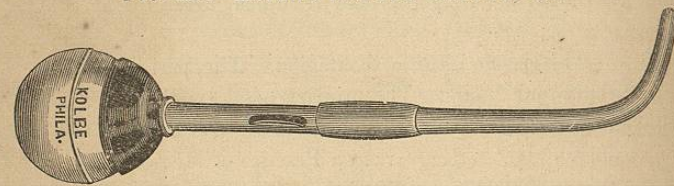


submucous development carrying and attenuating the membrane; a variety is undoubtedly modified adenomata. Papillomata is a variety made by certain writers.

The hygrometric character of a gelatinoid polypus finds explanation in its structure; this is cellulo-fibrous, the meshes being filled with a sero-albuminous fluid. The growth is commonly much affected by the state of the atmosphere, being smallest in dry, largest in wet weather.

Treatment of mucous polypi is by desiccation, evulsion, abscission, the electric cauterant, and the use of potential cauterants. The first is to be tried with the smaller varieties. In this direction a powder composed of tannin and iodoform, in equal parts, is to be recommended; application is made by means of a glass tube charged with the medicine, this being blown over the growth. A second means employs an insufflator composed of bellows and tube: Kolbe's instrument (Fig. 420) is a good one. Strong alum- or lead-

FIG. 420.—KOLBE'S POWDER INSUFFLATOR.



water, as an injection, is found to afford much comfort; it is to be used two or three times a day.

Cure by evulsion, tearing away, or by strangulating is most relied on; to this end a polypryte, or double canula, is used. Fig. 421 shows a modifi-

FIG. 421.—THE ARELING-HODGE POLYPRYTE.

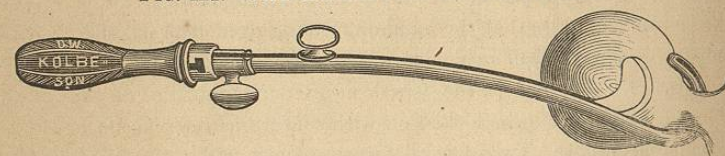
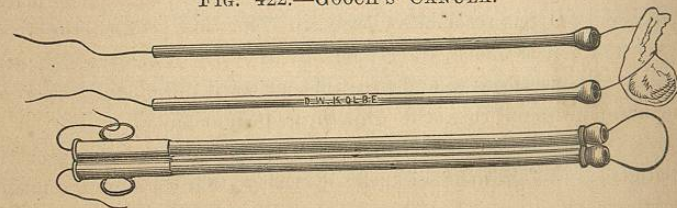


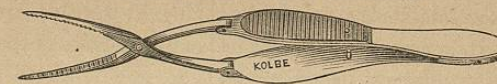
FIG. 422.—GOOCH'S CANULA.



cation on Hodge's modification of Areling's polypryte. This instrument, though best fitted for use in another location, is yet found at times to act well in the nostril. Fig. 422 represents Gooch's double canula applied.

Still another instrument, one the writer would recommend, is shown in Fig. 423. An advantage consists in the forceps having the grasping part

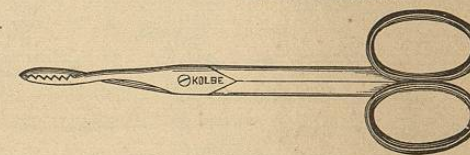
FIG. 423.—TORSION FORCEPS.



connected by three joints; thus, in seizing a tumor the points cannot slip or twist laterally; the leverage is also increased, while the strain of the fingers is diminished. Another instrument still is that illustrated in Fig. 424. This, where the pedicle is tough and resisting, plays a most satisfactory part.

To use the snare or forceps requires that the operator possess himself of an accurate knowledge of the position of the base of the tumor; using the loop, the wire is to be placed by means of a notched guide; the forceps employed, the pedicle is to be grasped immediately adjoining the part from which the growth originates. A polypus associated

FIG. 424.—POLYPUS FORCEPS.



with the posterior nares, or naso-pharynx, falling backward into the throat, is to be caught from below and twisted off, otherwise it may have its pedicle encircled by a double wire passed through the nostril, being extended until it can be caught in the pharynx and slipped over the tumor. In abating a polypus after this latter manner it is desirable to save the mass from slipping into the apex of the pouch through means of a ligature passed through it previous to the strangulation.

