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Resumption of endoscopy in the Galician colorectal cancer screening programme after the COVID-19 lock down: patient safety results

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ABSTRACT

The COVID-19 pandemic meant that the population-based colorectal cancer (CRC) screening programmes had to be suspended. In order to reduce SARS-CoV-2 transmission, modifications were made to the organization. We report the experience of the Galician CRC screening programme and patient safety results. Endoscopy was suspended between 13/03/2020 and 11/05/2020. After resumption, a total of 3310 colonoscopies were performed (1702 positive faecal occult blood test, 1608 endoscopy monitoring). No SARS-CoV-2 infection was detected in the subsequent fortnight. Resumption of activity associated with population screening was safe.

Keywords

colorectal cancer screening, COVID-19, safety, SARS-COV2.

Abbreviations

CCR, colorectal cancer.

FOBT, faecal occult blood test

GPEDCC, Galician programme for early detection of colon cancer

INTRODUCTION

The COVID-19 pandemic meant that the endoscopy scheduled in Spain during the month of March 2020, including endoscopy related to colorectal cancer (CRC) population screening programmes, had to be suspended. Resumption of endoscopy has entailed one of the largest organizational challenges for endoscopy units. Changes to indications and priorities for examinations in terms of making appointments and receipt of these, restructuring of space, staff protection measures, cleaning of spaces and monitoring after performing examinations, were all implemented (1). These changes entailed a reduced volume of examinations performed and increased time periods for performing examinations. Against this backdrop, CRC diagnoses have fallen (2) with an increase in emerging diagnoses (3). Modelling studies performed in the United Kingdom suggest that the time periods associated with reduced endoscopy capacity might entail an increase of 15.3% to 16.6% in CRC mortality (4).

In the case of CRC population screening programmes, the COVID-19 pandemic entails an additional risk for healthy subjects invited to take part. All activity related to population programmes was suspended during the first wave of the pandemic in Spain. Resuming the activity is proving to be heterogeneous (5). The most important risk of prolonged suspension of programmes is the time for diagnosis of CRC for patients with a positive result. Delays over 270 days after a positive faecal occult blood test (FOBT) increase the risk of detecting CRC and advanced CRC (6). However, at present data indicate that suspending endoscopy within the scope of screening programmes has led to increased detection rates of advanced lesions and CRC. However, there is no evidence of stage of diagnosis or mortality (7). In this paper we report the experience of resuming the early CRC detection programme in Galicia with special reference to the risk of SARS-CoV-2 infection associated with endoscopy.

Methods

During the first wave of the pandemic, until 29 May 2020, a total of 9507 SARS-CoV-2 infections in Galicia were reported to the Spanish Network for Epidemiological Monitoring, with a cumulative incidence of 3.52 cases/1000 inhabitants (8). The Galician programme for early detection of colon

cancer (GPEDCC) had a reference population at 31/12/2019 of 725,254 Galicians with a health card aged 50 to 69 years. The GPEDCC suspended its activity on 13 March 2020. At this time letters of invitation to an initial screening round, kits for collection of samples during successive rounds, primary care appointments for subjects with a positive FOBT and scheduling of colonoscopies were no longer sent. Moreover, subjects were requested not to return kits they still held. Nonetheless, contact could not be established with all subjects, whereby FOBT were collected in health centres. Appointments already scheduled both for primary care and endoscopy units went ahead. Endoscopy associated with the screening programme resumed from 11 to 18 May 2020 in endoscopy units from the seven hospitals taking part. Patients already evaluated in primary care with a FOBT result ≥ 100 $\mu\text{g/g}$ faeces were prioritised and, subsequently, those with a FOBT < 100 $\mu\text{g/g}$ faeces, repetitions due to incomplete or fragmented resections and finally, endoscopy surveillance colonoscopies after adenoma resection. Once the activity pending at closure of the screening programme was completed subjects with positive results were once again called for primary care appointments, endoscopic surveillance and subsequently, recently, kits were sent to subjects for successive rounds of screening.

To guarantee the minimum risk of SARS-CoV-2 transmission associated with endoscopy examination each hospital's own action protocols were defined (9,10). Within the scope of these protocols, a prior telephone questionnaire was included to guarantee that at the time of the appointment subjects had not presented symptoms related to COVID-19 or lived with an active case in the two previous weeks. If the questionnaire was positive, the appointment was delayed and a primary care telephone appointment request was recommended. During this process appointments were delayed for two people because of positive diagnosis of SARS-CoV-2 and one person with direct contact, in addition to the personal preferences of delaying the study for a while. The use of protective masks was required to attend hospitals, prior to the wearing of masks becoming mandatory. Finally, to comply with social distancing in recovery rooms and perform cleaning protocols in rooms in between examinations, activity was reduced by 80% in all health areas until the pending activity was completed. To identify cases associated with endoscopy we periodically crossed screening programme endoscopy with the autonomous database of SARS-CoV-2 infections.

RESULTS

Primary care appointments resumed between 28 May and 1 July 2020 for all health areas. Just as for colonoscopies, living with COVID-19 cases or the existence of any symptoms the two weeks

prior were ruled out on the telephone. This meant a delay of two months for participants with a primary care appointment up until the colonoscopy, three and a half months for those pending a primary care appointment and five and a half months for sending out new invitations. During this process appointments were delayed for two people because of positive diagnosis of SARS-CoV-2 and one person with direct contact with a COVID-19 case, in addition to the personal preferences of delaying the study for a while. Since resumption of GPEDCC activity up to 31 October 2020 a total of 3310 suspended or delayed colonoscopies - 1702 because of a positive FOBT and 1608 because of endoscopy monitoring – were performed. For colonoscopies after a positive FOBT the rate of detection of CRC, low and high risk adenomas was 2.2%, 43.9% and 20.4%, respectively. On the other hand, in surveillance colonoscopies, the rate of detection of CRC, low and high risk adenomas was 0.1%, 22.3% and 34.2%, respectively. Over the same period the previous year (16/03/2019-31/10/2019) a total of 7491 colonoscopies (6269 after a positive FOBT and 1222 because of endoscopy monitoring), were performed. To date, we have not detected any SARS-CoV-2 infection associated with endoscopy. A total of 5785 FOBT already sent are currently pending delivery. Once this delay has been resolved, routine screening activity will be restarted with invitations sent to the population turning 50 and those that did not participate in previous rounds.

DISCUSSION

The experience from the Galician programme confirms that resuming population screening is safe if rules to reduce the risk of SARS-CoV-2 transmission are observed. Therefore, we believe it is necessary to fully restart population programmes, both invitations to the first and successive rounds of screening. Although data indicate that the impact of delays under nine months will be limited in terms of the prevalence and stage of CRC detected within the scope of screening programmes, this time interval should not be exceeded (6). The bottleneck lies in the reduced capacity of endoscopy units to perform examinations and examinations still pending. It will be necessary to implement modifications to priority criteria (11) and indication for examinations (12), first, and organisation of assistance activity, second, to limit the impact on long term CRC incidence and mortality.

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