

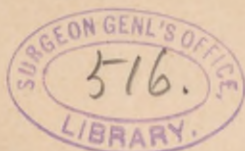
RADCLIFFE (S. J.)

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Foreign Bodies in the Nasal Cavities.

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Foreign bodies in the nose may be confined to those regular, or irregular, more or less solid substances, or masses, introduced or fixed in the nasal fossa either by accident or design, which may remain there only temporarily, or be lodged undiscovered for years—even for twenty years or more as has been reported—without material inconvenience. If the condition has been caused by accident, it is only secondary, as the dropping of a ball, by gravity, from a gunshot wound in the superior maxillary space or vault of the pharynx; if by design, it usually occurs in young children or in those of a lower order of intelligence.

The character of the body introduced may be either round and smooth, as peas, beans, corn, leaden or other balls, or shot, or buttons of various kinds, with or without shanks, and many irregular substances, as pieces of slate pencil, small ornaments or sticks, or anything the child may be playing

with or handling at the time. Larvæ of flies or insects as an accidental cause may also be added to this catalogue, and may play an important part in the obstruction of these cavities.

The foreign body may be loosely inserted or it may become more or less impacted according to the length of time it remains in position—the degree of impaction depending upon the amount of irritation produced, and the infiltration and swelling of the tissues surrounding the foreign body; the degree of swelling and imbedding will govern to a great extent the diagnosis and treatment. The body may be visible by anterior or posterior rhinoscopic examination, or it may be so hidden from view in some by-sulcus by the swollen condition of the mucosa and submucosa, as to be entirely unrecognizable or unobserved.

If observed early, at the time or soon after the occurrence, the body may be usually removed at once without

difficulty, but if the substance introduced is of a vegetable nature, capable of absorbing moisture, as beans, peas, or corn, the swelling of the body may increase the difficulty of its extraction to a very great degree—indeed sometimes rendering it impossible to do so as a whole without great injury to the surrounding parts. If the body should be solid, as of the nature of large glass beads or small shells, it may slip aside out of view, cause no uneasiness, or impediment to nasal respiration, and may remain in such position without special attention being paid to the condition for a number of years, when suddenly a discharge is set up more or less offensive, ozena being suspected. an examination is made, and for the first time its cause ascertained.

In this state, after the body has remained in situ for a considerable period, concretions slowly form about it, as a nucleus, precipitated, little by little, from the salts of the normal or abnormal flow of mucus, and produce those rather rare irregular masses, or rings, called rhinoliths, occasionally found in operations in the nasal cavities, and about which so many curious things have been stated. I say rare because Mr. A. F. Clay, Casualty Surgeon to Queen's Hospital, Birmingham, says in the *British Medical Journal*, Feb, 12, 1887, p. 338, that nasal calculi are so extremely rare that so far as he could ascertain only 46 cases had been published since this condition was first discovered in 1502. Many more cases might have been, and may still be added to the list, no doubt, if the proper examinations had been made, and if they continue to be the rule in all cases where foreign bodies are removed from the nose.

To show some of the peculiarities of these foreign bodies, the concretions that form about them, and the long

period they may remain in the nose without causing any great disturbance of respiration or detriment to health, I quote the following cases in illustration: An English woman, aged 30, recently arrived in Canada (Reported to the Medical Chir. So. Canada, May, 1890, see *Medical Journal*, July 19, 1890, p. 185) came under the care of Dr. Mayor, of Montreal, last spring. She was suffering from nasal obstruction and attributed the difficulty which she experienced in breathing to a catarrhal condition, the result of climatic causes. On examination the right nostril was seen to be occluded by swelling of the mucous membrane, and the turbinated bones. When, however, a probe was passed for exploratory purposes, a foreign body of large proportions was encountered. Cocaine was applied, and after some difficulty, a rhinolith was dislodged and drawn after some trouble out of the nostril. It measured about three-quarters of an inch, by one-half inch in length and weighed about 38 grains. The patient remembered that when six years old, she had introduced a number of small sea shells into the nostrils, but always had believed they had all been removed. The patient's husband, who had been acquainted with her from infancy, authenticated the incident about the shells. The rhinolith was crushed, fragments of a pearly nature being easily distinguished. Thus a foreign body had occupied the nasal cavity for about 25 years without exciting suspicion. When examining the patient, no unpleasant odor was detected, nor was the lip excoriated as is usual in similar cases.