After removal of one of these polypi the base, where possible, is to be deeply cauterized with London paste, chromic acid, or other agent. The preference of the writer is for the paste.

*Fibrous Polypi.*—Fibrous polypi, unlike the form just described, which is rarely met with in the young, is a condition associated with all periods of life. It is less common than the gelatinoid, is rarely multiple, and, unless markedly pedunculated, is to be esteemed of threatening import. The composition of these growths consists of fibres intricately arranged, among which arterial and venous vessels, possessed of brittle coats, freely circulate. Microscopic examination too often distinguishes a sarcomatous element.

Fibrous polypi of pedunculated base are to be snared or twisted precisely as the gelatinoid. Where the base is broad experience has shown the futility of all operations. Great care is to be exercised in distinguishing these growths, that they be not confounded with others coming from the base of the skull.

Diagnosis of simple fibrous polypi lies in obstruction and in the movable nature of the tumor, as well as in complexion, which differs from the gelatinoid

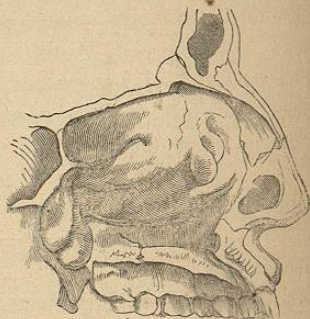
in being of flesh-like appearance. The sarcomatous form of polypus is commonly of rapid growth, quickly making its presence recognized upon the external face. Frog-face, as it is called, deformity growing out of lateralization of polypus, is diagramed in the cut.\* (Fig. 425.)

Polypi of the sarcomatous variety are found little amenable to treatment, even the most radical removal affording seldom any but a temporary relief. Injections of ergot, of iron, of different acids are not, as has been suggested, of questionable advantage; they are injurious to the greatest extent. The

FIG. 425.—FROG-FACE.

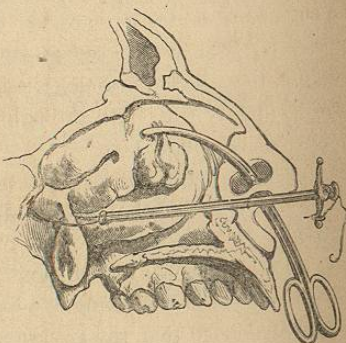


FIG. 426.



Polypus related with turbinated bone.

FIG. 427.



Illustrations of removal of polypi with the forceps, and with the canula and loop. See Fig. 437.

galvanic éraseur is alike objectionable, except with the markedly pedunculated growths.

Extirpation of sarcomatous polypi is practised variously. When situated well back in the naso-pharyngeal region, the origin being from the base of the skull, Langenbeck's procedure may be imitated; this consists in a depression

\* A cartilaginous tumor associated with the septum nasi or lateral cartilage finds an exact representation in this tumor. The two forms of growth are not to be confounded.

of the upper jaw. The writer on one occasion succeeded most satisfactorily in an operation performed in the naso-pharyngeal space by slitting the soft palate. Nélaton, the French surgeon, records operations practised by dividing both soft and hard palates. To do the operation of Nélaton, an incision is commenced in the soft parts and carried through mucous membrane and periosteum of the hard palate. Next the periosteum is carefully raised, a triangular exposure being made of the bone. A succeeding manipulation removes the bone to an extent necessary to reach the tumor.

Where a polypus of the naso-pharynx is not large, yet of a nature not to be excised from the nares, the "palatine button-hole" of Maune may be made. This "hole" consists of a simple section through the velum, leaving the uvula intact.

