

Rare post-tonsillectomy complication in human immunodeficiency virus positive patient: ulcero-necrotic lesion of tonsillar fossa

P K SINGH, A MASOOD, O P CHAWLA

Abstract

Objective: Post-tonsillectomy complications are common. The majority are easily recognised because of their frequent occurrence and can be managed as required. Infrequent complications may be misdiagnosed or managed inappropriately. We present a previously unreported complication of tonsillectomy.

Case report: A 45-year-old Afro-Caribbean man underwent routine tonsillectomy. Eight weeks post-operatively, he developed an ulcero-necrotic lesion of the tonsillar fossa. Subsequent investigation revealed that he was human immunodeficiency virus positive. It is highly likely that the patient's underlying immuno-compromised state, secondary to human immunodeficiency virus infection, contributed to this ulcero-necrotic lesion.

Conclusions: This case highlights the importance of clinician awareness of rare complications of tonsillectomy, in order to facilitate identification and appropriate investigation.

Key words: Tonsillectomy; Postoperative Complications; HIV

Introduction

Post-tonsillectomy complications arise commonly. The majority are easily recognised because of their frequent occurrence. Infrequent complications may be misdiagnosed, resulting in delayed or inappropriate management. We present a previously unreported case of an ulcero-necrotic lesion of the tonsillar fossa developing as a post-operative complication of tonsillectomy.

Case report

A 45-year-old Afro-Caribbean man underwent routine tonsillectomy at Luton and Dunstable Hospital. He had been suffering from recurrent sore throats since childhood. He had been having three to four episodes of severe tonsillitis every year, which had been affecting his work and quality of life. He had no known significant past medical history, there was no recent change in his symptoms and he had not experienced any weight loss.

Tonsillectomy was performed by 'cold steel' dissection, and haemostasis was achieved using ties and diathermy. Early post-operative recovery was uneventful, and the patient was discharged the day after surgery as planned.

Subsequently, the patient presented to the emergency department twice, at five days and four weeks post-operatively, with persistent throat pain and odynophagia to solids and liquids. There was no history of nasal regurgitation. Examination of the oropharynx showed slough-covered tonsillar fossae, as expected following tonsillectomy. The patient was discharged on both occasions with increased analgesia.

At eight weeks post-operatively, the patient again presented with worsening of his symptoms, resulting in an 8 kg weight loss since his operation. He was admitted to hospital for further evaluation and management.

Examination showed an ulcero-necrotic lesion of the right posterior tonsillar pillar with surrounding white debris.

Routine haematological and microbiological investigations were requested, and the patient was empirically commenced on intravenous cefuroxime and metronidazole, along with analgesics, topical anaesthetic rinse and oral nutritional supplements. The full blood count and renal function tests were normal. The erythrocyte sedimentation rate was elevated, at 55 mm/hr, and the C-reactive protein level was elevated at 79 mg/L. Blood culture was negative, but analysis of a throat swab showed a heavy growth of *Candida albicans*. Hence, topical anti-fungal treatment was added to the patient's regime.

The patient failed to show any response to treatment; in fact, the ulcero-necrotic lesion continued to extend so as to involve both tonsillar pillars (anterior and posterior), the right tonsillar fossa and the right half of the soft palate (Figure 1). In view of the atypical presentation and the very rare findings post-tonsillectomy, it was suspected that the patient may have an underlying immuno-compromised state. He denied any risk factors and was initially reluctant to undergo testing for human immunodeficiency virus (HIV). However, following counselling he agreed to have the test. His autoimmune screen was negative but his HIV test was confirmed as positive.

The patient was commenced on systemic anti-fungal treatment and was referred to the genito-urinary medicine

