

in your general practice, you will be asked to make a diagnosis in these cases. It may be that you will have no difficulty in discerning between alcoholism and other forms of illness, such as apoplexy, uræmic coma, epilepsy, &c.; but experience teaches that it is only too easy to make a mistake, and therefore I advise you, if you have the slightest doubt in the matter, to keep or order the case to be kept under medical supervision. A few hours will suffice to clear up the uncertainty. This advice applies with double force to the medical officers of public institutions like hospitals and workhouse infirmaries. The public look with a jealous eye upon the management of places they are asked to support, and there is a tendency to presuppose abuses of offices of trust. It would be a grievous mischance if a house surgeon were, after dressing a scalp wound of a person partially insensible from apparent drunkenness, to restore him to the care of the police, and afterwards to find at an inquest that the case was one of apoplexy. Several such mistakes have occurred to my knowledge. I would not be hard on my professional brethren, but I cannot help thinking a certain amount of opprobrium for these errors is not altogether unmerited.

ON THE
NATURE AND TREATMENT OF HYPER-
TROPHIES AND TUMOURS OF THE
NASAL AND PHARYNGEAL
CAVITIES.¹

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DURING the last twenty years the knowledge of diseases of the nasal cavity and the methods of their treatment have been so much improved that they are not behind any other branch of surgery or medicine. The operative, particularly the electro-caustic methods, vie in accuracy with operations on the eye, and the results, as deduced from comparative scientific discussion, have been eminently satisfactory. This has been acknowledged by many members of the profession, notably by those, not a small number, who placed themselves under my care for troubles belonging to the category here to be considered. One of the commonest ailments is hypertrophy of one or other or both of the lower turbinated bodies. This affects most commonly the anterior part, and is not rarely so great as to close the nostril. It then leads to respiratory (nasal) inadequacy, and severe consequences to lungs, nerves, and constitution; it conduces to malformation of the septum from unequal pressure, and from bilateral pressure and ulceration to perforation and loss of the septum.

CASE 1.—A married woman, from Bradford, came under my care on Nov. 9th, 1886. Her nose had gradually become narrow, and entirely obstructed in 1885. On inspection the nose was found to be closed by the two hypertrophied turbinated bodies, which admitted only a probe, no speculum. I effected ablation of the bodies by electro-cautery. When about an inch of the right turbinated body had been removed, it was seen that the septum was perforated and extensively ulcerated all round the perforation. The left concha was now also shortened, and a completely sufficient passage through each nostril was established. The patient was placed under suitable treatment, and when I saw her on Feb. 1st, 1887, she had completely recovered the faculty of respiration through the nose with closed lips, had lost the nasal speech, recovered her sense of smell, and the ulceration was nearly healed.

CASE 2.—A gentleman, residing at Leeds, received a blow on the nose by a door. The nose bled inside and out, and was swollen. He then had inflammation in the ethmoid region with severe pain during five days, after which an abscess discharged into the nose. (This was surmised to be caused by a bad tooth, which was drawn without result.) The discharge and inflammation continuing, polypus formed, and at last the patient came under my care.

After preliminary removal of some polypi on Oct. 5th, 1886, both lower and middle right turbinated bodies were found greatly hypertrophied. The only respiratory passage was underneath the lower turbinated body, and this was liable to be blocked by the slightest cold or irritation. I therefore removed on Oct. 15th, 1886, ten days after the operation for polypus, the anterior part of the lower turbinated body. This produced an adequate respiratory canal, and the parts healed well. During the operation a relatively large quantity of pus was discharged from the ethmoid region, and it was necessary to deal with the parts in which the pus originated. On exploration some dead bone was found in the labyrinth and removed. By continued treatment the swelling diminished, and it could be ascertained that the middle turbinated body was enlarged to a bulla, filled with pus. I therefore cut away this bulla entirely by electro-cautery, and cleared the septum from adhesions up to the cribrous plate. Now the abscesses in the ethmoid cells—i.e., the labyrinth—were all laid open and discharged; the anterior and posterior healed quickly; the middle one persisted to discharge in a variable manner. The cavity could be explored with probe, and cleared with sponge. The patient was under treatment about six weeks, and left for his home almost entirely recovered, and well satisfied with his freedom of breathing.

