OTOLARYNGOLOGY

Volume 3

HEAD AND NECK

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HEAD AND NECK

Edited by

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PREFACE

The face of head and neck surgery is changing, and it is changing rapidly.

The past 15 years have evidenced a tremendous interest not only in cancer surgery of the head and neck area, but in maxillofacial and facial plastic surgery as well. The Otolaryngologist's natural interest in the anatomy, physiology and pathophysiology of this region of the body makes him the logical practitioner of medicine and surgery for this area.

Most head and neck surgery of the past has dealt mainly with surgery for cancer. Today it is a further delineation of regional plastic surgery and includes all disease entities, benign and malignant, in the head and neck region. This approach to highly specialized surgery has gained popularity as the various specialties have grown in sophistication.

This volume is a furtherance of Volume I of Otolaryngology and introduces into a major reference source the use of intra- and extraoral maxillofacial prosthetics, which have added such a tremendous dimension to the scope of the work of the head and neck surgeon.

Volume III covers diseases of the nose and sinuses, dental diseases and maxillofacial and cosmetic surgery. Volume II, on *Ear*, and this volume are intended to represent most of the Otolaryngologist's clinical practice.

The chapters of this volume are but an introduction to a field whose horizons are limitless and whose future will be written by those to follow.

DONALD A. SHUMRICK, M.D.

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Section One

DISEASES OF THE NOSE AND SINUSES

Section One

DISEASES OF THE NOSE AND SINUSES

PART 1

Diseases of the Nose

Chapter 1

CONGENITAL DEFECTS OF THE NOSE*

by Claus Walter, M.D.

MEDIAN NASAL FISTULAS AND DERMOID CYSTS

The first case of a dermoid cyst of the nose was published in 1890 by Bramann in Germany and by Berkett in the United States (Denecke and Meyer, 1967). According to Wang and Macomber in *Reconstructive Plastic Surgery* by Converse (1964), approximately 100 cases of fistulas and cysts of the nose have been reported in the literature.

These cysts are thought to originate from a displacement of epidermal elements during the intramembranous growth phase of the nasal bones in the embryo. Maroncelli (1965), on the other hand, feels that dermoid cysts represent epithelioid remnants which became displaced during the development of the septum.

New and Erich, as quoted in Denecke and Meyer (1967) and in Converse (1964), placed the incidence of dermoid cysts and fistulas of the nose at 12.6 per cent of all the cysts found in the head and neck region.

An increase in the number of publications dealing with dermoid cysts and fistulas has been noted in recent years (Nydell, 1959; Caliceti, and Castelini, 1962; Sienkiewicz, 1963; McLean, 1964; Kucera, 1964; Sirota, 1964; Origilia, 1965; Taylor, 1967).

According to Müsebeck (1967) and Littlewood (1961), these cysts can be differentiated according to their location into superficial and deep (septal) cysts. The superficial cysts are located in the region of the perpendicular plate of the ethmoid bone and the quadrangular cartilage, while the deep cysts may be found within the columella and in the vomer.

According to Kleestadt (quoted and beautifully illustrated in Denecke and Meyer, 1967), median upper cysts with their corresponding fistulas toward the dorsum of the nose have small openings or puncta in the midline.

One can also distinguish cysts of the midface region which are associated with the facial clefts, such as cysts of the naso-ethmoid cleft, cysts of the subalar cleft, globulomaxillary cysts, cysts connected with cleft lips or palates, premaxillary cysts, cysts of Jacobson's organ, nasopalatine cysts of the floor of the nose, and cysts of the incisive foramen—just to mention the most important ones.

*Translated by Paul W. Hoffmann, M.D.