The operation of Langenbeck is done as follows: 1. An incision commenced at the base of the nasal ala and carried outward until it reaches midway of the zygomatic arch. 2. A second incision beginning at the centre of the root of the nose directed just below the inferior margin of the orbit, continuing over the frontal process of the malar bone until it meets the first at an obtuse angle. Beginning now at the apex of the triangle seen to be included in the incisions, the flap is dissected from its bed. Succeeding this, section is made of the periosteum in the line of the cuts, while the masseter is lifted from its malar origin. Using now the circular-saw of the surgical engine (though Langenbeck employs a narrow blade), the bone is to be cut horizontally from behind forward, leaving intact the nasal process. With the engine-saw no occasion exists to introduce the finger into the posterior nares as a guide, the position of the cutting edge of the saw being instantly recognized in the cessation of obstruction. The bone thus freed, except as regard is had to its relation with the central line of the face and its covering of soft parts, is to be pried out of its bed by a lever inserted between it and the os malare. The tumor, thus exposed, being removed, the bone and overlying parts are restored to their original location.

Fibrous polypi are secondarily dangerous as the cause of intra-cranial disease, being an excitant of coma, convulsions, abscess, chorea, asthma, emphysema, and cerebral affections.

5. NASAL ABSCESS.—As met with in the practice of the writer, nasal abscess has its seat most commonly in the septum. Cause is so persistently a strumous diathesis as to imply, for such cachexia, consideration in every case. Patients are almost invariably of the yellow class. Diagnosis is found in protrusion from the nares of a fluctuating sac. Treatment is both constitutional and local. The first is as heretofore directed; the second implies venting of the accumulated pus and the injection of stimulating lotions.

6. CONDITIONS DIRECT AND INDIRECT ASSOCIATED WITH OZÆNA.—Ozæna is an opprobrium of surgical practice. By some it is esteemed and treated as a parasitic disease; by others as an expression of a dyscrasia. At the head of the first of these schools is Dr. Massei, an Italian. Treatment

advised by that gentleman is as follows: *a.* Gradual dilatation of the obliterated nasal passages by means of elastic bougies; *b.* Cleaning and disinfection of the diseased regions by a very weak solution of salicylic acid (one part to five hundred parts of water), applied by means of a syringe; *c.* Modifying local medication, by blowing calomel powder through a nasal speculum on the ulcerated surfaces. The author says that there is always an arrest in the process of healing at a certain period, but advises strongly not to give up this treatment, but to continue it patiently until total cure is obtained. Dr. Fränkel (*Virchow's Archives*, vol. lxxxv.) gives a number of cases which he thinks will confirm the views of those who believe that ozæna always owes its origin to a dyscrasia,—two of his patients were phthisical, two syphilitic,—but he does not believe, though admitting the frequent coincidence of ozæna with pharyngitis sicca, that the diseases are in causal connection with each other.

To understand ozæna is to appreciate a circle of associations. The accompanying study is presented for the instruction of the student and the consideration of practitioners.

The term ozæna, like that of epulis, is a somewhat indefinite one, and is to be first viewed from the stand-point of its common signification.

Ozæna is from the Greek *ὄζειν*, signifying "stench," and the term is, therefore, in reality, applicable to any ill-smelling condition. By universal consent, however, it has been restricted in its application to foul expressions about the nares and associate parts, accompanied with offensive discharge. The study of ozæna, then, it will be seen, is, necessarily, a study of various conditions, and these conditions, experience will show, are classifiable under the following heads:

1. Accumulation and degeneration of the common antral secretion.
2. Degenerated pus from tooth-abscess discharging into the antrum, and from this appearing in the nose.
3. Ulceration of mucous membrane of the antrum.
4. Deteriorated secretions from constitutional causes.
5. Caries of the osseous walls of the antrum.
6. Ulceration of the mucous membrane of the nares.
7. Caries and necrosis of the osseous boundaries of the nares.
8. Lodgment and retention of foreign bodies.

1. The first of these conditions is most frequently observed in connection with the ordinary cold in the head. The outlet of the antrum, it will be remembered, is by an opening about the size of a goose-quill into the middle meatus, which opening is circumscribed by mucous membrane, and which membrane, as the result of congestion, can very readily occlude this outlet; the parts being in this condition, it may happen that the pent-up mucus degenerates and decomposes, so that, on the subsidence of the swelling, the escaping discharge presents an offensive odor. To diagnose this character of ozæna, it is only necessary to connect it with the preceding inflammation, with the absence of specific conditions, and with the readiness with which it

yields to simple treatment. Of course there would have been a preliminary feeling of the sense of congestion on the part of the patient; he would have had, to express it most simply, a cold in the head, and this cold, with its accompaniment of dryness and constriction, would have grown worse, until, with the appearance of the discharge, relief would have been experienced,—the discharge implying the passing away of the congestion and the restoration of a normal circulation and secretion.

