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Pyriform Sinus Fistula

This 17-year-old young man attended the oromaxillofacial (OMF) department of a tertiary surgical center. He had attended both local and overseas ENT departments since the age of 5 years. Previously, an unspecified surgery had been performed as a child with ongoing problems since with a discharging sinus on the anterior aspect of the lower left side of the neck.

On clinical examination, several scars were present on the anterior aspect of the neck and a skin opening was evident in the left para-midline of the lower neck.

Following clinico-radiological discussion a barium swallow was undertaken (*Figures 1 and 2*).



Figure 1. a,b,c: Barium Swallow: A serpiginous tract of barium is delineated in the left side of the neck arising from the left pyriform sinus extending to the skin opening.

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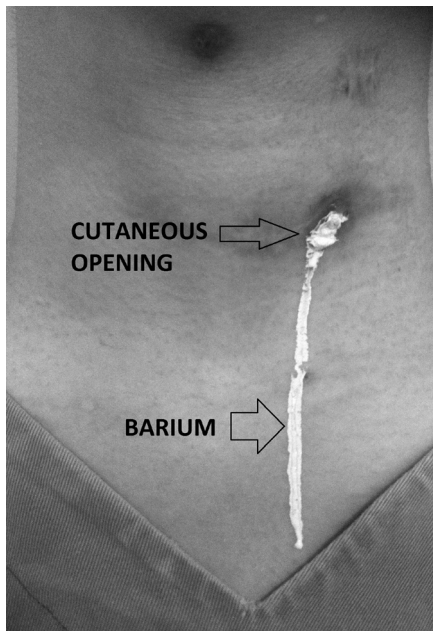


Figure 2. Clinical Image: During the swallow examination barium exuded from the skin opening, confirming the fistulous tract

DISCUSSION

A pyriform sinus fistula is an uncommon but, well documented condition. It is most commonly observed in the pediatric community usually presenting with an acute neck infection.

The vast majority occur on the left side of the neck with reports documenting fistula on this side accounting for between 83 and 100%.^{1,2} It is highly associated with an underlying congenital third, or fourth branchial cyst.

Various imaging modalities have been employed in the identification and characterization of a pyriform sinus fistula. Barium swallow has been traditionally used and may elegantly illustrate the fistula in a dynamic fashion. However, the tract is not always well demonstrated. Use of a cross sectional modality (ideally MRI) is essential in identifying; the fistula and its course, any underlying branchial cyst, an associated acute neck infection and whether the thyroid gland is involved.³ Thyroid gland involvement is frequently encountered given the typical course of the fistula.⁴

Fiberoptic endoscopy is also employed to identify the origin of the fistula in the pyriform sinus and is an important part of the diagnostic process.

Definitive treatment is complete excision of the fistula and any underlying cystic focus. Alternative methods have been employed with success, including chemo-cauterization and the use of fibrin to close the fistulous tract.⁵

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