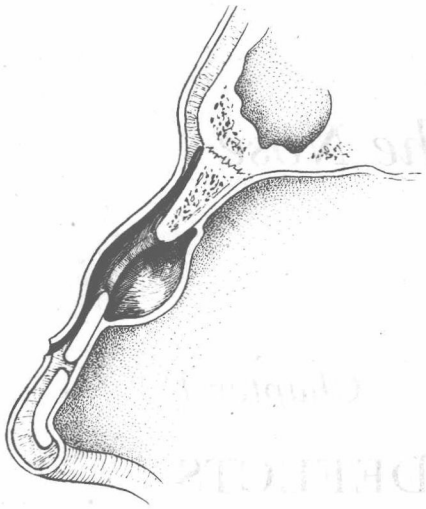

Figure 1. Median nasal fistula with dermoid cyst. (After Denecke and Meyer, 1967.)

As a rule, fistulas located in the median line of the nasal dorsum have a tract connecting them to their cysts. The fistulous tract usually extends cranially along the midline underneath the skin of the dorsum of the nose. It then passes through the intranasal and frontonasal suture line, leading to cysts in the depth of the ethmoid region or even in the frontal sinus area. Sometimes these cysts may have a dumbbell configuration, with one part of the cyst above and the other below the suture line of the nasal bones. Very extensive teratomas, which may reach all the way to the nasopharynx, have been reported (Nikol'skaia, 1968). Bifurcation of the fistula tract has also been described (Tiwari, 1967) (Figs. 1 and 2).

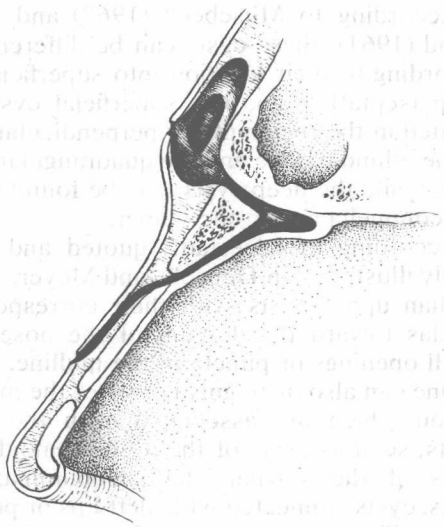

Figure 2. Median nasal fistula connected with a dermoid cyst anterior to the frontal bone. (After Denecke and Meyer, 1967.)

According to their developmental history, one would not suspect any endocranial connections; however, isolated cases have been described in which such dermoid cysts extended all the way up to the base of the skull (Faltynek, 1961) or were even connected to a dura mater pedicle (Bourdial and Natali, 1961). Denecke and Meyer describe two cases of Crawford and Webster in which a widespread fistulous network starting from two separate openings extended all the way underneath the frontal bone and into the base of the skull. Bilateral cysts can also be encountered and are usually located in the vestibular region of the nose (Kori, 1961).

The course of treatment depends mainly on a well established and correct preoperative diagnosis. The typical finding of a localized swelling in the area of the nasal dorsum or the nasal tip, with widening of the nasal bones or a swelling in the area of the columella, septum, or floor of the nose, will call the surgeon's attention immediately to such a congenital deformity.

The differential diagnosis should include mucoceles, osteomyelitis, gliomas, and encephaloceles (Pratt, 1965; Wang and Macomber, cited in Converse, 1964).

Gliomas mainly are encapsulated tumors containing fibrous and glial tissue with astrocytes, which developed from an encephalocele. They have lost their endocranial connection and frequently only a small strand of fibrous connective tissue can be found extending to the base of the skull into the area of the foramen cecum.

Unlike the gliomas, the encephaloceles are still connected to the brain. They represent herniations of brain tissue, contain cerebrospinal fluid and are covered by the meninges.

Hemangiomas and neurofibromas should also be taken into consideration in the differential diagnosis.

A difference between these tumors can already be noted by their external appearance. The gliomas usually are found along the side or dorsum of the nose. They are round or dome-shaped, reddish, relatively firm and mobile, and are located subcutaneously. Usually, defects of the nasal or skull bones can not be found. These more externally located gliomas should be differentiated from the intranasal gliomas, which will be discussed in the section on nasal tumors. Gliomas and dermoid cysts show no pulsations. Encephaloceles, on the other hand, present as pulsatile tumors, and enlargement of the tumor