Fracture of the anterior parts of the nose produces sometimes a distortion of the septum, which closes the nostril entirely, and may be mistaken for hypertrophied turbinated bones.

CASE 3.—Master J. K.—came under my observation with the results of this accident. I advised an early operation for this deformity, which, as all experience shows, will no doubt increase.

CASE 4.—A clergyman had suffered for several years from obstructed nose, and been operated upon for polypus by forceps a great many times. He had been asthmatic and was constantly hoarse, and fairly unable to attend to business. I removed a great number of deep-seated polypi from both sides, and obtained a good passage for the right nostril only. The left remained obstructed by a posterior growth, which could not be reached owing to hypertrophy of the lower turbinated body and of the septum opposite. I therefore removed, eight days after the first operation, the greater part of the left lower turbinated body, also the ridge from the septum, both with electro-cautery. When the patient blew through the nostril forward it became completely blocked; when he drew backwards it was quite free. The obstruction was an old, hard, strongly-attached, but movable polypus, which was seized, looped, and removed by electro-cautery. The operation was perfectly successful, and after some general treatment the patient resumed his duties, with nose and vocal organs perfectly restored.

CASE 5.—A gentleman, aged twenty-four, was introduced to me by Mr. Tegart. He had been much treated by powders, lotions, and other means, douche, &c., for a discharge from the right nostril, but without effect. The right lower turbinated bone was greatly hypertrophied and pressed the septum in a deep excavation to the left. In the left nostril the septum was hypertrophied below. On July 9th I removed the right anterior lower turbinated body by electro-cautery, also the excrescence from the septum in the left meatus. The results of the operation (at which Mr. Tegart was present) and of the after-treatment were excellent.

CASE 6.—An officer of Cuirassiers in the German army, came to London to be under my care in the course of the summer of 1886. He had for some years suffered from nasal obstruction, which had so altered the sound of his voice as to greatly interfere with his efficiency as a commander. He had been under the care successively of three so-called specialists in Germany, and had in the aggregate been burned with the electro-cautery, superficially, over the lower turbinated body, more than forty times. He had been further tortured with attempts at dilatation of the nostril by the introduction of hard sticks of laminaria. This most painful treatment had the effect of producing a series of asthmatic attacks, of which some were dangerously severe. On examination I found the right meatus very narrow and contracted, the membranous part of the turbinated body scarred and contracted, but the posterior part hypertrophied, osseous, and touching the septum, which was itself hypertrophied and kinked towards the turbinated body. I effected removal of the hypertrophied part of the turbinated body and ablation of the prominence of the septum. The

¹ Substance of a paper read before the West London Medico-Chirurgical Society, Feb. 4th, 1887.

patient declared that the operation gave him complete and absolute relief; he lost the nasal tone of his voice completely, and was at once, and has ever since remained, free from all symptoms of asthma. Having in the autumn of 1886 passed, during two months, through the most active part of the manoeuvres of the German army, he observed some respiratory inadequacy in his left nasal meatus. He therefore came to London in the spring of the present year to have the left meatus operated upon in the same manner as the right one had been. The effect was as satisfactory as that of the previous operation, and the patient is now restored to perfect health and efficiency, and his sense of smell is rather more acute than it was before the operation, and is in every sense complete.

CASE 7.—An Irish gentleman and landowner, aged forty-three, who had been suffering for twenty-three years, and had been operated on twice ineffectually, applied to me for treatment. I removed from each nostril a number of grotesque polypi; and from each a large ampulla, with many polypi attached, being the dependent part of the middle turbinated body. In this case both the respiratory and olfactory meati were reestablished in eight days, and the patient made a perfect recovery.

CASE 8.—A young gentleman, aged twenty-three, from the west of England, had suffered for six years, had endured two unsuccessful attempts at operation, and used much iodine in glycerine as a paint to the inside of the nose. The ethmoid region contained many polypi, and both middle conchæ were much hypertrophied and covered with out-growths; the septum was bent to the left and thickened in left and right meati on prominent parts. I removed both upper turbinated bodies and all polypi, and restored to the patient a more comfortable breathing passage than he had ever had before. This was the more important for him, as his local trouble was no doubt caused by an inherited tuberculous diathesis, which had already invaded the right lung. The patient resided during the winter in Malta.

