Pyiform Sinus Fistula

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A 2-year-old boy with recurrent abscesses of on the left side of the neck due to pyiform sinus fistula is presented. Pyiform sinus fistula may cause acute suppurrative thyroiditis and induce anterior cervical swelling, as in this case. Cervical computed tomography and barium swallow X-ray examination are important methods to diagnose of pyiform sinus fistula.

Nearly all reported pyiform sinus fistulae are on the left side. During normal embryologic development of the branchial apparatus, the fourth arch artery on the left side becomes part of the aortic arch, and the fourth arch artery on the right side becomes the proximal portion of the right subclavian artery. This asymmetric development of the branchial apparatus may explain the left-sided predominance of pyiform sinus fistula. Furthermore, immunohistochemical studies have show that the fistulae are remnants of the ultimobranchial body, and trace the migration route of the ultimobranchial body to the thyroid gland.

Complete removal of the sinus tract (fistula) should be considered to prevent recurrence. Treatment without fistulectomy, such as the use of antibiotics and drainage of the abscess, may allow recurrence.

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Fig. 3

Fig. 4

References