RHINOLITHS

By R. F. McNAB JONES (London)

AN unusual rhinolith seen personally in an out-patient attending the Royal National Throat, Nose and Ear Hospital stimulated interest in the subject and suggested a review of similar cases occurring in this hospital since 1948. Most of the cases described below concern in-patients. Some cases treated solely as out-patients may have escaped the writer's notice.

CASE I

A.P., 59 years, F.

C.O. Past 30 years, intermittent right-sided yellow nasal discharge. In twenties remembers small piece of ? bone extruded from right nostril. No remembrance of introducing foreign body into nose.

O.E. Fœtor oris.

Nose—large rhinolith visible just posterior to anterior end of right inferior turbinate. Granulations on the septum around its anterior limit.

Nasopharynx—normal.

X-rays showed the rhinolith occupying the middle of the right nasal fossa with a more dense backward prolongation lying in middle meatus. Right antrum opaque (see Fig. 1).

Treatment. Small piece of anterior end of rhinolith removed under local anæsthesia at first visit. Attended one week later when all remaining rhinolith removed in several pieces. The last piece was a fragment of porcelain—possibly part of a porcelain doll.

Fig. 2 shows the pieces of rhinolith after removal and an attempt at reconstruction of the rhinolith on the basis of the X-ray appearances. Only the slightly rough anterior end of the porcelain fragment had become encrusted. The rest of it was smooth and unaffected after remaining in the nasal passage for probably fifty years. The rhinolith weighed 3·6 gm.

Progress. One week later all symptoms relieved.

Right antral puncture and washout—clear.

CASE II

A.W., 66 years, F. Case of Professor Ormerod.

C.O. Ten years left-sided nasal obstruction and discharge reddish pus. Epistaxis once. Left aural discharge past eight years.

O.E. Yellowish mass one inch inside left nasal passage—" like hard putty ".

Treatment. Removed under general anæsthesia partly through anterior and partly through posterior nares. The specimen is preserved in the hospital museum and has a foreign body nucleus of seed-like appearance.

Progress. All nasal symptoms quickly disappeared. She continued to have intermittent left aural discharge.

https://doi.org/10.1017/S0022215100047927 Published online by Cambridge University Press

Rhinoliths

Case III

F.B., 65 years, F. Case of Professor Ormerod.

C.O. Eighteen months, pain and copious yellow discharge left nostril. Occasional epistaxes.

O.E. Rhinolith under left inferior turbinate. Mucopus left side of nose. Left antrum opaque on transillumination.

Treatment. Under general anæsthesia rhinolith removed *viâ* mouth after probing into nasopharynx. Left intranasal antrostomy.

Progress. Three weeks later all symptoms relieved.

Case IV

C.G., 50 years, F. Case of Mr. Watkyn-Thomas.

C.O. Past twenty years, left nasal discharge—brownish and watery. Cacosmia.

O.E. Polypi left middle meatus: rhinolith suspected on left inferior turbinate.

X-rays showed rhinolith and opaque left antrum.

Treatment. Rhinolith too large for removal through anterior nares so removed *viâ* a Caldwell-Luc transantral approach. The rhinolith was examined but no foreign body nucleus was found.

Progress. Two weeks later all symptoms relieved and antral washout clear.

Case V

D.R., 22 years, F. Case of Mr. Watkyn-Thomas.

C.O. Always had right nasal discharge. Thinks she pushed piece of chain into her nose as child and it was never recovered.

O.E. Crusts right nasal fossa. ? hard mass on floor.

Treatment. Rhinolith removed in several pieces under general anæsthesia. Right antral puncture and washout—clear. Pressure atrophy right inferior turbinate. There is no note on examination of the rhinolith for a foreign body nucleus.

Progress. Continued to complain of offensive smell right side of nose, but appearance satisfactory and X-ray showed no sinus infection or residual rhinolith.

Case VI

F.K., 22 years, F. Case of Mr. Howells.

C.O. Nine years, rhinorrhœa, nasal obstruction, and anosmia, following S.M.R. Bilateral otitis media three years after S.M.R.

Treatment. Rhinolith removed from both nostrils (see Fig. 3). One was dissected and a metal wire nucleus discovered. The nucleus closely resembled a wire nasal dilator, and as she had such a dilator introduced into each nostril some years earlier it seems probable that these had been left in and become encrusted.

Progress. Two weeks after removal of the second rhinolith the nose was normal, and the ears dry.

https://doi.org/10.1017/S0022215100047927 Published online by Cambridge University Press

CASE VII

L.P., 47 years, F. Case of Mr. Howells.

C.O. Seven months, brownish discharge from right nostril.

O.E. Rhinolith on floor of right nasal fossa.

Treatment. No details of removal. Cartilaginous septum eroded.

Progress. All symptoms relieved.

CASE VIII

S.G., 9 years, F. Case of Mr. Howells.

C.O. Past six months, left nasal discharge. Cacosmia. Remembers putting button in nose aged five years.

O.E. A button was seen impacted beneath the anterior third of the left inferior turbinate—heavily encrusted.

Treatment. Removed under local anæsthesia.

Progress. No details.

CASE IX

S.S., 47 years, M. Case of Mr. Howells.

C.O. Many years history of unilateral nasal discharge and obstruction. Rhinolith removed ; had a nut nucleus.

CASE X

J.L., 20 years, F. Case of Mr. Dingley.

C.O. Past four months, discharge from right nostril. Slight epistaxes.

O.E. Soft rhinolith between septum and right inferior turbinate.

Treatment. Partial removal as out-patient. Later completely removed under general anæsthesia. Large rhinolith had eroded antro-nasal wall but no direct opening discovered into antrum. Right antral puncture and washout —clear.

