

Transient Unilateral Parotid Gland Swelling Following Upper Endoscopy

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Received

1st April 2020

Received in revised form

22nd May 2020

Accepted

9th June 2020

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ABSTRACT

Transient parotid gland swelling could happen as complication after per oral endoscopy or intubation. We reported a 53-year-old man who developed transient unilateral parotid gland swelling following esophagogastroduodenoscopy (OGDS) with dilatation of achalasia cardia. The swelling of the parotid gland was transient and resolved completely without any intervention.

KEYWORDS: Anaesthesia mumps; Esophagogastroduodenoscopy; Parotitis

INTRODUCTION

Swelling of salivary glands is a rare complication that happen post per oral endoscopy [1]. This can happen as a complication following general anaesthesia (GA), especially for those who had undergone the anaesthesia for a long time, and it is known as “anaesthesia mumps” [2, 3]. The swelling could involve the parotid gland, submaxillary or submandibular gland, and it is usually transient in nature, with complete resolution within hours [4, 5].

CASE PRESENTATION

A 53-year-old man with history of achalasia cardia, was admitted for esophagogastroduodenoscopy (OGDS) with balloon dilatation. Further history, he presented with progressive dysphagia and persistent vomiting a few years ago, and he was confirmed to have achalasia cardia type 1. He had been regularly visiting our hospital for sessions of endoscopic dilatation for the

achalasia cardia, and this would have been the third procedure of balloon dilatation. The patient was kept fasted with adequate intravenous fluid overnight. He underwent OGDS under sedation of oropharynx spray, together with midazolam 2.5mg and fentanyl 25mcg intravenously. He was kept in the left lateral position. A dilated oesophagus with retained food and a puckered gastroesophageal junction was noted. The dilatation was performed successfully with controlled radial expansion (CRE) balloon dilator till 30mm for 1 minute. The patient did not have any event of cough or retching during the procedure. The procedure took about ten minutes, and it was uneventful. After the completion of the procedure, scope was withdrawn. About ten minutes after the procedure, the patient complained of a painless swelling of right jaw in front of the ear. He denied any difficulty or pain in swallowing. The patient remained clinically stable and his oxygen saturation was 100% on room air. A firm mass of 4cm in size, globular shape, with no erythema or tenderness was palpated in right



parotid gland (Figure 1). He found mild limitation of the opening of his mouth due to stiffness of the right temporomandibular joint. Otherwise, no crepitus was felt. Clinically, he had no facial nerve palsy. There was no bleeding from the mouth. Flexible nasopharyngolaryngoscopy had been performed showing normal supraglottic structures with no medialisation. Further questioning, he denied any history of parotid mass or salivary gland calculi, or any autoimmune disorder. He denied previous symptoms of dry mouth or decreased salivation as well. He denied excessive alcohol drinking. There was no recent complaint of parotitis among his family members. The patient was kept overnight for observation. The swelling started decreasing in size and then completely disappeared the next morning (Figure 2). There was no documented fever, or elevated white cell count. The patient was discharged well the next day.



Figure 1: Swelling of right parotid gland - A firm mass of 4 cm in size, globular shape, with no erythema or tenderness



Figure 2: Complete resolution of the parotid gland swelling.

DISCUSSION

Parotid swelling post oral endoscopy or endotracheal intubation for GA is rarely reported. The actual aetiology remains obscure, but different hypothesized aetiologies have been proposed. Adverse drug reaction especially to anaesthetic agents had been proposed as the factor. However, the anaesthetic agent which was used in our patient, fentanyl has been shown to depress rather than stimulate salivation. There is thought to be an association with the coughing and retching during the procedure which lead to venous congestion together with the swelling of the salivary glands [6], but our patient did not have cough or retching throughout the procedure. Some authors have suggested that dehydration prior to the procedure may play a role in causing thick secretion and further predispose blockage of the salivary ducts. This was unlikely in our case as he was well hydrated prior to the procedure. Parasympathetic stimulation of the salivary glands is

thought to cause vasodilatation and hyperaemia [7, 8]. The head manipulation and prolonged endoscopy procedure are considered as risk factor. In our case, the procedure lasted only ten minutes which was considered a short duration. However, we believed that the dilatation instrumentation may stimulate an unusually powerful reflex arc resulting in hyperaemia of the glands during the procedure.

Further imaging such as ultrasonography (US), radio-isotope scanning, computed tomography, and magnetic resonance imaging should be performed to rule out other aetiology of abscess/calcifications and ductal calculi, if the swelling persisted. Observation with reassurance of its transient and benign nature was adequate for the patient. Antibiotics could be initiated to prevent secondary infection especially if the swelling persisted for a longer duration, or if the patient developed fever.

CONCLUSION

Salivary gland complication with transient gland swelling is a benign and self-limiting complication after upper endoscopy or endotracheal intubation. It is important for the endoscopists to be aware of this rare event, in order to avoid unnecessary anxiety and investigations.

Conflict of Interest

Authors declare none.

Acknowledgements

The authors would like to thank the patient for allowing us to share his details, including photos.

Author's contribution

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Role: Endoscopist/Consultant Gastroenterologist, manuscript drafting and editing, final review/revision, supervision.

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Role: Data collection, images, manuscript drafting, references.

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