Dr. Hays relates a case in the *Trans. College of Physicians of Philadelphia*, of a lady between 25 and 30 years of age, who consulted him for ozena, with which she had been troubled since

childhood. Her disease resisted several modes of treatment, he discontinued his visits and lost sight of her. Four years subsequently, he said, she fell into the hands of Dr. Danach, who finding it intractable, determined to examine into the condition of the bones of the nose. With this object in view he introduced a probe into the nasal fossa, and while moving the instrument about he accidentally dislodged a mass, which dropped into the opening of the nostril, and by an effort on the part of the patient was expelled. On examination the nucleus proved to be an old fashioned glass button with a glass eye. The mother of the lady said she remembered that one of her sons when a child had a coat with similar buttons. Dr. Danach thought the lady, when a child, might have placed the button in her mouth, from the mouth it may have been lodged in the throat, and in an effort to cough it out, it was forced into the posterior nasal cavity over 25 years before.

Dr. Clay, of Birmingham, reports the case of R. F., aged 47, married, who had an unusually healthy life. Never had rheumatism or gout. At two years of age was thrown from a wheel-barrow on his face and for many years afterward had an unpleasant discharge from his nose. As long as the patient can remember, his breath was offensive to others, especially when he caught cold. Had never had any difficulty in breathing. During the past two years had complained of almost incessant headache and there has been a perceptible deviation of his nose towards the left side. While being examined there was marked tenderness, but no local pain otherwise, and none in his ears. No discomfort had been noticed from epiphora. There was considerable bulging of the right cheek and nostril, and the septum nasi was obviously

deflected to the left side. From a casual glance the patient's appearance suggested that a tumor growing from the antrum had extended inwards. From the anterior nares a brown substance could be seen in the inferior meatus, and this when examined with a probe, was found to be rough and hard. The left side was free to the passage of air, but the right was completely blocked, the mucous membrane being very much tumefied. The patient was chloroformed, and with a pair of curved polypus forceps it was brought away. Hemorrhage was inconsiderable and no necrosis could be detected. The stone was like an isosceles triangle, rough, one and one-half inches in length, and its weight, when dried, was 110 grains. On cutting its base (although only half of its shell remained and was altered in physical character) the stone had every appearance of having originated around a cherry stone which had been introduced some time previous to the accident, 45 years before.

At a meeting of the St. Petersburg Medical Society (*Vratch*, No. 1, 1887, *British Med. Jour.*, Feb'y 27, 1887), Dr. Stitch showed calculi which he had removed from the nasal cavity of two patients suffering from lupus of the nose with offensive discharge, in the one case of four years', and in the other of two years' duration. In one of the stones the nucleus consisted of a piece of dead bone, the other not ascertained.

In the Brighton and Sussex Medico-Chir. Society, March 3, 1887, Mr. Caswell Baber read notes of a case of rhinolith occurring in a child of 12. There had been offensive discharges and bleeding from the left nostril for six years. In the left nasal passage which was impervious, and blocked with granulations, a hard body was detached about one and one-half inches from the

tip of the nose. On removal through the nostril, it proved to be a filbert-shaped calculus having a nucleus of tightly pressed folds of rag. No diseased bone was detected.

Larva of flies may also, as was said, be rightly included in the list of foreign substances in the nasal cavity causing obstruction, of which a number of cases have been reported in the journals. Dr. Jacobson, of Havana, reports a very interesting case of a man aged 27, who was admitted to the hospital of that city suffering from offensive discharges from the nose with intense itching and burning in the parts, which had lasted for months. He had several times noticed on blowing his nose that the mucus contained living maggots and on one occasion a small blue fly had come out of his nose. His voice was thick and nasal, so much so as to make his speech scarcely intelligible. The mucous membrane lining the nasal fossa was bathed in pus, uniformly congested, and ulcerated here and there. There was an irregular perforation one and one-half centimeters in diameter in the arch of the palate, making a wide communication between the nasal passages and the mouth. The edges were sharp and covered with pus. Irrigation with one per cent. carbolic acid, and then with benzine, removed the larva and relieved the patient. These cases are frequent in Havana he says, the fly entering the nostril while the men are at their mid-day siesta in the open air.

The causes of the retention of foreign bodies in the nasal fossa are varied and numerous, but, perhaps, the most prominent cause is that which depends upon their often irregular and sometimes abnormal anatomical construction. Deviations or deflections of the septum, unusual enlargement and deviation of the turbinated bones. Too much arch-

ing of the palate bones, or abnormal bands or folds of mucous membrane, or muscular structures forming irregular strictures, and sulci may tend to hide or clasp the foreign substance, and keep it in position when once located. Abnormal growths, as polypi and tumors, or tumefaction of the mucous and submucous membranes from subacute or acute inflammations, and intense rhinitis are important factors in the retention of foreign bodies in the nasal fossa, forming complications which may intensify the difficulty in both recognizing and treating the trouble.