To cure this form of ozæna requires very little treatment,—indeed, in most cases no treatment at all. The author is in the habit, when the discharge continues longer than two or three days, of directing the sniffing up the nostril of the affected side some such combination as the following:

R.—Ætheris sulphurici, ℥j;  
Tincturæ iodinii, ℥ij;  
Olei juniperi, ℥j. M.

If this fail to check the discharge, such constitutional treatment as seems indicated is to be directed. Patients in whom such drain exists belong to one of two classes, the plethoric or the anæmic. With the first, the treatment demanded is depletory: a dose or two of sulphate of magnesia will generally be all that is demanded; although in a few instances it is found necessary to bleed from the veins. With the second class—and this is by far the more numerous—the mucous membrane of the part is found fallen into a condition analogous to the urethritis of chronic gonorrhœa; in these cases tonics are at once to be resorted to; the common combination of iron and quinia is perhaps the best that can be prescribed:

R.—Tincturæ ferri chloridi, ℥j;  
Quinix sulphatis, ℥j. M.

Sig.—Fifteen drops in water every three hours.

2. Fetid discharges depending on tooth-abscesses—abscesses which vent into the antrum—find their cure, as a rule, immediately on the extraction of the diseased organ. If this prove not to be the case in any special instance, then injections are to be made through the tooth alveolus. Iodine is an admirable base for all such injections. It is desirable practice to control the odor with the permanganate of potash.

R.—Potassii permanganatis, ℥ss-j;  
Aquæ, ℥viiij. M.  
Inject as occasion requires.

It would most likely be quite sufficient to use the disinfectant three times a day. After it the following may be thrown in:

R.—Tincturæ iodinii, ℥j;  
Glycerinæ, ℥j;  
Acidi tannici, ℥ss;  
Aquæ Colonix, ℥j;  
Aquæ destillatæ, ℥ij. M.

- Or,  
 R.—Tincturæ capsici compositæ, ℥ss;  
 Aquæ rosæ, ℥viiij. M.
- Or,  
 R.—Argenti nitratis, gr. xxx;  
 Aquæ, ℥vj. M.
- Or,  
 R.—Vini opii, ℥j;  
 Vini aromatici, ℥j;  
 Aquæ, ℥vj. M.

Indeed, any stimulant preparation may be resorted to, although experience favors particularly the use of iodine.

3. Ozæna from ulceration of the mucous membrane of the antrum is not a condition of frequent occurrence; without doubt this is the case where no specific disease, as syphilis, scrofula, or scurvy, exists, so that, meeting with such ozæna, we naturally at once revert to the constitutional condition. To discover an ulcer within the antrum is a matter for diagnosis by exclusion, and thus to expose it is not at all a difficult matter. If there be no diseased teeth or teeth-roots, no nasal ulceration, no antral dropsy, no acute preliminary conditions; if the fetid matter flow most freely when the suspected antrum overlies its nasal outlet, then we will generally be right in inferring an ulcer of the antrum; but an ulcer in the antrum is not necessarily a cause of ozæna. To give this fetid odor, it must be an unhealthy ulcer, by which is meant that it tends to degenerate its granulations, rather than to organize them. An ulcer, says Mr. Cooper, may be defined to be "a granulating surface, secreting matter;" and this is certainly true of most ulcers, particularly if we replace the term secreting with the term making; for the matter given off is nothing but degenerated lymph-corpuscles, to which the parts lacked strength to give force of organization. A healthy ulcer is to be seen in any accidental sore tending to rapid self-cure: there is in these cases little or perhaps no pus, for the reason that every particle of the exuded lymph of repair has in it vitality sufficient for its organization. An unhealthy ulcer, on the contrary,—and by such an ulcer we mean an adynamic one,—gives off more or less matter; it throws out its reparative lymph just as does the healthy one, but the viability of such lymph differs materially from the exudation of the former ulcer. Thus, according to the nature and character of such degeneration, we have the produced pus: ichorous, a thin, watery, acrid discharge; scrofulous, a cheesy, curdlike pus; sanious, a thin, sily discharge; glutinous and viscid, as in sordes, etc.

