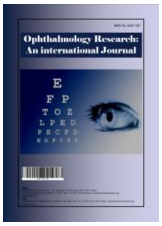

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A Sino-orbitocutaneous Fistula from Local (Native) Tonsillectomy: A Case Report

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Authors' contributions

This work was carried out in collaboration among all authors. Authors NEC and MII designed the study. Author NEC wrote the protocol and the first draft of the manuscript. Authors NEC, MII and EOE managed the literature searches. All authors read and approved the final manuscript.

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Case Report

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ABSTRACT

Background: Orbitocutaneous fistula is a known complication of orbital exenteration. Orbitocutaneous fistula arising from a tonsillectomy are quite uncommon. Risk factors for fistula development are sinus diseases, radiotherapy, inadvertent sinus penetration during mid-face and other related surgeries.
Case Report: MS is a 16-year-old girl who presented with swelling of the right side of the face and neck of ten days duration following local tonsillectomy at home. Ocular examination findings showed lid swelling, ecchymosis, pus point in the medial third of the upper lid of the right eye which gave way and formed a sinus tract with the commencement of antibiotics.
Discussion: Although orbitosinocutaneous fistula is uncommon with tonsillectomy however fistulae may develop following poorly performed procedure by a non-professional who may tamper with the sinuses in the course of surgery. Since asepsis was not observed, there may have also been upward track of infection to the orbit.
Conclusion: Orbitosinocutaneous fistula could be a complication of poorly performed tonsillectomy.

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Keywords: Orbitocutaneous fistula; tonsillectomy; radiotherapy.

1. INTRODUCTION

Sino-orbitocutaneous fistula is a known complication of orbital exenteration and sinonasal carcinoma resection [1,2]. It could also be a challenging complication of midface and orbital resection and reconstruction. [1] They could lead to functional and cosmetic problems such as malodorous discharge, pain, crusting, further wound breakdown, difficulty with nose-blowing, hypernasal speech, or inability to wear an orbital prosthesis [3,2,4].

Risk factors that may contribute to fistula formation include radiotherapy, sinus disease, intraoperative penetration into a sinus and immunocompromise [5].

Dead space from either native or resected sinus cavities may leave patients at risk for fistula. For instance, resection of the ethmoid sinuses and medial orbital wall allows communication of the sinonasal cavity with the skin incision especially when the nasal or medial lid skin is resected. [1]Furthermore, radiation or wound complications can produce defects predisposed to breakdown, which can lead to fistula formation [1].

Management of fistulas varies depending on the size and location of the defect [6]. Occasionally, small fistulas may spontaneously heal or remain minimally symptomatic, but most fistulas persist and require surgical repair [7,8].

Closure of fistulas is indicated if bothersome symptoms develop. Since local tissues may be disturbed after midface resection and orbital exenteration, repair of these fistulas can be difficult, however, to prevent a recurrence, a minimum two-layered closure is an essential reconstructive requirement [3].

2. CASE REPORT

MS is a 16-year-old girl who presented with a ten-day history of swelling in the right side of the face and neck. This followed a local(native) tonsillectomy with subsequent in-take of hot drink at home. Tonsillectomy was done following a prior three-day history of cough and breathlessness. Examination findings at presentation revealed she had lost vision in the right eye. The lid had complete mechanical ptosis, ecchymosis, pus point in the medial third of the upper eyelid and matted lashes. Other findings were redness of the eye, purulent eye discharge, corneal melting and hazy media in an eye undergoing phthisis. The left eye was normal.

There was also firm swelling over the parotid region extending from the pre-auricular region to the left lower jaw. This was hyperaemic, tender with differential warmth. There was also enlarged submandibular lymphadenopathy.

The oropharynx findings were moist oral mucosa with distal oedematous tongue and drooling foul-smelling secretion. The tonsils could not be properly assessed due to pain and inadequate mouth opening.

An initial assessment of acute rhinosinusitis complicated by orbital cellulitis was made. The patient was commenced on conservative management with both systemic and topical antibiotics, keeping in view the need for evisceration. She also had daily wound dressing with topical Tobramycin.

A few days later, the pus point gave way with purulent discharge leaving an eventual sinus tract. A diagnosis of sino-orbitocutaneous fistula was made. The eye became cleaner with treatment and gradually went phthisical. Sinus closure surgery was deferred when the sinus tract gradually healed by granulation tissue as seen in Fig. 1.

3. DISCUSSION

Orbitosinucutaneous fistula is a well-known complication of evisceration especially when the sinus is tampered in the course of surgery. Orbitosinus fistulae from a tonsillectomy are rare to none, however, in this case, the sinuses may have been tampered with, in the course of tonsillectomy bearing in mind that this procedure was carried out by a non-professional who might not be acquainted with the anatomical landmarks. Sinus disease itself has been observed to be a risk factor in fistula formation [5]. Dead space from either native or resected sinus cavities may also leave patients at risk for fistula [1]. Furthermore, since asepsis was not observed in this procedure, this increases the likelihood for the upward track of infection from the sinuses to the orbit.

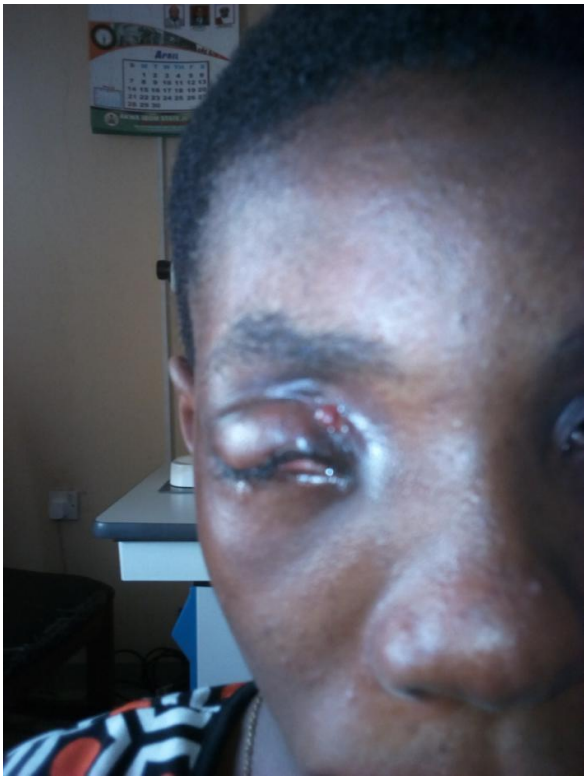

Fig. 1. Shows healed orbitosinocutaneous fistula

Vision loss could have been from raised intra-orbital pressure with compression of the orbital component of the optic nerve. Although patient denied use of harmful traditional eye medication which could have resulted in corneal melting and phthisis, this remains a likely cause.

There have been several reports on modalities for the closure of orbitosinus fistulae but closure was suspended in this case when we observed healing with granulation tissue. This has also been recommended especially for small-sized fistula [7].

4. CONCLUSION

Orbitosinocutaneous fistula could be a complication of poorly performed tonsillectomy.

5. RECOMMENDATION

Patients should be counseled and discouraged from visiting non-professionals to manage cases of tonsilitis which is a common practice among natives and also surgeons should look out for the signs presented in this patient which could be complications arising from tonsillectomy.

6. LIMITATIONS

The patient was unable to fully carry out the investigations that could have been quite helpful in elucidating most of our suspicion.

CONSENT AND ETHICAL APPROVAL

As per international standard guideline, participant consent and ethical approval has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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