Case report

Oropharyngeal dysphagia due to I-gel supraglottic airway (SGA).
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Abstract

Oropharyngeal dysphagia (OD) can be presented with signs of aspiration, voice changes, chest infections, malnutrition, etc. Early identification of this condition will help to initiate the definitive management without delay. A multidisciplinary approach is essential, and ENT, speech, and language therapy (SALT) teams play vital roles. There are multiple causes for OD. Herein, we present a patient who had OD during the immediate postoperative period as a complication of I-gel supraglottic airway which was kept in situ for seven hours for a vascular procedure.

Keywords: Igel, oropharyngeal dysphagia, Nasal endoscopy, video fluoroscopy, speech and language therapy, Supraglottic airway.

Introduction

Igel is a second-generation supraglottic airway. It is commonly used to maintain the airway in general anesthesia both spontaneous and intermittent positive pressure ventilation. It is used for emergency medicine and difficult airway management as it is easy to use, reliable, has high airway seal pressures, and gastric channel to protect from aspiration. It can cause trauma to the upper airway rarely.

Case history

He was a 73-year-old ASA 2 patient with well-controlled hypertension and Type 2 DM. He had basal ganglia stroke a few years back and
Oropharyngeal dysphagia due to I-gel supraglottic airway recovered without neurological deficits. One year back, he had an anterior resection done for bowel cancer. He presented with sudden onset right leg discomfort and pain. CT angiogram revealed that right iliac artery stenosis with occluded blood flow in Superficial femoral artery (SFA) and popliteal artery with a thrombus. He underwent right Iliac and infra popliteal angioplasty, iliac kissing stents, and SFA thrombectomy. He had general anesthesia with Propofol and Remifentanil. The airway was managed with size 5 Igel ( >90kg body weight). I-gel was properly lubricated, and insertion was not difficult. He had fascia iliaca block and Popliteal block. Intervention time was unexpectantly seven hours. He was admitted to the High dependency unit (HDU) for close observation. He experienced aspiration while drinking and had a voice change. Flexible endoscopy was done by the ENT team. It showed normal vocal cords, no saliva aspiration, and a small traumatic ulcer on the posterior pharyngeal wall (figure 1). The patient was seen by the Speech and Language Therapy Team (SALT). He underwent videofluoroscopy (VFS) and trialed level 0 (thin) to level 7(regular) meals. Their preliminary findings were mistiming airway closure, incomplete epiglottic deflection ( due to oedematous pharynx), and reduced pharyngeal sensation. Reduced Piriformis sinus space was noted. Aspiration happened on all food consistencies. (Figure 2).SALT recommended management strategies and those were implemented. The patient was removed from the high-risk pathway and discharged to home after planning telephone reviews.
Discussion

NAP4 survey in the UK was undertaken to provide an estimate of number of General anesthetic (GA) cases happening per year in NHS hospitals and airway techniques used. It estimated that 2.9 million patients had GA s and supraglottic airway use was 56% and 38% cases were intubated. Supraglottic airway devices are becoming more popular.

I-gel was introduced into the clinical practice in the United Kingdom in 2007. It is made up of gel like thermoplastic elastomer. It has the potential advantage of easy insertion, stability, and minimal risk of tissue compression. Richez B et al carried out one of the first studies to evaluate I-gel and it revealed that it was successful in 97% cases and all I-gel insertions had happened in the first attempt and had been easy. I-gel can be used to maintain the airway during General anesthesia provided surgical time is not very long. There are case reports of prolonged use of I-gel for ventilation. One intensive care patient had positive pressure ventilation while on I-gel for 48 hours. It did not comment on the upper airway soft tissue injury as patient died. NAP4 survey (phase 2) identified 33 events of complications due to SGAs. They were gastric content aspirations, nerve injury, loss of airway, failed insertion, displacement, and trauma. Common areas of trauma were lip, pharynx, tongue, uvula and epiglottis. Causes for pharyngeal trauma were forceful insertion, inadequate lubricants or prolonged insertion.

Oropharyngeal dysphagia (OD) can be characterized by difficulty in initiating swallowing and difficulty in transferring food from oral cavity to oesophagus. There are multiple causes such as neurological conditions, neurodegenerative conditions,
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Cancers, muscular disorder, tonsillar ulcers and some medications. Patients can have serious consequences due to OD such as malnutrition and chest infections. VFS, is also known as modified barium swallow, is the most widely used test to diagnose OD. In this case, the patient had a pharyngeal ulcer due to the pressure caused by the I-gel. Initially, the expected surgical time was 2 to 3 hours but, it was gradually extended and went up to 7 hours. That is not unusual in Interventional Radiology Theatres. According to the I-gel user guide, it cannot be kept in situ for more than 04 hours. As there were no intraoperative airway complications I-gel was not replaced with endotracheal tube (ETT). In the HDU, the Patient was investigated for sore throat, voice change, and aspirations. Oropharyngeal Dysphagia was diagnosed and the cause was identified without delay before encountering serious complications of OD.

References


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