Abnormal growths and polypi can usually be recognized if proper examination is made, and the differentiation can thus easily be established, the diagnosis made, and the cause of the obstruction ascertained,—though Christopher Heath says: (Bradshaw Lecturers 1892) "And yet mistakes are made in the diagnosis of polypus, and the commonest, in my experience, is that of taking the side of a deviated septum, or the anterior extremity of a hypertrophied inferior turbinated bone for a growth." And in regard to nasal pharyngeal tumors he says: "In rare instances, actual protrusions from the cranial cavity in the form of meningocele or encephalocele have been mistaken for naso-pharyngeal growth, and in more than one case have been attacked by the surgeon with fatal results."

The history of the case will generally suffice to show the cause of the nasal obstruction or results of the retention of foreign bodies in the nose. In recent cases the amount of constitutional disturbance is not great, but in chronic cases there is a series of reflex nasal neuroses associated with them which can hardly be mistaken. These conditions, it is true, may be associated with any abnormality of the nose, but this is particularly the case in old obstruc-

tions caused by hard substances. Heath says, Hack makes the nasal reflexes cover a sufficiently large field namely: gastralgia, and dyspepsia, cardiac palpitation, salivation, trigeminal neuralgia, cephalalgia, migraine, scotoma, ciliary neuralgia, photophobia, vertigo, and agraphia; while his followers give examples of epilepsy, neurasthenia and nocturnal incontinence. To these may be added exophthalmic goitre, asthma, and so-called hay-fever. There is frequently observed compression, hypochondria, drowsiness, lassitude, inability to keep the attention fixed, neuralgic headache, paroxysms of sneezing and these cases are always "mouth-breathers." As to exophthalmic goitre, Hack considers is due to "permanent irritation of certain peripheral terminal apparatus of the sympathetic nerve, which are expanded in the erectal tissue of the nose." The effect of such long continued local irritation is many times far reaching, and long obscures neurasthenic or parietic cases. Where the diagnosis cannot easily be made, a close investigation should be made into these cavities, in our search for its point of departure.

In regard to the relief of these cases, very much depends upon the condition of the patient, and the length of time the foreign substance has remained in the nose. When the foreign body is known, or supposed, to be lodged in the nasal cavity, thorough exploration should be made, and for this purpose the anterior nares should be well dilated, a strong light thrown in, and diligent search made with the eye, aided by a probe which should be moved about in all directions, especially in the neighborhood of the posterior part of the middle and inferior part of the turbinated bones. Sometimes by giving the probe a slight bend in the shape of a Eustachian catheter, a larger surface

may be reached, and the search materially facilitated. After a minute anterior examination, if what is sought for is not found, exploration by way of the posterior nares may be substituted, and with a good illumination, the reflected light of a rhinoscopic mirror is made to penetrate every crevice — care being taken that uvula and soft palate are sufficiently elevated to afford a good view. Exploration with the finger in the nasal pharynx often gives the very best results.

Sometimes before making examination complete anesthesia is necessary; and at other times, and in the majority of cases, spraying the interior of the nose with a 4 to 10 per cent. solution of cocaine will be all sufficient. It is always better before manipulations in the nose to obtund sensibility, as you can then work more deliberately, and with more comfort to the patient. If the object is placed in position to be seen, and it happens to be a button with a shank, I know of nothing better for its removal than an ordinary crochet needle or an instrument or probe similarly made. If it is some other round or regular body and it can be drawn into the opening of the posterior nares by causing the patient to blow his nose violently, it may be expelled, or a Bellocq's canula reversed through the posterior nares may force it out. If the substance remains *in situ* and cannot be dislodged, an attempt should be made to crush it — care being taken to prevent the particles from falling into the larynx. The ordinary polypus forceps will generally answer the purpose or if not, a stronger forceps should be improvised. If the body seems to be attached to the middle or inferior turbinated bone, as it is frequently is, it may be necessary to snip off the bone, partially or entirely, in order to remove it. It is rarely required to perform

any heroic procedure in these cases—the simple means indicated are all that are usually necessary.

After the removal of the foreign body, especially if much irritation has been

set up, free irrigation with a good antiseptic solution with or without cocaine should be employed. This should be kept up until all irritation has subsided.

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