Teratoma

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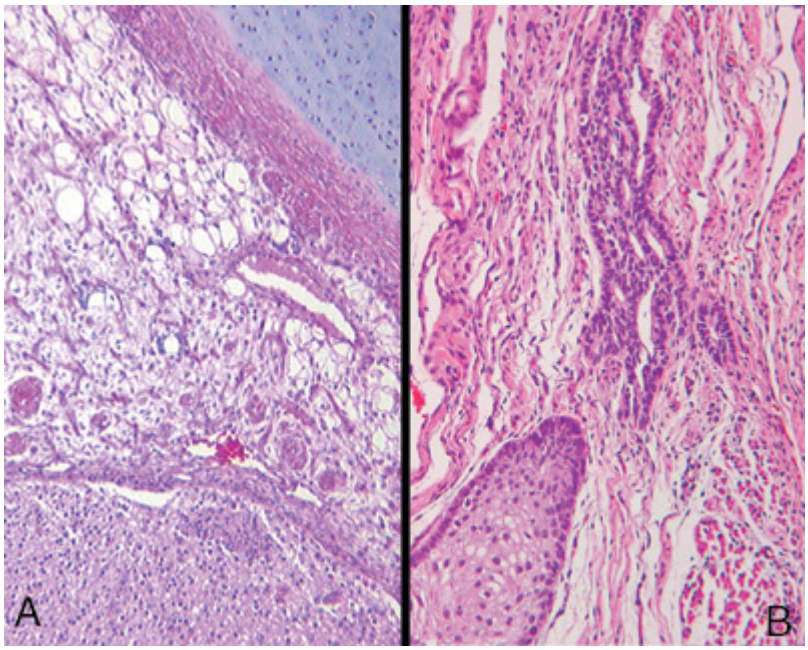

*Figure 1. Photograph shows a teratoma with mature cartilage, fat, skeletal muscle, and brain tissue (**A**); another contains skin, glandular epithelium, and mature muscle (**B**).*

Teratomas are neoplasms made up of tissues foreign to the site of occurrence. They contain tissue from all three embryonic germ layers (endoderm, mesoderm, and ectoderm). Other terms––choristoma, hamartoma, heterotopia, epignathus, and dermoid––refer to separate, unique entities that are not covered here.

Only about 6% of all teratomas occur in the head and neck. Patients range in age from newborns to those in their 9th decade, although most patients are neonates and infants. Many of these patients are born prematurely, and their births are often complicated by polyhydramnios. Teratomas are distributed equally between the sexes. Interestingly, neonates have benign tumors, while malignant tumors are seen only in adults. The anatomic site of involvement varies (e.g., neck, sinonasal tract, or nasopharynx). Most patients present with a midline mass lesion and a facial deformity, which are often accompanied by other associated symptoms (e.g., respiratory distress, dyspnea, stridor, or difficulty swallowing). Other congenital anomalies may be present, especially in neonatal patients.

Macroscopically, these tumors are well-circumscribed, lobulated, soft, and cystic. Islands of gritty material consistent with bone and cartilage are often identified. These tumors contain a wide array of mature and immature tissues interspersed with one another. Squamous epithelium, respiratory epithelium, glandular epithelium, gastrointestinal epithelium, thyroid gland, pancreas, liver, neural tissue, pigmented retinal anlage, immature neuroblastomal elements, cartilage, bone, muscle, fat, and loose myxoid-to-fibrous embryonic mesenchymal connective tissue are identified (figures 1 and 2). If the entire tumor is made up of predominantly immature elements, a malignant teratoma or teratocarcinosarcoma must be excluded.

Complete surgical excision is curative, although complications and death may occur secondary to the space-occupying and destructive character of these benign neoplasms.

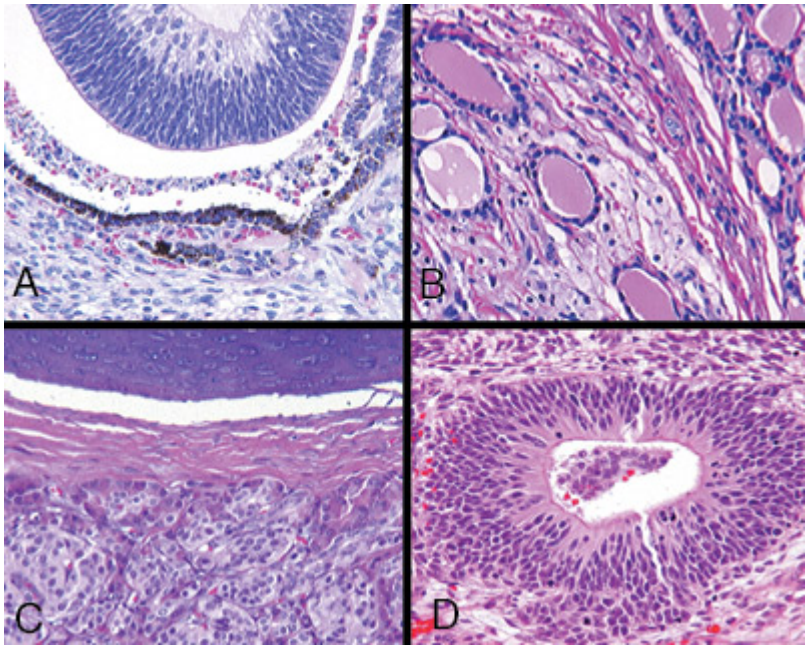

*Figure 2. Teratomas can contain various elements, including retinal anlage pigmented epithelium (**A**), thyroid epithelium (**B**), mature pancreas and cartilage (**C**), and a primitive neural rosette (**D**).*

Suggested reading

Batsakis JG, el-Naggar AK, Luna MA. Teratomas of the head and neck with emphasis on malignancy. Ann Otol Rhinol Laryngol 1995;104:496-500.

Thompson LD, Rosai J, Heffess CS. Primary thyroid teratomas: A clinicopathologic study of 30 cases. Cancer 2000;88:1149-58.