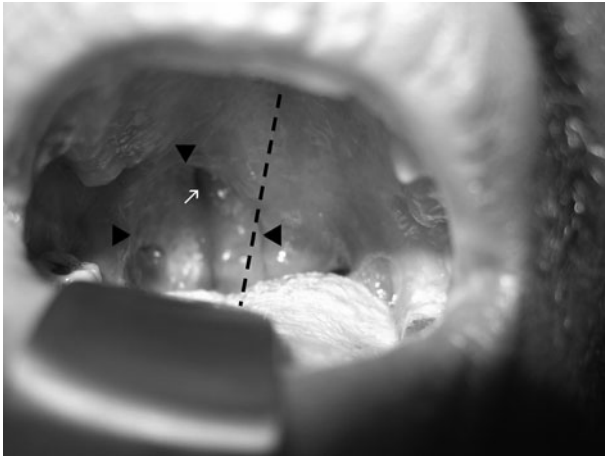


FIG. 1

Clinical photograph showing the extent of the ulcero-necrotic lesion. The right tonsillar pillars, right half of the soft palate and the uvula have been eroded. Black arrowheads point to the margins of the lesion. The white arrow demonstrates the right eustachian tube opening on the postero-lateral pharyngeal wall. The dashed line indicates the mid-line.

specialist. He was found to have evidence of immune deficiency, with a very low cluster of differentiation four glycoprotein count of 74 cells/cm³ (normal range, 400–1500 cells/cm³) and a high viral load (of 1 427 923 copies/ml). He was commenced on anti-retroviral treatment consisting of Kivexa[®] (abacavir 600 mg plus lamivudine 300 mg; GSK (GlaxoSmithKline), Uxbridge, UK), one tablet daily, and Kaletra[®] (lopinavir 133.3 mg plus ritonavir 33.3 mg; Abbott, Maidenhead, UK), two tablets twice daily. His additional medication comprised fluconazole for oral candidiasis, co-trimoxazole forte as prophylaxis against *Pneumocystis carinii* pneumonia and aciclovir as suppressive treatment for herpes infection.

After the patient's discharge from hospital and commencement of anti-retroviral treatment, his odynophagia improved significantly. A month later, he was managing to eat solid food without much pain in his throat. On examination, his oropharyngeal defect had healed well, with no residual ulceration present.

Discussion

Tonsillectomy is a common procedure performed in ENT departments. The commonest complication is post-operative haemorrhage (primary or secondary). Other common complications include dental trauma, odynophagia, otalgia, throat infection, nausea and vomiting.¹ Unusual complications are mentioned in the literature mostly as case reports. A systematic review of unusual tonsillectomy complications by Leong *et al.* identified a number of rare complications, including surgical subcutaneous emphysema, neurovascular injury, jugular vein thrombosis, Grisel syndrome (atlanto-axial joint subluxation) and cervical necrotising fasciitis.²

Oropharyngeal manifestations of HIV include pharyngitis, oropharyngeal candidiasis, infective periodontal disease, herpes zoster, non-Hodgkin's lymphoma, Kaposi's sarcoma lesions, xerostomia and recurrent aphthous ulceration.^{3,4} Ulcero-necrotic oral mucosal lesions are seen in the sublingual region and tongue, and typically manifest with pain, dysgeusia, dysphagia and dysarthria.⁵

Pharyngitis, including sore throat, throat pain and tonsillitis, is a common presenting symptom in more than 25 per

cent of patients with a diagnosis of primary HIV infection.⁶ Coco and Kleinhans found the prevalence of primary HIV infection to be 0.16 per cent in ambulatory patients with pharyngitis.⁶ In our case, there had been no recent change in the frequency or severity of the patient's tonsillitis, nor had he any symptoms suggestive of sero-conversion. It is highly unlikely that the patient sero-converted as a result of his tonsillectomy. As such, it is not possible to estimate when he may have been infected with HIV. Whilst tonsillectomy is not recommended treatment for HIV tonsillitis, there was no suspicion at the time of surgery that the patient could have been HIV-positive.

Oropharyngeal necrosis of the tonsillar bed or soft palate is extremely rare. A literature search of Medline, Embase and the Cochrane library, including the search terms 'tonsillectomy', 'complications', 'rare', 'oropharyngeal', 'HIV' and 'candidiasis', found no reports of this complication occurring after tonsillectomy.

It is highly likely that our patient's tonsillectomy complication developed as a result of his underlying HIV infection. The patient's immuno-compromised state had not been recognised pre-operatively, as he was asymptomatic and there was no history suggestive of HIV. His background did not include any risk factors for HIV. The patient's post-operative re-presentation with persistent pain and odynophagia without any clinical signs was assumed to be part of the routine post-operative recovery process. It was only because the patient's symptoms persisted beyond the usual time frame and were associated with weight loss that he was investigated further. This case demonstrates the importance of exploring rare possible causes in the event of unexplained complications, and of appropriate patient counselling as required.