Now, whether any or all of these kinds of pus give the fetor of ozæna, depends on circumstances; not the least important of which is the state of the atmosphere, and the condition of cleanliness preserved. Laudable pus, issuing from a healthy wound, will, in hot weather, become quite offensive in a very short time, as is, unfortunately, too freely illustrated in hospital practice. Certain ulcers are, however, in themselves offensive. Every one has

had occasion to observe, at some time or other, the disgusting odor arising from the saliva of particular persons,—constitutional ozæna it may with most propriety be termed. The writer recalls, even to this day, a certain school-master, the stench of whose spittle, employed to rub sums from his slate, always made him sick. This kind of saliva, and this odorous ulcer, belong to the alkaline class of people. Give such persons acid: they always need it; there is no exception.

A simple ulcer of the sinus—that is, one not associated with osseous diseases—is to be treated in the twofold direction of its constitutional and local requirements. To treat an ulcer scientifically, calls for an understanding of the conditions on which ulcers in general depend; and as ulcers of various significance so frequently present themselves about the mouth and throat, it is not a digression to make a hasty review of so enlarged and important a subject.

Ulceration is the absorption or the breaking down of some constituent part of the body. Its great cause is inflammation. Inflammation is always preceded and excited by irritation. The term irritation is a comprehensive one, and covers every source of offence to which the human body is subject. Thus, one man has an ulcer, the result of an inflammation excited and perhaps kept up by the presence of some foreign body, as, for example, a ball, a splinter of wood, a particle of dust, etc. A second man has an ulcer, the result of a localized inflammation, predisposed by the presence within his system of some specific taint. These ulcers, a glance would exhibit, must vary widely in their character, and even more so in treatment demanded for their cure. Thus it is that we speak of, and think about, ulcers in the way of their significance. We have simple purulent ulcers, venereal ulcers, scrofulous ulcers, scorbutic, varicose, and cancerous ulcers; the character of each being expressed by its adjectival prefix. A simple purulent ulcer is a sore, the result of some local accident, and is, most likely, self-curing; a venereal ulcer is one excited and kept alive by the presence in the system of the venereal poison; the scrofulous, scorbutic, and cancerous alike depend on dyscrasic conditions; the varicose on certain obstructions in the venous system, etc. To secure a cure in the first of these classes of ulcers, nothing more is necessary than to protect them from adverse influences. A varicose ulcer, to be cured, must be converted into a simple one by treatment directed to the trouble in the circulation; a cancerous, scorbutic, or scrofulous ulcer is only to be permanently cured by obliterating the cachexia. There is nothing obscure in the appreciation of these facts; the difficulty is in meeting the indications. Ulcers, it is true, are presented under a great variety of names; but these variations have reference only to differences in expression. Thus, a carious ulcer implies that the condition is dependent on the presence of dead or dying bone; a callous ulcer is one having indurated circumference; a fungous ulcer is one where the granulations of repair are in excess; a sinuous ulcer is one constituting the orifice of a canal leading to a deeper than the manifested disease; an irritable ulcer is one that, from internal or external causes, has

become tender and excitable; a phagedenic ulcer is one that tends to take on gangrenous action; a sordid ulcer is one discharging a dirty-looking glutinous matter; and so on, each of the many appellations being simply expressions of distinctive peculiarities. Now, one man, having syphilis, gets a rheumatism in his joints; another an ulcer on his tibia. In these two cases the important features of treatment are alike: both patients must have antisyphilitic medication; local applications are simply adjuncts. An ulcer, simple in its character, situated over or upon some part in frequent motion, is apt to assume the irritable aspect; an ulcer the result of an idiopathic influence, if occurring on a person of weak or typhoid condition, is almost certain to assume the chronic or indolent form; an ulcer engrafted by external cause on a depraved constitution as always more or less influenced by the vice, and such vice is to be considered in its treatment; and so, whatever the extent of the review, this wide collateral relationship keeps itself in the foreground.

