An unfortunate incident of a surgical swab left in the sphenoid sinus for eight years

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Abstract

Retained foreign bodies are foreign materials which are left accidentally inside a patient's body after a procedure. In this report we present the case of a 57 year old man who presented to the ENT clinic with a history of symptoms stretching over 8 years back to when he underwent a hypophysectomy through the transsphenoidal approach. These symptoms included cacosmia, ageusia, altered taste at times, foul smelling discharge, nasal discharge and dizziness. He had undergone multiple radiological examinations as well as antibiotic courses. It was only after the examination of the nose under general anaesthesia, conducted by the corresponding author that a swab was found in the sphenoid sinus which was left behind from his surgery 8 years ago. Cases of retained foreign bodies are very rare and are easily preventable. This case highlights the importance of adherence to health and safety protocols to prevent such an avoidable complication.

Keywords: Retained foreign bodies, complication, safety checklist.

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Introduction

Retained foreign bodies (RFBs) are a surgical complication resulting from foreign materials accidentally left in a patient's body after a procedure [1]. Cases of RFBs occur approximately in 1:5500 surgeries,[2] which have been published in literature. Leaving iatrogenic foreign bodies behind is widely considered to be a "never event"[3]. Patients with RFBs are vulnerable to immune system responses such as inflammation, sepsis, obstruction and abscesses[4]. It is of paramount importance that healthcare professionals should be aware of the occurrence of such instances so that adherence to safety protocols is strengthened further.

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Case report

A 57-year-old male patient was presented to the otorhinolaryngology outpatient department at Northwest General Hospital and research center, Peshawar, KP on 5th August 2021, with presenting complaints of cacosmia accompanied with foul smelling discharge from the nose and mouth for past 4 months, the severe stench coupled with congestion would make the patient feel nauseous at times. Complaints of intermittent loss of appetite and ageusia with a taste sensation to only chilly foods were also made. The patient also had a history, stretching back almost 8 years of recurrent sinusitis and pressure headache. These symptoms however developed a few months after he had undergone a hypophysectomy through transsphenoidal approach for a Pituitary Macroadenoma, at a tertiary care hospital (Figure1). Previous physical examinations determined that there was a septal perforation and adhesion in the right nostril below the vestibule and on endoscopy he had a mucopurulent discharge running down from the sphenoid sinus and mucopurulent strings movable with the endoscope near the sphenoid sinus. Initially he was managed conservatively and was prescribed antibiotic courses including drugs such as Amoxicillin, moxifloxacin, clarithromycin and gatifloxacin which had no effect at all. Gamma radiation was also advised, citing a possibility of recurrence when no

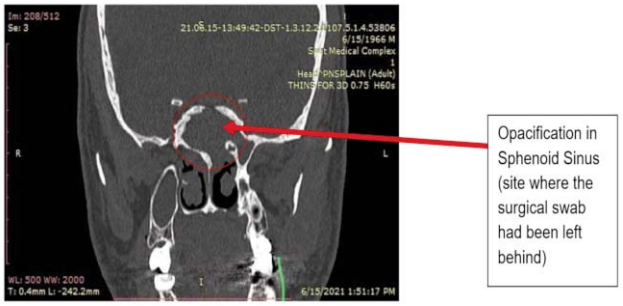

Figure-1(a): Pre op Coronal plane CT scan showing opacification of the sphenoid sinus.

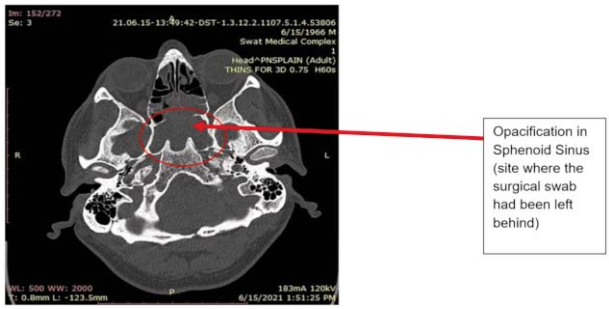

Figure-1(b): Pre op Axial plane CT scan showing opacification of the sphenoid sinus.

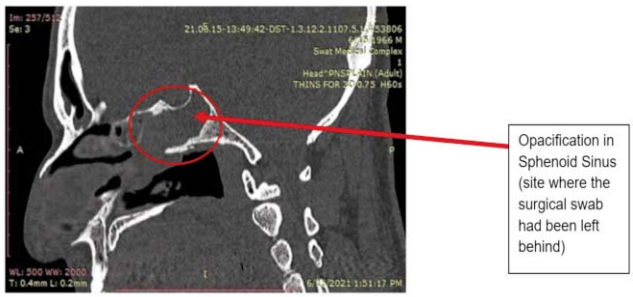

Figure-1(c): Pre op Sagittal view CT scan showing opacification of the sphenoid sinus.

improvement in symptoms were noted. Anti-allergic pills, nasal decongestants and steroid nasal sprays would only give symptomatic relief.

The latest CT scan suggested that the sinus cavity was completely opacified by a soft tissue attenuating area associated with an internal hyper density concerning chronic intersected secretions/fungal infection. Post-surgical defects in the roof and floor of the sphenoid sinus were also present (Figure 1 a,b,c). Based on the duration of the symptoms he was advised an endoscopic nasal examination under general anaesthesia. Bearing in mind the patient had a hypophysectomy in the past; the neurosurgical team was made aware of the planned procedure. After nasal preparation and re-examination of the right nostril it was found that the nasal congestion and inflammation around the ethmoids and sphenoids

Figure-2: Removed partially degraded swab material from the sphenoid sinus.

was in fact due to a swab left behind in the sphenoid sinus during the primary surgery (Figure 2). The sphenoid sinus was full of granulation tissue which was cleared with a micro debrider. The patient was discharged the next day after the nasal pack was removed. He did have an episode of nosebleed post operatively which required temporary nasal packs. However, after that the patient recovered well and has been asymptomatic since.

Discussion

Retained foreign bodies although very uncommon are still encountered. They are considered as "never events" which mean that they are preventable if proper safety protocols are followed [3]. The probability of retention of a foreign body is highest in abdominal, gynaecologic, vascular, and urologic procedures [5]. These cases can also manifest due to a lack of coordination between medical staff during such surgical procedures [6]. In this case the surgeon along with his team of medical professionals were unaware that there was a missing gauze in the mandatory recount of surgical instruments/sponges that is done before, during and after every surgery; the complexity of the anatomical structures surrounding the sphenoid sinus and the potential long term harm it could have caused the patient. Zero tolerance to such types of medical mishaps should be of high priority to health policy makers and the medical community not only due to medicolegal issues but also having high regards of the patients' health in mind. According to the WHO surgical safety checklist 2009, the scrub or circulating nurse should verbally confirm the completeness of final sponge and needle counts[7]. Specific measures to mitigate against retention of foreign bodies should be researched upon and evaluated to provide a meaningful foundation for future patient safety initiatives[8].

Conclusion

Cases of retained foreign bodies are very rare but still do occur. As in this case we found that standard checklists alone were not sufficient in ensuring that a swab was removed from the patients' sphenoid sinus before the end of his surgical procedure. A few months after the initial procedure, the patient started having recurrent bouts of sinusitis and pressure headaches for which he was treated, however his symptoms would not resolve therefore we need to keep the possibility of a retained foreign body in mind when treating patients with post-surgical chronic symptoms. Moreover new techniques and safety protocols should be researched that ensures the prevention of retained foreign bodies.

Consent: Consent was provided by the patient.

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Conflict of Interest: None.

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