Letters

Testing for Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2): the case of an accidentally swallowed Rapid Antigen swab

Editor

Oropharyngeal and nasopharyngeal specimens obtained by swabbing are pivotal in both rapid antigen tests and the PCR tests for the diagnosis of acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Self-performed tests are widely available and performed globally. This unique case highlights some unusual risks associated with self -performed testing kits and challenges that can be faced with managing these patients in the medical setting.

A 14 year old boy was referred to General Surgeons having accidently swallowed a self-performed Rapid antigen COVID-19 testing nasopharyngeal swab. He presented with no symptoms; denied any abdominal pain or difficulties breathing. His observations were within normal range.

Radiological options for determining position were limited due to the swallowed swab being made entirely of plastic and non-radio-opaque. Conservative watchful waiting was considered and discarded as an option due to risks of perforation. An urgent OGD was considered the most appropriate diagnostic and therapeutic option and consent was obtained.

An urgent OGD was performed with the intention to locate and retrieve the swab. The presence of the swab was confirmed in the third part of the duodenum and retrieved at the maximum reach of the endoscope (see figure 1). The patient had remained clinically stable following the procedure and was discharged home that same day. He required no further follow up but had to isolate having tested positive for SARS-CoV-2.

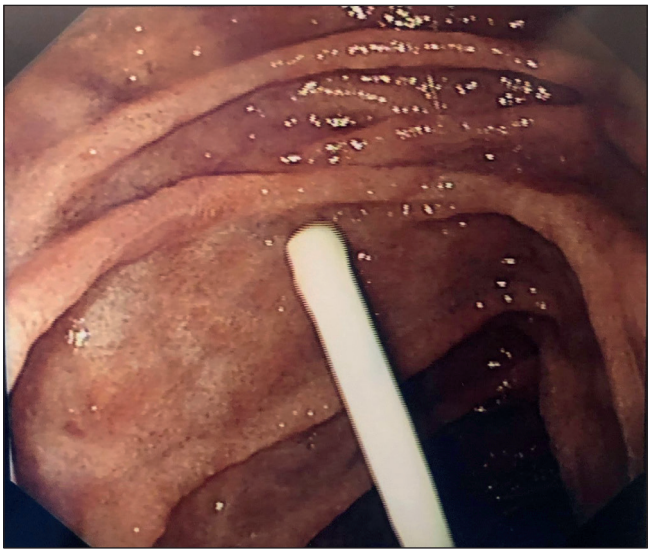

Figure 1: Endoscopic image showing the ingested swab in the 3rd part of the duodenum.

There is limited literature regarding the SARS-CoV-2 sampling complications [1]. A case study by Molnár et al. (2021) explored the management of a 45 year old male patient who had ingested a 15cm swab, similar to this case, with retrieval achieved via endoscopy in Budapest [2]. Other complications highlighted from previous cases studies involved breakage of the swab tip; leading to a foreign body in the nasal cavity, the oesophagus [3] and in the bronchus following sampling through a tracheostomy [4]. The length of Rapid antigen test swab in this case was approximately 8cm compared to the usual length of 15cm specimen samples mainly distributed for testing.

Through the pages of your Journal, we wish to emphasise:

- Correct sampling technique is crucial to avoid false negative test results and further spread of the SARS-CoV-2 virus [5].
- Education in correct technique for completing self-performed tests is one method to reduce complication rates. Knowledge regarding differences between nasopharyngeal and oropharyngeal swabs would also provide benefit.
- The significance of reading and following instructions enclosed in every test pack should be reinforced to the public. This education should also form part of the vaccination and self-testing media campaigns.

Challenges faced in this case included limited imaging methods that could identify the location of the swab prior to performing the OGD. If the swab was labelled with a radiopaque material, the location could have been identified sooner and an appropriate management plan targeted. This would be a useful consideration to the future design of swabs to reduce serious complications requiring further extensive surgery if left to advance beyond the duodenum.

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