of Philadelphia, by Professor J. G. Richardson, where the sac was filled with seed-like bodies similar to those met with in bursæ of the wrist-joint.

Convinced by personal experience that this form of cyst is not uncommon, the author is led to infer that the bursa described by Fleischman is very much more constant as to presence than generally admitted. Diagnosis of this special cyst is forwarded in remembering that the tumor is to be felt upon the neck adjacent to the middle line. A post-mortem made of such a cyst by a Dr. Müller, of Moscow, showed a cavernous tumor the size of a pigeon-egg, the contents of which were a clear, transparent fluid. The subject was an infant.

Epithelioma of the floor of the mouth commences as a primary affection at the lingual frænum, otherwise it is an extension of the disease from the side of the tongue or gum.

Venous aneurism, or nævus, of the location, has been met with in the author's practice but in a single instance. The case was successfully treated by exciting inflammation in the growth.

CHAPTER XXXIX.

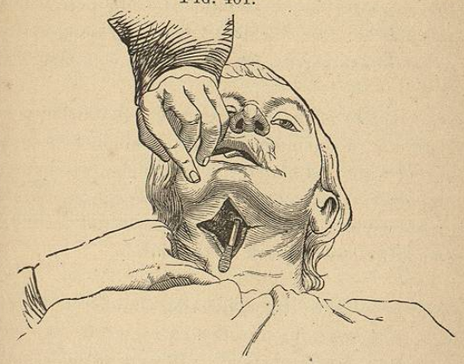
HYGROMATA OF THE NECK.

A CLASS of cysts indirectly associated with the oral floor may at this point claim attention.

The front of the neck holds several bursæ. The first of these, commencing from above, is known as Fleischman's. The second is situated between the thyro-hyoid membrane and the posterior face of the hyoid bone. The third has its location between the skin and pomum Adami; this last is sometimes double. Any of these cysts may become the seat of a hygroma, the contents of which may be either clear and viscid, or sanguineous and grumous. Any one of them may furnish location for a true ranular deposit.

Example of Ranula situated in Front of Neck.—Fig. 401 represents a case and operation, occurring in the practice of the author, having the

FIG. 401.



following history. First, it was noticed by the patient that the parts beneath the chin began to soften and broaden, and that gradually freedom of motion in the jaw was lost, while a slight sense of difficulty was experienced in speech, as the result of stiffness about the tongue, the floor of the mouth being quite indurated. In the course of four months, a tumor, evidently cystic, and fully the size of an ordinary orange, occupied the front of the neck, but was happily concealed by a long and heavy beard worn by the patient.

Presenting himself for a cure, a diagnosis as to the general nature of the

tumor was secured through the aid of an exploring-needle; this valuable instrument demonstrating not only that the tumefaction was cystiform, but affording an idea of the contents.

Treating the tumor as a cyst of immediate signification, a bistoury, making a reasonable incision, was passed into the most pendent part; the contents, a mass of lymph-like fluid, filling a large goblet, issued as a continuous rope; in color and in consistence this would have been well likened to thin calves-foot jelly. The cavity having been thoroughly washed with warm alum-water, compresses were carefully adjusted to the parts and sustained by a strip bandage. In two weeks, and without any trouble, the parts had united, and the cyst seemed permanently obliterated.

One month later the patient again presented himself. The tumor was reforming: the sac apparently had not been obliterated; already it was the size of a walnut. A few days later a second operation was performed precisely as in the first instance; the contents of the cyst differed, however, at least in color, having the same colloid consistence, but being blood-red. After the incision, and after evacuating the cavity, determined on obliterating the cyst, it was treated with the officinal tincture of iodine, and stuffed loosely with cotton. This time a perfect cure was obtained; but the swelling, associated with the inflammation produced by the injection, was so great that it was only with the aid of leeches, and by a free use of cathartic and diaphoretic medicines, combined with the closest attention, extending over four days, that the man's life was saved: for two whole days the patient was unable to swallow even teaspoonful measures of water, and breathed only with the greatest difficulty.