CASE 9.—This case was that of a girl, aged four years and a half, whom I saw in consultation with Mr. Cripps Lawrence. Both lower turbinated bodies were enormously enlarged and pressed the septum in the opposite direction. There were also enormously enlarged tonsils. In this case a plan of treatment was adopted to reduce the hypertrophy by medicine. Such cases are frequent, and rarely admit of operation in the nose before the patients are of nearly adult age.

CASE 10.—A clergyman from the country had suffered for many years from obstruction in the nose, and had been operated on many times without much advantage. After clearing away some polypi, I found an enormously enlarged right turbinated body. This I removed entire, as it not only obstructed its own meatus, but the left one also by pressure upon the septum. When the bulla was cut through, pus escaped, and it was now seen that the entire swelling was, in fact, an encapsuled abscess. This case is further remarkable on account of a variety of nervous symptoms, which disappeared entirely after the operation: cerebral confusion with hemianopsia, beginning of spasmodic fits without loss of consciousness, and spasm of the pylorus. The etiology pointed to measles as the first cause of the chronic illness. The patient is now practically well.

These cases are a sufficient support of the thesis—which I could sustain by a very large experience—that in cases of chronic hypertrophy of any of the four (lower) turbinated bodies, causing obstruction or accompanying neuroses, ablation is indicated, and is in most cases the only means of effecting a cure. I have experience of cases which have remained well for ten and fifteen years. Not a few patients, having had relief in one nostril, came after a period to obtain the same relief in the other, as did the patient in Case 6. These cases demonstrate that to call such operations either unnecessary or unjustifiable, and their result a mutilation, is not only contrary to common sense but to actual fact; for these persons were mutilated by their disease, and restored to health by the operation.

The reflex neuroses caused by nasal and naso-pharyngeal disease have engaged my attention and been treated in my publications since 1865. They are spasmodic sneezing, lacrymation, asthma of various forms, hemianopsia, convulsive twitchings, mydriasis, spasm of pylorus, vertigo of such intensity that the patient may fall in a semi-conscious state, disordered sense of smell (a condition which causes to the patient olfactory delusions), and others. In such cases (German and American specialists have practised superficial

cauterisation in the nasal cavity, frequently with such evil effects as were described at the International Medical Congress in London six years ago. In opposition to these surface cauterisations, the result of which is so well illustrated in Case 6, I maintain that if a diseased or hypertrophied part of the nasal cavity can reasonably be supposed to be the exciting cause of any reflex neurosis, it should be removed by abscission. I say exciting cause, for they are but rarely the absolute cause. For most so-called reflex neuroses, said to be, and apparently being, connected with nose-disease, are only partially so or in a certain sense—that is to say, both nose disease and neurosis or nerve complaint have a common dyscratic origin, tuberculous, scrofulous, enthetic, scarlatinous, morbillar, variolar; and without such a constitutional (in the last three cases sequellar) basis the reflexes are never produced. That the local disease acts as an exciting cause is proved by the disappearance or mitigation of the neurosis after the removal of the local disease. This local disease must, of course, be clearly and unmistakably developed. To burn a healthy concha because a person is liable to asthma is more likely to provoke and aggravate, or, as in Case 6, to literally produce, than to heal it. Indeed, this surface burning in the nose, which has been so much abused, particularly in Germany, is already being found out, and some of its admirers in this country now admit that "it was calculated to raise expectations which are likely to remain unfulfilled."

I must again point out the superiority of the electro-caustic over any other method of operating in these cases. A battery of seven large Grove cells with platinum plates, an oxyhydrogen lime-light, a complete special armamentarium with best platinum wire, and a good assistant are indispensable. What becomes of cases in which the condition laid down by large experience are left unfulfilled can be seen by the following records.

CASE 11.—A young woman, aged twenty-three, suffering from multiple polypi, was treated in a country hospital for eighteen months as an out-patient. The polypi were attacked with forceps at first once a week, later on once a fortnight. No passage was ever produced, and the patient went to a London special hospital. In this she remained as an in-patient during four periods of three months each, spending the intervals necessitated by the rules in a convalescent home. Thus this patient had been under treatment for two years and a half, and had the forceps in her nose an unknown number of times—on at least 200 occasions. This person was freed from her polypi by my method in two sittings, and has now returned to service quite recovered.

