

Transient parotitis after upper gastrointestinal endoscopy



Fig. 1 **a** Right parotid enlargement in a 12-year-old boy with epilepsy and recurrent abdominal pain, who underwent endoscopy without topical anesthesia. **b** Facial view reveals bilateral parotid enlargement: the right is much more enlarged than the left side.

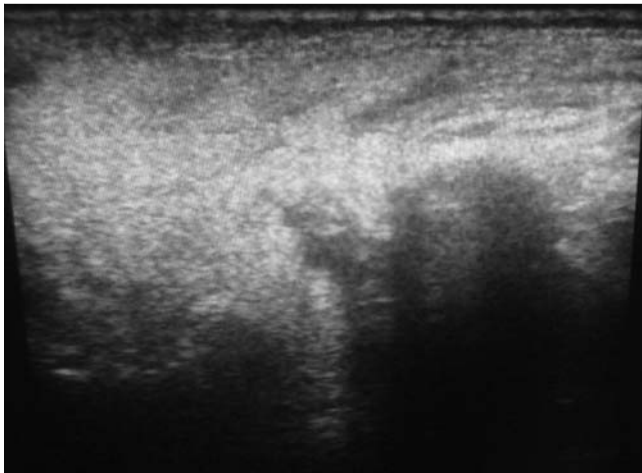


Fig. 2 Ultrasound view of the edematous right parotid.

A 12-year-old boy with epilepsy was referred for recurrent abdominal pain of 2 months duration and underwent endoscopy without conscious sedation. The patient strained a little during the procedure and antral gastritis was detected. After 2 minutes of having the procedure, he developed swelling of the right parotid gland (● Fig. 1). On examination, he had bilateral nontender, noncrepitant parotid enlargement without excess salivation, and gingival hyperplasia (phenytoin-induced) but was otherwise clinically normal. Ultrasound showed an edematous right parotid gland (● Fig. 2); the left parotid was normal and the swelling

on the right side subsided within 30 minutes.

Transient parotid enlargement is a rare complication of endoscopy [1], bronchoscopy [2], and endotracheal intubation [3, 4]. It may manifest unilaterally or bilaterally. In our patient, we initially suspected trauma during esophagoscopy, this was excluded on palpation of the glands and confirmed on ultrasound. The development mechanism of this complication is not fully understood. Various causes have been proposed such as anticholinergics, neuromuscular blockers, and coughing. Matsuki et al. (1975) suggested that coughing and straining leads to venous

congestion and salivary gland enlargement [4,5]. Couper hypothesized that head manipulation leads to obstruction of thoracic inlet, which further leads to parotid congestion [6]. Wakayama et al. postulated obstruction of the salivary ducts [7,8], but this is unlikely to be a cause. Bonchek [3] and Strowbridge [9] considered a reflex arc, with an afferent stimulus from the tongue and oropharynx and efferent impulses through the glossopharyngeal nerve (parasympathetic) leading to vasodilatation and hyperemia. The main secretory parasympathetic innervation of the submandibular and sublingual glands comes from the salivary nucleus via the facial nerve, chorda tympani, and lingual nerve, and via the glossopharyngeal nerve to the parotids, which is not blocked by atropine.

Distension of the esophagus is a potent stimulus of salivation, as is chronic irritation [10], producing a greater response on the stimulated side but there is some effect on the opposite side too. Even if the stimuli on both sides are equal, the response may be stronger on one side than the other, explaining the asymmetrical parotid swelling in our patient. In summary, salivary gland enlargement is a rare complication of endoscopy that does not require specific medical management.

Endoscopy_UCTN_Code_CPL_1AH_2AJ

Competing interests: None

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DOI <http://dx.doi.org/10.1055/s-0033-1344775>
Endoscopy 2013; 45: E424–E425
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

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