To return to ulcers in the antrum. We are prepared to recognize that such sores may be of various signification, and may, for their cure, demand a various character of treatment. So far as odor is concerned, all will alike be benefited by a primary treatment of cleanliness and antiseptic injections. To correct the fetor in a chronic case, it generally becomes a necessity either to trephine the canine fossa, or to extract one of the underlying teeth and get into the cavity through its alveolus: the latter mode is decidedly to be preferred. A plan, however, that may be tried, consists in keeping a tuft of cotton or fine sponge in the nostril, and frequently saturating it by the sniffing into it of an antiseptic. The entrance into the cavity, however, through the alveolus of a tooth is one of the simplest procedures in surgery, demanding only that the operator shall recognize the position of the sinus as influenced by the shape of the jaw. Any spear-shaped instrument will answer to make the opening: to keep it patulous, it is only necessary to introduce, after each operation or injection, a tent of cotton or sponge. As a medicament, the following combination may be employed:

R.—Acidi carbolici, gtt. xx;  
Glycerinæ, ℥ss;  
Acidi tannici, gr. v;  
Aquæ, ℥vj. M.

Or,

R.—Spiritus vini, ℥j;  
Creasoti, gtt. x;  
Aquæ, ℥vj. M.

Or, as suggested on a previous page, the permanganate of potash in the proportion of from two to ten grains to the ounce of water, as indicated.

Phénol sodique, combining as it does antiseptic and alterative virtues, is one of the very best injections that may be employed in these cases. It is used diluted, as required.

Associated with such antiseptic treatment, and which is to be used in every

case of ozæna whatever its origin, we connect the specific or peculiar treatment demanded by each special case,—the appreciation of which treatment presupposes and necessitates the understanding of therapeutics in general, and can conform to no special rule.

It is true that for certain diseases certain remedies have come, perhaps unadvisedly, to stand too much in the light of specifics. Thus, in syphilis, the mercurials are depended on; so that, having an ulcer of such origin to treat, a medicine ordinarily prescribed is as follows:

R.—Syrupi ferri pyrophosphatis, ℥vj;  
Hydrargyri chloridi corrosivi, gr. iv. M.  
Sig.—A teaspoonful three times a day.

Or,

R.—Hydrargyri iodidi, gr. ij;  
Potassii iodidi, ℥ij;  
Syrupi sarsaparillæ compositæ, ℥vii. M.  
Sig.—A tablespoonful three times a day.

Mercury is to be considered as an active force, striking at the condition of syphilis, destroying it; and while it is very well thus to kill such a condition, it is quite as well to remember that the harm of the agent employed requires to be constantly met and antagonized. This is done by keeping up and supporting the system, so that it will commonly be found that syphilitic ulcers require, quite as much as a specific medication, wholesome food, fresh air, proper exercise, judicious bathing;—in short, the employment of every means that tends to the maintenance of general health.

In the mercurial ulcer of the antrum—which is far more common than the syphilitic,—the general and local use of the chlorate of potash is found to act very well. The medicine, dissolved in water, may be given in doses of ten grains, repeated four or five times a day; the injection is not to be less in strength than a saturated solution. The mercurial character of an ulcer is discovered by association of a local lesion with an existing dyscrasia.

Scrofulous ulcers are judged by the appearance of the sore, the nature of the discharge, and the existence of depression in the patient at large. A scrofulous subject, while not always bearing the clearest general evidences of the disease, usually has some one or more features that will allow of it being distinguished. Common features associated with scrofula may be enumerated as follows: the first manifestation occurs generally, not always, at the period of milk dentition, the symptoms being irregular appetite, an ill-smelling, inspissated mucus, and swelling of the superficial glands of the neck. Continued manifestations advance with age, presenting subcutaneous lymph effusion, particularly about the calves of the legs and the outside of the thighs; various eruptions, inflammation, and suppuration of joints, especially those of the hip, knee, and thumb; a flaccid, enlarged condition of the tonsil glands, susceptibility to atmospheric changes, inability to endure physical fatigue, impoverishment of the blood, general asthenia. Scrofulous