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CORRESPONDENCE

A fractured nasopharyngeal swab in the duodenum of a toddler: an unusual complication of preoperative COVID-19 testing

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To the Editor,

The first COVID-19 case in Turkey was reported in March 2020 and approximately 35 million diagnostic tests have been performed since then.[1] All patients scheduled for elective surgery are recommended to undergo COVID-19 testing before their procedures.[2] We report on a case of an inadvertent fracture of a nasopharyngeal swab (NPS) in a toddler as an unusual complication of preoperative COVID-19 testing. The legal guardians of the patient provided written consent for this report.

A 22-month-old female patient was scheduled for neuroblastoma excision. According to our hospital policy, a COVID-19 swab test was performed preoperatively. During the test, the NPS (Bio-Speedy COVID-19 RT-qPCR Detection Kit; Bioeksen, Istanbul, Turkey) fractured because the patient moved suddenly, resulting in the lodgement of approximately 5 cm of the swab stick in the nasopharynx. The piece could not be visualized with plain sight or on *x-ray*, and there was no clinical deterioration related to aspiration into the upper airways, for which there was no evidence on chest *x-ray* (Figure 1, panel A). Since the patient exhibited no signs of intestinal obstruction and her surgical intervention was scheduled to be performed within a few days, an exploratory upper gastrointestinal tract endoscopy was planned for the same session. An esophagogastroduodenoscopy procedure was performed after anesthetic induction followed by endotracheal intubation with an uncuffed tube (internal diameter, 4.5 mm). The NPS fragment was identified in the duodenum and gently retrieved with alligator endoscopic forceps (Figure, panel B; eVideo in the Electronic Supplementary Material). There was no mucosal injury. The scheduled surgical procedure was performed subsequently; after approximately six hours of surgery, the patient was extubated and transferred to the intensive care unit.

As NPS tests, which have been used for the diagnosis of viral infections for a long time, have become widely used in the COVID-19 pandemic, some complications related to their use have been reported, including accidental fracture in adults.[3,4] We are unaware of reports of serious complications, and NPSs are still considered to be safe.

Our institution uses the same COVID-19 RT-qPCR Detection Kit in both pediatric and adult patients. Since pediatric patients may not cooperate and often move during the test as did our patient, healthcare providers should be experienced and trained to hold infants and children securely during these sample collection procedures. Alternative COVID-19 diagnostic test modalities such as saliva and nasopharyngeal aspirates may be considered[5]; however, saliva or saline swish and gargle samples are not suitable for patients under five years of age because of cooperation difficulties. Nasopharyngeal aspirates are also not recommended because of increased risk of COVID-19 transmission.

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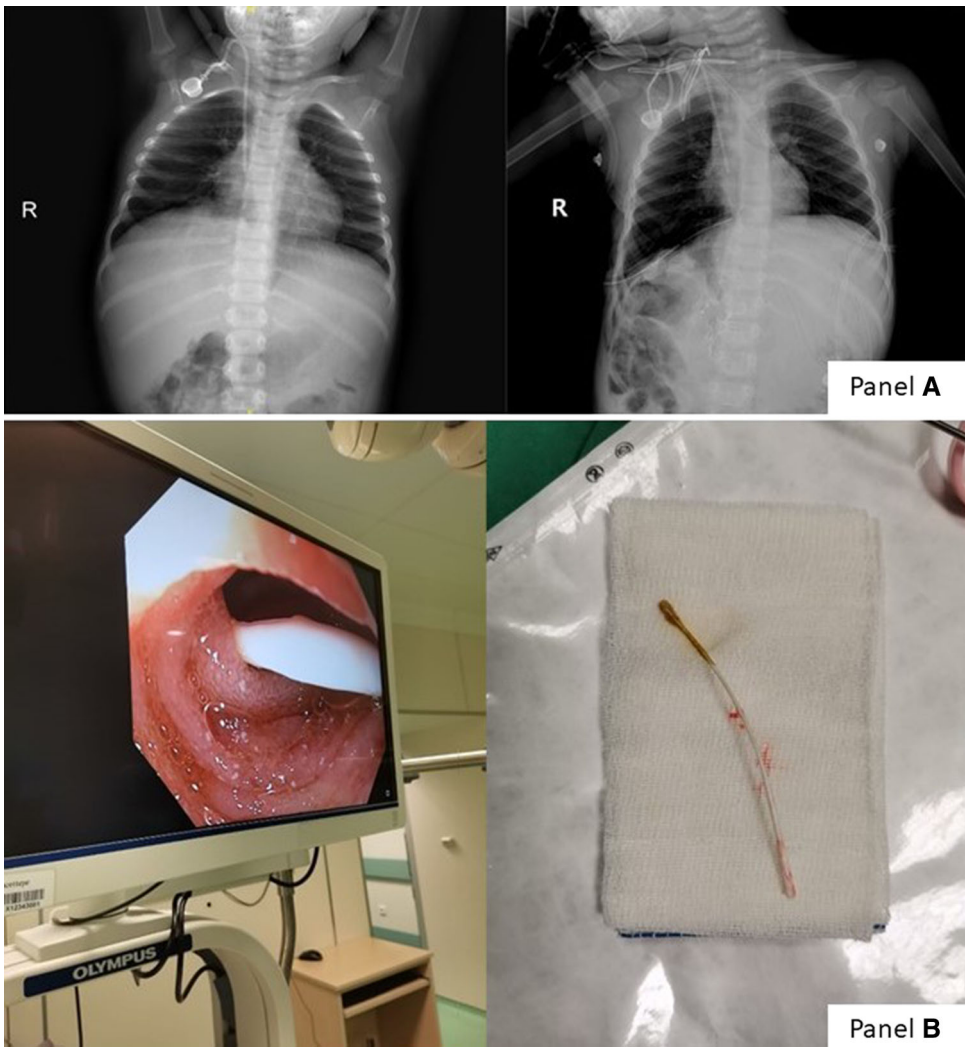

FIGURE 1 Panel A) No fractured nasopharyngeal swab (NPS) was visible in daily preoperative *x-rays* of the patient taken after the test. Panel B) Fractured NPS piece identified in the duodenum via esophagogastroduodenoscopy (left) and following uneventful retrieval (right)

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