



## Pediatric Head and Neck Tumors

Tumors or growths in the head and neck region may be divided into those that are benign (not cancerous) and malignant (ie., cancer). Fortunately, most growths in the head and neck region in children are considered to be benign. These benign growths can be related to infection, inflammation, fluid collections, swellings, or neoplasms (tumors) that are non life-threatening. The malignant growths, on the other hand, may be life-threatening and cause other problems related to their growth and spread. Even the malignant growths in the head and neck are usually treatable.

### *Benign Tumors*

It is very common for children to have enlarged tonsils and adenoids. These are almost always from an infection or inflammation. It is very rare that children develop a cancer, lymphoma, or sarcoma of these areas. When the tonsils, adenoids, or other areas of the mouth or throat remain enlarged or are enlarged on only one side, it is important to have an evaluation by a specialist in ear, nose and throat or otolaryngology-head and neck surgery.

The lymph nodes of the neck region may become enlarged during childhood. Most of the time, this is reactive in nature and related to inflammation or infection. However, if the lymph nodes remain enlarged for a period of time without going away, it is important to have an otolaryngologist-head and neck surgeon evaluate the problem.

Other benign growths in the face and neck include cysts (fluid collection) such as branchial cleft cyst, thyroglossal duct cyst, cystic hygroma, and dermoid cysts. These often require removal due to their continued growth and potential for infection. Growths of blood vessels often are seen in the face and neck and these are often referred to as hemangiomas, vascular malformations, lymphatic and arteriovenous malformations (AVM). Some of these may require removal or treatment depending upon the type and location.

### *Sinus and Nose Growths*

Although most children have nose bleeds and occasional allergies and sinus infection, sometimes tumors of the nose and sinus present with similar symptoms. It is generally recommended that a child with continuous sinus problems or nose bleeds be evaluated by an otolaryngologist-head and neck surgeon to be sure it is not a tumor or other treatable condition.

Non-epithelial neoplasms constitute the majority of sinonasal (sinus) tumors in children and adolescents. Among these, rhabdomyosarcoma (RMS) or undifferentiated sarcoma and non-Hodgkin lymphoma account for the majority of cases. Among head and neck RMS 14 percent arise from the nasal cavity and 10 percent from the paranasal sinuses. Nasopharyngeal

carcinoma accounts for one third of the nasopharyngeal neoplasms in children. As is the case in adult patients, it is associated with Epstein-Barr virus (EBV) infection as demonstrated by EBV DNA presence in malignant cells. Less frequently, Ewing's sarcoma/PNET can present in this location. These tumors have also been described as secondary malignancies following treatment of retinoblastoma and other neoplasms. Esthesioneuroblastoma is a rare sinonasal tumor historically related to Ewing/PNET, although more recently comparative genomic hybridization analysis disputes this relation. Other less common sinonasal tumors presenting in children include hemangioma and hemagiopericitoma, fibroma and fibrosarcoma, malignant fibrous histiocytoma, and desmoid fibromatosis.

### ***Salivary Gland Tumors***

There are three paired sets of salivary glands in the head and neck region. These include the ones in front of the ears (parotid), below the jaw (submandibular), and underneath the tongue (sublingual). Additionally, there are numerous very small salivary glands throughout the mouth and throat. Although tumors can arise in these areas, they are rare. Thus, any child with a growth in these areas should be seen by an otolaryngologist-head and neck surgeon.

### ***Thyroid Tumors***

The thyroid gland is found in the front of the lower part of the neck just above the chest area but below the Adam's apple on both sides. Although tumors can arise in this area, they are rare. Thus, any child with a growth in this area should be seen by an otolaryngologist-head and neck surgeon.



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