Three Generations of Thyroglossal Duct Remnant in One Family

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Thyroglossal duct cysts represent a fairly common clinical entity usually detected in early childhood resulting from the persistence and dilation of the embryologic thyroglossal duct. There are at this time no statistics indicating the incidence of occurrence in a patient's sibling or child. Furthermore, there is no report of a possible genetic etiology in the literature. The purpose of this communication is to present the case of one family in which the females in three consecutive generations developed thyroglossal duct cysts.

Case Report

A 24-year-old white female was admitted to the Naval Regional Medical Center in Jacksonville, Florida, for elective evaluation of persistent swelling in the midline of her neck which was noted as an incidental finding on physical examination. The patient, an only child, reported that she had noticed the small lump in the anterior midline of her neck since childhood prior to beginning elementary school. She noted that the mass moved in her neck with her "voice box" during deglutition. Although she could not remember noting a foul taste in her mouth, she had been plagued with halitosis unassociated with poor oral hygiene or sinusitus. The patient also reported several instances of pain and swelling in the mass which were treated with warm compresses and antibiotics. Surgical consultation was suggested by the patient's family physician after one such flare, but the suggestion went unheeded until the present time.

The patient's family medical history was interesting in that her mother had an almost identical history to that of this patient. The mother had, however, undergone surgery in which a thyroglossal duct cyst was removed. Unfortunately, shortly after surgery another cystic structure developed, became infected, and drained spontaneously through the surgical wound. She refused further surgery to correct the draining sinus, preferring to wear a small pad about her anterior neck to hold her now intermittent discharge.

The family medical history also revealed the existence of another such cystic mass in the anterior midline of the neck of the patient's only child, a daughter. This particular lesion had been previously noted by the child's pediatrician; and since the child complained of no symptoms, a watchful-waiting stance was maintained. Examination at a later date by this physician confirmed the presence of a thyroglossal duct cyst.

The systems review was essentially unremarkable, and laboratory studies, including those for thyroid function, were within normal limits. Thyroid scan revealed normally functioning thyroid tissue outside of the cystic structure.

Physicial examination demonstrated a well-developed and well-nourished Caucasian female with vital signs within physiologic limits. The examination of the neck revealed a 2 × 2 cm cystic, mobile mass which moved both on deglutition and on protrusion of the tongue. The lesion was nontender and could not be decompressed manually. The remainder of the examination was negative. The following day her thyroglossal duct cyst was removed in block with the middle third of the hyoid bone and the foramen cecum. The diagnosis was verified by histopathology. The patient recovered from her surgery without complication, and a two-year follow-up has revealed no further recurrences.

Discussion

The reported sex ratio of the duct cyst is one to one, and the Mayo Clinic has reported a prevalence of 31 out of 86,000 consecutive surgical admissions.[1] Treatment is surgical and usually in-

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volves excision of the cyst, tract, middle 1/3 of the hyoid bone, and the foramen cecum as described by Sistrunk.[2] Complications of thyroglossal duct cysts include infection, recurrence, carcinomatous change, osteomyelitis of the hyoid bone, and airway obstruction. The differential diagnosis in this disorder includes ectopic thyroid, teratoma of the neck, dermoid cyst, branchial cleft cyst, abscess, lipoma, and midline cervical cleft.[3] Another well-known complication as demonstrated in this case report is incomplete excision with resultant recurrence of the cyst with spontaneous drainage through the surgical wound.

As previously stated, there have been no reports in the literature which have suggested the existence of a possible genetic link in this disorder of thyroid embryogenesis. Certainly this case history does not contain enough information to demonstrate a particular mode of genetic inheritance; however, in this instance, three consecutive generations of females in the same family strongly suggest a probable genetic link. Beyond this point one can only speculate about a clearly defined genetic picture until more data are obtained by primary care physicians who are most likely to see whole families and determine such genetic connections.

References

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An Ambulatory Teaching Audit Using Resident-Generated Protocols

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A unique feature of family practice residency training is the ability to follow patients with chronic disease conditions over periods of time under experienced supervision in the Family Health Center setting. Unfortunately, preceptoring of such patients tends to become episodic and sporadic unless some mechanism of audit is available to permit overall assessment and review of patient management. A recent article has documented the desire of residents for such continuing review,[1] and several articles have presented methods of outpatient audit applicable to family practice residency programs.[2,5] A description follows of the ambulatory teaching audit which has been developed at this institution together with a brief analysis of certain features which the author feels make this type of audit system particularly attractive for use in a residency teaching program.

Methods

The central concept of the audit is the resident-generated protocol for management of a common outpatient problem. Each second and third year resident chooses or is assigned a common outpatient problem for which he or she prepares a protocol in outline form which defines diagnosis, treatment, patient education, and follow-up for that particular condition. The resident is requested to review the recent literature and consult with specialists on the hospital staff to determine current practices. He is further instructed to use his own best judgment to determine how he personally would like to manage such a patient in his own private practice and to write the protocol accordingly.

The protocol is then typed and distributed to the

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