This patient was found to have a viral load of nearly 1.5 million copies/ml. Viral load tests are reported as the number of HIV copies in a millilitre of blood. If the viral load measurement is high, it indicates that HIV is reproducing and that the disease will probably progress faster than if the viral load is low. A high viral load can be anywhere from 5000 to 10 000 copies/ml and can range as high as one million or more. A low viral load is usually between 200 to 500 copies/ml; it indicates that HIV is not actively reproducing and that the risk of disease progression is low.⁷ In our case, timely recognition of HIV infection meant that the patient was commenced on life-prolonging anti-retroviral treatment.

- **A rare post-operative tonsillectomy complication is reported to alert clinicians**
- **Development of an ulcero-necrotic lesion of the tonsillar fossa following tonsillectomy has not previously been reported**
- **The patient's immuno-compromised status (due to human immunodeficiency virus infection) probably contributed to the lesion**

This case also highlights the importance of universal precautions when performing any surgical procedure. Evrard *et al.* have found the prevalence of unknown HIV infection to be 0.07 per cent in a population similar to ours.⁸ Taking into account the rate of parenteral injuries, the rate of contamination after an infected parenteral injury, and the total number of operations performed during a 40-year career, these authors estimated the cumulative risk of unknown HIV infection to be 1 per cent, increasing to 10 per cent in high-risk areas. Specifically, blood-splash to the eyes is

a possible mode of transmission to the otolaryngologist performing tonsillectomy.⁹

Conclusions

The development of an ulcero-necrotic lesion of the tonsillar fossa following tonsillectomy has not been reported in the English literature. It is highly likely that the patient's underlying immuno-compromised state, secondary to HIV infection, contributed to the development of this complication.

This case report highlights the fact that clinicians should be aware of rare complications of tonsillectomy. Investigation for an underlying cause should be prompted when unusual complications arise. Universal precautions against peri-operative parenteral HIV transmission should be taken during all operations.

References

- 1 Johnson LB, Elluru RG, Myer CM. Complications of adenotonsillectomy. *Laryngoscope* 2002;**112**:35–6
- 2 Leong S, Karkos P, Papouliakos S, Apostolidou M. Unusual complications of tonsillectomy: a systematic review. *Am J Otolaryngol* 2007;**28**:419–22
- 3 Patton L, van der Horst C. Oral infections and other manifestations of HIV disease. *Infect Dis Clin North Am* 1999;**13**:879–900
- 4 HIV InSite Gateway to HIV and AIDS Knowledge (Lee KC & Tami TA. Otolaryngologic Manifestations of HIV–HIV InSite Knowledge Base Chapter). <http://hivinsite.ucsf.edu> [14 August 1998]
- 5 Gileva OS, Sazhina MV, Gileva ES, Efimov AV, Scully C. Spectrum of oral manifestations of HIV/AIDS in the Perm region (Russia) and identification of self-induced ulcero-necrotic lingual lesions. *Med Oral* 2004;**9**:212–15
- 6 Coco A, Kleinhans E. Prevalence of primary HIV infection in symptomatic ambulatory patients. *Ann Fam Med* 2005;**3**:400–4
- 7 Lab Tests Online. http://www.labtestsonline.org/understanding/analytes/viral_load/test.html [14 May 2008]
- 8 Evrard S, Meyer P, van Haaften K, Christmann D, Marescaux J. Occupational risk to surgeons of unrecognized HIV infection in a low-prevalence area. *World J Surg* 1993;**17**:232–5
- 9 Keogh IJ, Hone SW, Colreavey M, Walsh M. Blood splash and tonsillectomy: an underestimated hazard to the otolaryngologist. *J Laryngol Otol* 2001;**115**:455–6

Address for correspondence:

Mr Pranay Kumar Singh,
Dept of Otolaryngology,
Luton and Dunstable Hospital,
Lewsey Road,
Luton LU4 0DZ, UK.

Fax: +44 1582 497031

E-mail: pranaysingh@doctors.org.uk

Mr P K Singh takes responsibility for the integrity of the content of the paper.

Competing interests: None declared
