A Case of Piriform Sinus Fistula Complicated with Suppurative Thyroiditis Treated with Chemocauterization Using Trichloroacetic Acid

Kyung Lae Son, Heung Sik Kim, Hee Jong Lee, Chang Ki Yeo
Department of Pediatrics, Department of Radiology, Department of Otolaryngology, School of Medicine, Keimyung University, Daegu, Korea

Introduction
Childhood acute suppurative thyroiditis is rare and usually associated with piriform sinus fistula. So complete surgical excision was treatment of choice in the past. However, it is a very invasive procedure and can cause injury of nerve or blood vessel around fistula. Recently, minimal invasive chemocauterization using trichloroacetic acid (TCA) of opening of piriform sinus fistula have been introduced. We report a case of acute suppurative thyroiditis associated with piriform sinus fistula treated with chemocauterization using TCA and antibiotics.

Case
• Patient: 23 months-old girl
• C/C: fever and left neck mass
• P/E:
  General appearance: Acute ill appearance
  Neck: Left neck swelling, redness, tenderness and heatness

<Lab findings>
Hb 11.6 g/dL
WBC 15,000/uL (neutrophil 66%)
PLT 458,000/uL
ESR 68 mm/hr
CRP 6.36 mg/dL
T3 122.44 ng/dL
fT4 1.46 ng/dL
TSH 0.58 mIU/mL
TSH R.Ab 0.61 IU/L
TG Ab 46.46 IU/mL
Microsomal Ab 2.69 IU/mL
Needle aspiration culture: Streptococcus gordonii

Image findings
Fig. 1. USG shows a perithyroidal abscess in the left anterior deep cervical space.
Fig. 2. Post contrast-enhanced T1-weighted MRI demonstrates an irregular rim-enhancing abscess cavity (white star) extending to the swollen left thyroid gland (arrow).
Fig. 3. Barium esophagography reveals a faint sinus tract (arrow) from the left piriform sinus.
Fig. 4. Thyroid scan shows diffuse mildly decreased radioactivity of both thyroid glands.
Fig. 5. Laryngoscopic finding of the chemocauterization. Internal opening of left piriform sinus fistula was cauterized with 20% TCA(a) and right after cauterization (b).

Treatment & Hospital course
On admission: Cefotaxime (200mg/kg/d), Vancomycin (40mg/kg/d), Metronidazole (30mg/kg/d) were administered
HD 6: Needle aspiration of the abscess was performed.
HD 8: Fever and mass size decreased gradually.
HD 14: TCA chemocauterization was performed
HD 17: Patient’s condition improved and discharged.

Conclusion
We report a case of piriform sinus fistula of the neck complicated with suppurative thyroiditis. The fistula was treated with chemocauterization using TCA.

References