicine during COVID-19 pandemic is to provide patients and families with supportive care while minimizing exposure to the

infection, limiting disease transmission and reducing PPE use in hospital settings. Preliminary conditions include the availability of an adequate internet connection and equipment for both parties as well as a sufficient autonomy in the use of the proposed platform. Ideally, the patient and its family should be trained in advance on the use of the platform by a dedicated team, but the current situation does not always allow it. Thus, the platform designated for the telemedicine should be as simpler as possible to be easily used by the majority of patients and their families [45]. Finally, another requirement for an optimal use of telemedicine is the availability of dematerialized prescriptions both for drugs and for any investigation eventually needed. That verified, data security must be guaranteed. The provider has to assure the compliance to the regulations concerning the processing of personal data according to the General Data Protection Regulation (GDPR-EC directive 2016/679). Moreover, the platform chosen by the provider should be certified according to the EC Directive 93/42. This rule states that any software dedicated to medical interactions are equivalent to medical devices, and should therefore have the aforementioned certification [57]. Ideally, consent for virtual visits should be obtained either in a pre-visit phase or at the beginning of the visit, and it should be documented by including a written statement in the visit note indicating that verbal consent was obtained. The final decision to carry on with a tele-health encounter has to be a shared between the provider, patient and family. Lastly, the provider has to assure compliance to professional ethical principles, medical deontology and good professional practice rules.

3.6. Transition

3.6.1. Recommendation

We recommend restarting all the transition programmes, with the aid of telemedicine in order to limit hospital accesses in the high-risk area. [Vote result: Strongly agree: 50%; agree: 41.7%, neutral: 8.3%, disagree: 0%, strongly disagree: 0%]

A successful transition from paediatric to adult IBD care is essential to maintain the continuity of care. The transition of care is a process rather than a single point in time, which has been extensively detailed [58,59]. This on-going global crisis forced healthcare institutions and regulatory bodies to turn to alternative ways of providing healthcare while limiting exposure to SARS-CoV-2. Recently Pugliese et al. included transition within the “non urgent” IBD scenarios to deal with during the COVID-19 pandemic [60]. Nevertheless the authors well emphasize the risk correlated to indefinitely postpone this crucial phase for IBD patients [60]. In

the current emergency, telemedicine represents the ideal solution to keep transition programmes, ensuring the multidisciplinary involvement of different professionals and allowing the supervision of patients' skills through the administration of specific questionnaires [61]. The visits and/or telephone contacts must take place involving contemporarily the paediatrician and the adult gastroenterologist. Additionally the possibility of contact with the psychologist should be granted.

3.7. Psychological issues

3.7.1. Recommendation

We recommend continuing ensuring psychological care in all the children with IBD with the aid of online video-psychotherapy sessions. [Vote result: Strongly agree: 58.3%; agree: 41.7%, neutral: 0%, disagree: 0%, strongly disagree: 0%]

Children and adolescents during the lockdown have been exposed to high levels of stress related to important changes in their daily-life: lack of social contact associated with school closure, sedentary behaviour, lack of educational and physical activities [62]. This extended emergency situation could impact on patients' capacity to deal with their chronic disease and on their relation with hospital care. All paediatric IBD unit should grant the access to professional mental health consultations, in order to improve strategies for managing psychological stress, to share their own feelings and worries and to reinforce adherence to medications [63]. COVID-19 outbreak arose special psychological needs both in patients and their parents. In the video psychotherapy sessions that took place during the COVID-19 outbreak it was evident that patients' support was very important to help them settle in a new unexpected and sudden way of living but also to reinforce the therapeutic alliance in a period in which they could feel themselves "abandoned" by medical support (*Unpublished data*). Another important aspect coming out during this experience was that some important themes related to IBD, such as fantasy themes related to death fear, were particularly evident in the patients' parents (*Unpublished data*). This aspect underlines the importance to offer a support to the parents during this outbreak. Online consultations to parents seem to be useful to support them correctly communicating with their children. A good interaction between parents and children is one of the most important ways to help them avoiding negative effects on mental health. A honest information and an effective communication focused on the age and the level of understanding of the child, as well as an accurate listening about his beliefs and fears, is the most correct way to involve children in family life and to improve their self-efficacy skills [64].

4. Conclusion

COVID-19 pandemic has significantly challenged the management of paediatric IBD to healthcare providers across the globe. Hereby we provide useful indications for a safer and gradual restarting of routine clinical activities after COVID-19 peak in Italy. As the global COVID-19 pandemic is in continuous evolution and there are obvious differences in SARS-CoV-2 spread amongst different regions, it is essential to keep adaptability and interpret the current recommendations on the basis of each specific site scenario.

Declaration of Competing Interest

The authors have no conflict of interest to declare.

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