This tumor was evidently enough a hygroma, the starting-point of the lesion being, as inferred, in a sublingual gland. It might be suggested that, had it been associated with this gland, the swelling would have exhibited itself more in the mouth. A reason for inferring that it was so associated lay in the fact that a blunt probe passed into the cavity could readily be felt in the position of the left of these bodies in the mouth.

* * * * * * * * *

The preceding history is one of the illustrations offered in the chapter on *Ranula*, published in the first edition of this book; it was written four months after performance of the operation, every evidence existing as to the completeness of a cure.

As a coincidence, it occurred that, on the very day the perfected proofs of a succeeding edition were put into the writer's hands (the form being struck off), this patient again presented himself, the neck exhibiting evidence of a return of the tumor.

Now was determined on, and practised, an operation which shows the case in its most instructive light.

As illustrated in the diagram, a crucial incision was made, exposing, in the retraction of the flaps, the common deep fascia of the neck, which fascia constituted the floor of the cyst, and was, in appearance and consistence, apparently natural.

Passing into a sinus in this deep fascia, and emerging from the mouth, the reader observes a probe. The orifice of this sinus was very small, and was only seen after the parts had been thoroughly cleansed; the track was exceedingly tortuous, and was not passed until after several attempts, and only at last by an experimental bending of the probe.

On reaching the floor of the mouth, it was evident enough that the instrument struck the sublingual gland, as without effort that body could be thrust upward from its bed. To thus elevate and dissect out the organ, which was done, was a matter of no difficulty.

To complete the operation, the walls of the cyst were slightly cauterized with the solid stick of nitrate of silver, the flaps laid in place, and secured with the necessary stitches of interrupted suture; adhesion was secured by compresses continued in place over a month.

Examination of the removed gland discovered upon its under surface a break in the continuity, evidently pathological and of long standing; thus was demonstrated the salivary character of the tumor. Little by little the secretion had worked a passage downward, securing, by slow progress, an adventitious tissue, or walled sinus.

Looked at from the cervical base, one would naturally have viewed the sinus as being made by a prolongation of the fascia, so precisely did it look as though a tubular cul-de-sac had elongated itself until it had met and associated itself with the base of the gland.

The question of the location of this tumor is not without a special interest.

Does it not prove the existence of a supra-hyoid bursa, described by some anatomists and searched for in vain by many others? If such bursa had not, in this particular case at least, an existence, how shall we explain so naturally the presence of the perfect cyst which formed the tumor?

A second point of interest lies in the fact of reaching the gland described in the first diagnosis made months before. This, it would seem, could only have been the result of a rare accident, which on that occasion directed the probe into the sinus, and gave to the parts such favorable position as made the passage a direct one.

This case, viewed from the stand-point of fistula, is one of great interest and instructiveness: had the tumor been allowed to enlarge and attenuate the walls, and thus to rupture, it is evident that the case would have become one of salivary fistula proper.

An example of hygroma, very suggestive as a study, is recorded in Bell's "Principles of Surgery." The attention of the reader is directed to it:

The case was that of a young woman of Berwick, whose native peculiarity of accent had received a singular aggravation by such an uncouth obliquity and imperfect motion of the tongue as conveyed the notion of her attempting to chew and turn each vocable with her tongue before she proceeded to swal-