That the instrument ordinarily termed a "snare" may become a delusion the following case will clearly show:—

CASE 12.—A gentleman had been suffering from polypus in the nose for several years, and had much hemicrania; he had partially lost his sense of smell, but he could recognise oil of aniseed and tincture of camphor, though he could not distinguish other tinctures, or Barbadoes aloes, or extract of conia. He had been operated upon, but almost unsuccessfully, only some pieces of tissue being removed. I found the right meatus filled with growth and hypertrophy. I removed all polypi, also a bulla, or enlarged dependent hollow lamina of the middle turbinated bone. Only after this was I able to diagnose and remove a posterior naso-pharyngeal polypus more than an inch long; after that a racemose polypus from a cellule of the labyrinth and an abnormal cavity below was removed; upon this the cellulæ of the labyrinth discharged much thick pus. The removal of the last two polypi met with an unexpected difficulty. I felt something metallic, which I seized with a hook and a parallel forceps, and found it to be a piece of iron wire two inches in length. This had probably been in the nose eight months, or since the last operation with the snare; at least the patient, a considerate, calm, educated man, had no other means of accounting for its presence. The large posterior polypus was cystic, lost its serum when opened, and collapsed, and when refilled with water had the size of an inch of a man's little finger.

Cocaine hydrochlorate in the form of a watery solution of 25 per cent. strength, used as a spray, has been of great service in preventing or diminishing local pain during these operations. General anæsthesia frequently compromises the success of nasal and pharyngeal operations, and should be avoided.

CASE 13.—A patient had been operated upon for polypus by the aid of the forceps frequently, and had been under

anæsthesia by chloroform for this purpose, as he stated, at least thirty times. Yet he had never been liberated, and his nostrils were filled with polypi. From these he was freed by electro-cautery, preceded by cocaine, in two sittings. Only very short operations in the anterior part of the nasal cavity can be safely or successfully undertaken while the patient is under the influence of general anæsthetics.

NOTES ON STERILITY.

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EVERY occurrence in nature is the result of some pre-existing influence. The former we have agreed to call the effect, whilst the latter is called the cause. Nothing is accomplished by a sudden act of transition; Nature never executes her workings by fits and starts, although this may at times appear to happen. Interdependence is ever avowedly maintained. In the animal kingdom especially are these facts revealed, whether the end attained be one likely to prove beneficial to or exert a prejudicial influence on the species. In the whole organic world change is wont to be gradual. Creation and destruction keep pace with each other, and wherever there is life we witness co-etaneously gradual death. The process of generation manifests the same phenomenon. Between that state favourable to the production of a numerous offspring and that culminating in complete sterility there exists no distinct line of demarcation; so gradually, in fact, do the two states glide into each other that we are wholly unable to say where the one ends and the other begins. In the vegetable and animal kingdoms alike we encounter every degree of fertility.

The reproductive function, no matter how fulfilled, is wrapped in obscurity, and full of the greatest complexity, yet from a scientific point of view teems with questions of the deepest interest. Take, for example, the well-known yet mysterious influence of a first coitus on the progeny resulting from several succeeding sexual congresses. A purely-bred Arabian mare was covered by a quagga, the offspring resulting therefrom being a hybrid. Never afterwards did the quagga have an opportunity of covering this mare, yet each succeeding progeny, although begotten by an Arabian black horse, continued for some time thereafter to evince characteristics of the quagga, the hair of the mane especially being like that of the quagga, short and stiff. In this case the first coitus affected in a most marked and wholly inexplicable manner the offspring of the Arabian black horse. So potent may a single fertile coitus prove to be that it may continue to exert its influence for long afterwards, and this in cases beyond all doubt. I merely adduce this evidence in support of the tenet already expressed, that the whole question of reproduction is full of complexity. In order, however, that we may, as far as possible, have a clear conception of the multifarious influences for ever at work tending to induce sterility, we must approach the subject and attempt to elucidate revealed facts with a mind free from all bias, for in this way alone shall we serve the end of science by encouraging truth. Mistakes, be it remembered, more frequently arise from lack of observation than as a result of sheer ignorance.

