

Presentation of posterior tongue-tie in a young infant mimicking oral candidiasis: A diagnostic challenge

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Introduction

Milk tongue and oral candidiasis which are more common in young infants often mimic the less frequently seen posterior ankyloglossia. As opposed to anterior tongue-tie which is readily visible, posterior tongue is either barely visible or not visible at all causing uncertainty about diagnosis^{1,2,3}. Many mothers of infants with posterior tongue-tie report of difficulties in latching, sore nipples and sometimes, lack of weight gain. Focused palpation of the stiff frenulum can enable clinicians to suspect posterior tongue-tie and arrive at an early diagnosis. Herein, the authors report a young infant in whom posterior tongue-tie presented, mimicking oral candidiasis.

Case report

A 3-month-old female baby, born at term with no antenatal and perinatal complications, presented with thick white coating of her tongue since the age of one week (Figure 1).

She was exclusively breastfed and thriving. Her mother, who had undergone a liver transplantation, was taking tacrolimus and azathioprine as immunosuppressive medication throughout the pregnancy and breastfeeding period. Initially, she was treated for clinical candidiasis with topical nystatin over 4 weeks for which there was no improvement and was given topical miconazole (Daktarin) for 3 weeks which improved the situation slightly. Subsequently, she was started on oral miconazole for 2 weeks and was called for a review for further management. Her parents reported unsettledness and clicking sounds during feeding which they thought were due to oral discomfort and caused increased gassiness.

Examination revealed thick white coating of the posterior 2/3 of tongue while the anterior 1/3 of tongue was pink and clear. Buccal mucosa, gingiva, throat, and palate were clear (Figure 1). Systemic examination was unremarkable. There were no signs of oral pain or sensitivity. The tongue movements were noted to be restricted.

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There was no history of infections in the child. A full blood cell count was unremarkable. Fungal cultures of tongue scrapings remained negative. The baby underwent detailed evaluation by the otorhinolaryngologist and lingual frenotomy was performed. Her symptoms improved significantly upon frenulotomy (Figure 2).



Figure 1: Appearance of tongue at initial presentation



Figure 2: Appearance of tongue following frenulotomy

Discussion

Anterior tongue-tie is readily visible and generally managed by division of the visible, short frenulum by sharp scissors in an ear nose and throat (ENT) out-patient setting⁴. However, posterior tongue-tie is often invisible and therefore, the diagnosis relies on palpation of the non-visible tight band of sub-mucosal tissue at the base of the ventral tongue⁵. Literature regarding management of posterior tongue-tie remains inconclusive. Although deep dissection and release of tight sub-mucosal band has been practised as a treatment option, the procedure can be

associated with post-operative complications such as infection, bleeding, scarring, ductal and nerve damage and is therefore not advocated. Optimal delivery of breastfeeding support is paramount in initial management of posterior tongue-tie. Frenotomy, which involves clipping of the tight tissues underneath the tongue using either a surgical knife or sterilized scissors, can be attempted in infants less than 6 months in whom feeding problems persist despite correction of other contributory factors and optimal breast-feeding support. Frenotomy has been demonstrated to be effective in improving nipple pain related to breast feeding³. However, positive effects of frenotomy on improvement in breastfeeding are not consistent⁶. Detailed evaluation by ENT specialist is important in accurate diagnosis of posterior tongue-tie so that unnecessary and complicated surgical procedures can be avoided.

As opposed to anterior ankyloglossia (tongue-tie), where a short and anteriorly inserting frenulum is easily visible, posterior tongue-tie has more subtle visual clues. The tongue often appears as lying flat in the mouth when the baby is crying. A short and thickened lingual frenulum is found on examination of the tongue. While the anterior part of the tongue can be moved freely and has hence a normal pink appearance, the mid and posterior part of the tongue is restricted in its movements. Many mothers of infants with posterior tongue-tie report difficulties in latching, sore nipples and sometimes lack of weight gain, prolonged feeding duration, gassiness or frothy stools in their babies⁷. Aerophagia occurs by loss of sucking-vacuum which is indicated by clicking noises during feeding.

Thorough evaluation for tongue-tie includes a skilled breastfeeding assessment, with direct observation of breastfeeding, detailed history taking and the use of screening tools such as the TABBY or the Bristol tongue-tie-assessment-tool. The more comprehensive Hazelbaker tongue-tie-assessment-tool emphasizes on function of the tongue in addition to appearance^{6,8,9}. Tongue-tie is a mucosal fold, sometimes containing fascia, which restricts the tongue function in regards to breastfeeding. Frenotomy can be an effective way to manage nipple pain and/or poor milk transfer, if conservative measures have not been effective^{10,11}.

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