low, in place of uttering it. This was produced by a tumor of very great size, and of an appearance so peculiar as plainly to denote its character. It consisted in a vast collection of matter in the sublingual gland; and as that gland is covered by the whole thickness of the tongue within, and by the mylo-hyoid muscle without, and is bounded by the line of the jaw-bone, it had the following singularities of character. It could not be distinguished as a tumor, but had rather the appearance of a general tumefaction of the lower part of the face, jaw, and neck, such as often accompanies severe toothache or mumps. On laying the hand upon the outside of the neck, below the lower jaw-bone, it was filled with a swelling, apparently solid, but so little convex or circumscribed as to resemble in no degree a tumor of any particular gland, and yet so limited and so firm as not at all to simulate the general enlargement proceeding from periodontitis. On introducing the finger into the mouth, the tongue was found raised, turned edge uppermost, and pressed entirely toward the left side of the mouth, the external tumor being upon the right side. On pressing the fingers very firmly down by the side of the tongue, and reaching from without, one could sensibly perceive not so properly a fluctuation as an elasticity, which implied the presence of a fluid; the tumor seemed elastic like a football, but with a degree of tension which made it appear almost solid. It was by comparing a variety of circumstances, especially the original place and slow growth of the tumor, that the surgeon confidently referred it to the sublingual gland. The patient being placed in a chair, a fine bleeding-lancet was struck deep into the growth by the side of the frænum of the tongue, when, from the firm compression of the surrounding parts, the matter, though too gross to pass freely through such an opening, was spewed out from the orifice, in a manner expressly resembling that in which yellow paint is squeezed from the bladder upon a painter's pallet. It was of a deep saffron color, thicker than mustard, mixed like gruel with seed-like particles, and exceedingly fetid. Next day the point of a probe-pointed bistoury was introduced into the orifice made by the lancet, when thick yellow mucus flowed freely, or was raked out with the points of the fingers and the handle of the bistoury, the tongue descending to its natural level.

So tense and apparently fixed was this tumor, in consequence of the compression by so many surrounding muscles, that it was at one time mistaken for a solid and strumous swelling.

It is found, in all such cases, a matter of some importance, especially in girls, to anticipate the outward suppuration of any sacculated tumor, by puncturing it, though to a great depth within the mouth and under the tongue, and equally necessary to be at pains in preserving the opening and obliterating the sac: a slight misconduct in this respect occasions much distress to the patient and much superfluous labor to the surgeon.

An expression of deep-seated ranula is exhibited in Fig. 402. Cases of this kind are met with where the swelling is associated exclusively with the submaxillary region; more commonly the tumor shows alike within and without the mouth. Abscess of the gland, the pus being confined between the triangular leaves of its fascia, is distinguished from hygroma by its history; the one being an inflammatory disease, the other not.

Hygromata of the neck, in no way related with ranula, are frequently

FIG. 402.

Deep-seated Ranula.

to be met with. The writer has dissected out such cysts of sizes varying from that of a hickory-nut to that of the largest orange. In a case under observation at this time of writing the tumor occupies the full square of the neck, it is quite the size of the largest cocoanut. Removal by operation is the only manner of cure.

CHAPTER XL.

DISEASES OF THE PHARYNX.

The pharynx is the pouch entered on passing through the oro-pharyngeal space. Its boundaries are as follows: above, the base of the skull; posteriorly and laterally, the constrictor muscles; anteriorly, the plane of the opening which associates it with the mouth.

The pouch communicates with seven associate parts; namely, with the mouth, the larynx, the œsophagus, the two nares, the two Eustachian tubes.

Dissection of the pharynx exhibits it as a muco-musculo-aponeurotic bag held open by attachment above to the petrous portion of the temporal bone, and laterally to this same bone, to the pterygoid processes of the sphenoid,

Fig. 403.

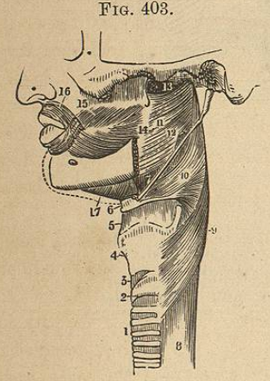


Fig. 404.

