

EP-178

새열 기원을 시사하는 조직병리학적 소견을 보인 드문 선천성 흉골 중앙부 피부동에 대한 증례보고

(A Report of an Unusual Congenital Midline Sternal Sinus with Histopathologic Features Consistent with a Branchial Cleft Origin)



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Purpose : Congenital sinus lesions in the anterior chest region are rare, and their embryologic origin remains unclear. Most reported cases are located laterally near the sternoclavicular joint and are considered part of the dermoid spectrum. However, some cases have shown features overlapping with branchial cleft anomalies, questioning their true embryologic origin. We report a case of a midline sternal sinus in an adult, in which intraoperative findings were consistent with a dermoid origin, yet histopathologic examination revealed features more characteristic of a branchial cleft origin.

Methods : A 25 years old man was referred from the department of dermatology for anterior chest complicated cyst with dermal sinus. The mass gets bigger during winter and had a mucinous discharge occasionally. Ultrasonography revealed a well-defined heterogeneous echoic soft tissue lesion in deep subcutaneous layer. Complete excision and biopsy were performed under local anesthesia.

Results : Intraoperatively, the sinus tract was firmly attached to the manubrium and surrounded by dense fibrosis, likely due to chronic inflammation. Multiple secondary branching tracts required two additional incisions for complete en bloc excision. Adnexal structures, including hair follicles, were observed within the tract. However, Histopathologic examination revealed ciliated respiratory-type epithelium, stratified squamous epithelium, lymphoid aggregates with reactive germinal centers, and salivary gland tissue, findings more consistent with a branchial cleft origin. No postoperative complications were observed, with the patient maintaining satisfactory recovery at 4-month follow-up.

Conclusion : This case demonstrates a rare midline anterior chest sinus with discordant features: intraoperative findings consistent with a dermoid sinus and histopathologic features suggestive of a branchial cleft anomaly. Unlike previously reported cases, which are typically lateral and dermoid in nature, this lesion supports the possibility of a spectrum or hybrid entity between dermoid and branchial cleft origins. Recognition of such atypical presentations is important for accurate diagnosis and may provide insight into the embryologic development of anterior chest congenital sinuses.

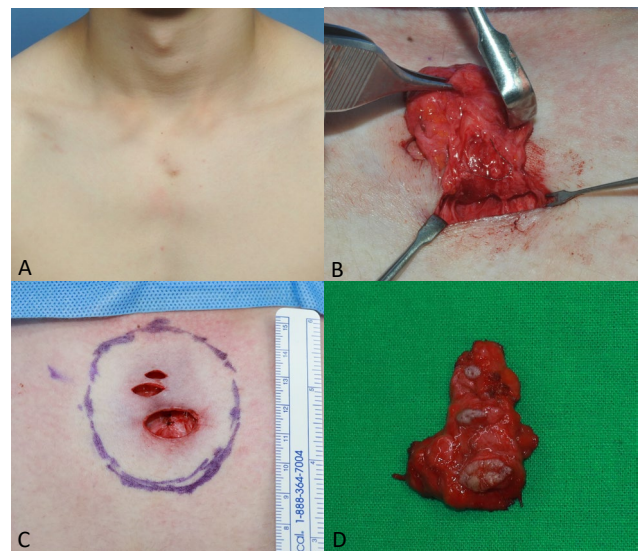


Fig. 1. Clinical and intraoperative photographs. (A) Preoperative view of the midline anterior chest sinus. (B) Intraoperative view showing hair follicles within the tract, suggesting dermoid origin. (C) Intraoperative view of multiple secondary branching tracts requiring two additional incisions. (D) Gross specimen demonstrating complex sinus tract architecture.

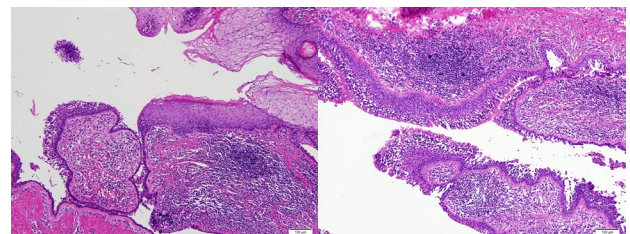


Fig. 2. Histopathologic findings (H&E stain). Left : demonstrating stratified squamous epithelium with adjacent lymphoid aggregates, Right : ciliated respiratory-type epithelium