In man and the majority of animals, perpetuation of the species is maintained by a process of gamogenesis, by a coalition and further segmentation of the germinal elements produced by two sexually distinct individuals. This participation in the act of generation by two parents necessarily hinders us in our investigations regarding those causes which, constantly at work and liable to the greatest variation, act and react directly or indirectly on the reproductive organs. In the case of the male parent all interest actually ceases with the emission of the sperm element; whilst the mother, on the other hand, not only produces the other germinal element, but must retain and nourish the impregnated mass for a more or less definite length of time—until, in fact, the resultant shall have reached that state of developmental perfection enabling it to maintain an independent existence. An inquiry, therefore, into the causes of sterility must not treat merely with the glands concerned in the production of the germinal elements and the relative affinities of these elements for each other, but deal also with those conditions, constitutional it may be, which directly or indirectly

interfere with the functions of the whole reproductive tract and the competent fulfilment of its requirements. When we remember that the female plays the all-important part and for a continued length of time in the production of offspring, it is not at all astonishing that we should so frequently find authors disposed to attribute the cause of failure in the sexual congress to become fruitful to some occult influence at work on the part of the mother. This admission does not, however, imply a need for the detection of some structural change in the organs of generation in a female who, because she has legitimately indulged in sexual intercourse for years, has never become pregnant. This, I need hardly add, is too commonly revealed, and simply as a result of defective observation. In the majority of such cases the alleged alteration in structure has no other than a mere fanciful existence in the mind of the observer himself. Let us not, therefore, be carried away too readily by a semblance of brilliant results obtained apparently by a too meddling interference, for careful observation teaches us that the good which follows is as a rule the outcome of an enforced sexual rest. In order that any organ of the body shall continue to perform its functions healthily, time must be allowed for the structure to regain its vigour after each period of activity. If sufficient rest be not obtained, the function becomes impaired and the structure itself may eventually undergo change because of a maintained vascular turgescence. An immoderate indulgence in sexual intercourse, or an artificial mode of gratifying the passion, tends to induce a state of sterility, and the possibility of conception is favoured by complete sexual rest followed by a moderate indulgence in the act.

In the human race there are so many factors for ever at work in the social life and habits of the individual which thwart us in our endeavours to elucidate questions bearing on the reproductive functions, that our chief information regarding those causes which tend to induce a sterile state must be obtained from facts afforded us by the whole organic world, whether it be vegetable or animal. Lately I saw a patient who, at the age of thirty-six, had given birth to her first child. Although living a marital life for eight years, she had never before been pregnant. In this case I found on interrogation the delay in conception was the result of the adoption on the part of the husband of a simple but well-known mode of protection, and this because of a mutual desire on the part of the husband and wife to be free from the cares of a family. That certain physical states occurring in the organs of generation hinder conception is apparent to everyone. They are, however, not only manifestly over-rated, but in many cases purely imaginary. Rarely, for example, if ever, do we find the lumen of the cervical canal of the uterus so narrowed in a female, otherwise reproductively healthy, as to be a fertile cause of sterility. In order that this may receive some credence, it may be well to consider the train of events consequent upon impregnation in the bird, as throwing some light upon the location at which in the reproductive tract the sperm and germ cell meet and coalesce. In birds, the egg, after fertilisation becomes coated with a calcareous product—the shell, which serves to protect the contained mass from all extraneous influences to which during the process of incubation it may chance to be exposed. This is the result of no mere acquisition on the part of the female bird, otherwise it must have foreseen the prejudicial influences to which the unprotected mass would have been exposed and have been capable of combating effectually such dangers. The secretion of this calcareous incrustation takes place in the lower and somewhat dilated portion of the oviduct, in a part comparable with that which in the human female becomes uterus. If the oviduct fails to fulfil its function in producing this chalky deposit, the unprotected mass cannot be brought to maturity, and the failure must be viewed as a degree of sterility. Prior to the deposition of the shell, however, the impregnated mass receives also an albuminous covering derived from the upper and tortuous part of the oviduct. In the case of the bird therefore, and all animals with a similar reproductive tract, the germinal elements coalesce somewhere about the free extremity of the Fallopian tube. The sperm cell in the human female travels a tube of very narrow lumen; so long therefore as the lumen of the cervical canal continues equal to that of the oviduct, it will not *per se* offer any very serious obstacle to conception.

In all animals the reproductive organs, it would appear, are highly sensitive, the most trifling changes in the habits