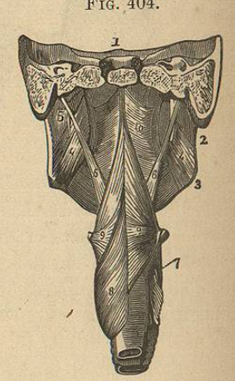


Fig. 403. Side view of pharynx and its muscles. 1, trachea; 2, cricoid cartilage; 3, vocal membrane; 4, 6, thyroid bone; 7, stylo-hyoid ligaments; 8, œsophagus; 9, inferior constrictor; 10, middle constrictor; 11, superior constrictor; 12, portion of stylo-pharyngeal muscle; 13, upper extremity of pharynx; 14, pterygoid-maxillary ligament; 15, buccinator muscle; 16, oral orbicular muscle; 17, mylo-hyoid muscle.

Fig. 404. Posterior view of the muscles of pharynx. 1, vertical section transversely of the base of the skull just in advance of the cervical vertebræ; 2, 3, posterior border and angle of lower jaw; 4, internal pterygoid muscle; 5, styloid process, giving attachment to, 6, stylo-pharyngeal muscle; 7, pharynx; 8, inferior constrictor of the pharynx; 9, middle constrictor; 10, superior constrictor.

the pterygo-maxillary ligaments, the angle of the lower jaw, the hyoid bone, and to the larynx.

The base, or framework of the pouch, is an aponeurosis. This is a fibrous structure internal to the muscular layers; thick above, where it is attached

to the skull, thin below, where it proximates the apex. The muscles are ten in number; these being fairly separable into five pairs. Figs. 403 and 404 show and name these muscles; affording as well appreciation of the posterior and lateral relations of the pouch. Fig. 27 shows an inside view of the pharynx. The mucous lining, seen in the last-named diagram, is soft and brownish red. The epithelium covering it is of the columnar ciliated variety above; below it resembles that of the mouth in being squamous.

Membrane and underlying parts are related by much submucous tissue in which are imbedded a large number of glands, these being of the racemose and follicular varieties.

The blood-vessels of the pharynx are derived indirectly from the internal maxillary and thyroid arteries. The nerves issue from the glosso-pharyngeal, the pneumogastric, and from the sympathetic system.

The pharynx is partly divided into an upper and a lower portion by the soft palate which extends incompletely across it. The part above the velum is termed the naso-pharynx; its immediate relation is with the nose. The part below is named the oro-pharynx; its association is with the mouth.

The soft palate, or veil, is a musculo-membranous curtain concerned in the processes of deglutition and speech. It may not inaptly be described as a fold of the common oral mucous membrane extending backward for some distance from the ledge of the hard palate, then turning upon itself, after dropping a pouch — the uvula — and passing forward to line the nares. Between these layers, relating with each other at a median raphé, are five pairs of muscles. These muscles are elevators, depressors, lateralizers. A special pair—azygos uvulæ—arise from the spine of the conjoined palate bones and extend into the uvula pouch.

Diseases.—The diseases of the pharynx relate to the mucous membrane and elements of the submucous tissue. Affections of the muscular and aponeurotic structures are uncommon.

Pharyngitis.—Pharyngitis, active, passive, or chronic, is the pathological condition most frequently met with. The aspect of phases presented in inflammation of the parts depends partly on the nature of the cause, partly on the state of health of the patient.

Angina simplex, common sore throat, inflammation arising out of taking cold, is ushered in by a sense of irritation about the throat which later progresses to a condition of huskiness in voice and pain in swallowing. Examination reveals a swollen state of the parts, a bright-red color, velvety appearance of the surface, a uvula more or less elongated and œdematous. Result: commonly resolution; sometimes laryngitis, trachitis, œsophagitis, and inflammation of Eustachian tube by extension through continuity. Treatment: feet in hot water, dry cups to neck, saline cathartics, refrigerant diaphoretics or diuretics, a gargle composed of one grain each of hydrate of chloral and sulphate of zinc to the ounce of water. A medicine found frequently to break up at once a sore throat, consists of twenty to forty grains of bromide