CASE XI

C.D., 49 years, F. Case of Mr. J. Hogg.

C.O. Eighteen months, obstruction of right nostril with foul greenish discharge. Slight epistaxes.

O.E. Rhinolith in right nasal fossa between septum and inferior turbinate surrounded by granulations and pus.

Treatment. Removed under general anæsthesia *viâ* anterior nares. Right antral puncture and washout—clear. Small piece of cloth was nucleus.

Progress. Three weeks later all symptoms relieved.

CASE XII

L.W., 11 years, M. Case of Mr. Asherson.

C.O. Past four months, discharge from right nostril. Slight epistaxis.

O.E. Rhinolith far back right nostril with surrounding inflammation.

Treatment. Removed under general anæsthesia. Right antral puncture and washout—clear.

Progress. One week later all symptoms relieved.

https://doi.org/10.1017/S0022215100047927 Published online by Cambridge University Press

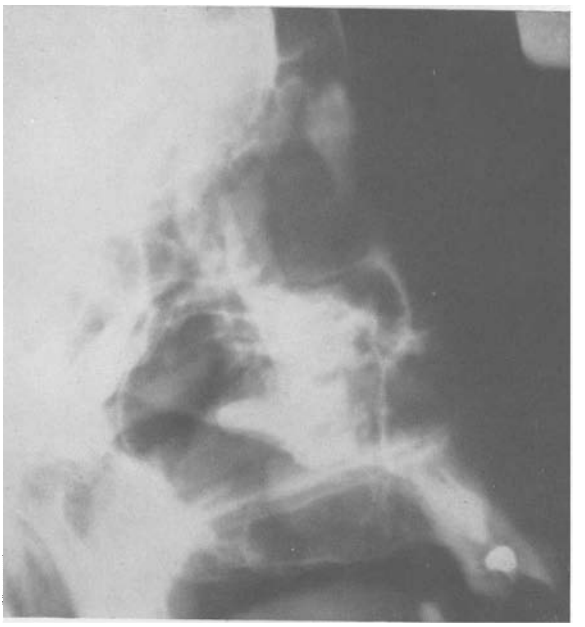


Fig. 1.

[face p. 464

https://doi.org/10.1017/S0022215100047927 Published online by Cambridge University Press

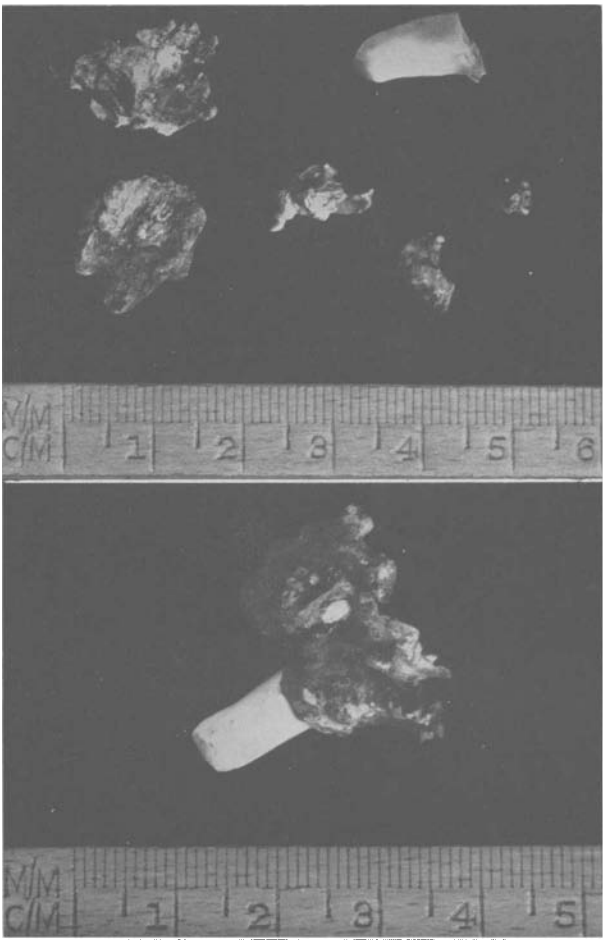


FIG. 2.



FIG. 3.

https://doi.org/10.1017/S0022215100047927 Published online by Cambridge University Press

Case XIII

H.S., 18 years, M. Case of Mr. Gill-Carey.

C.O. Always a cold. Frontal headaches.

O.E. Rhinolith left nasal fossa. Removed in out-patients. Foreign body nucleus—nut.

Progress. One week later all symptoms relieved.

Case XIV

P.D., 38 years, M. Case of Mr. Gill-Carey.

C.O. Three years, right-sided discharge. Left nasal obstruction. Cleft palate operation aged three years.

O.E. Fœtor. Septum deflected to the left, blocking airway. Crusts in right nasal fossa and hard mass palpated.

Treatment. Mass removed from right nasal fossa in pieces—last piece was lateral incisor tooth. S.M.R. After which more rhinolith removed from left nasal fossa.

Progress. Satisfactory. Marked improvement in mental condition.

A fuller description of the case has previously appeared in this *Journal* (see Reference, Walker A. S.).

Summary

Incidence. Without allowing for any cases of rhinolith which may have been treated solely as out-patients, and thus have escaped the writer's notice, the fourteen cases described above give an incidence of one case per 6,127 new patients seen at the hospital during the four years under review.

Sex. In ten out of the fourteen cases the patient was a female.

Symptoms. These were very constant. All the cases complained of nasal discharge, usually unilateral and purulent. Nasal obstruction and slight intermittent epistaxes were the other common symptoms.

Site. Six cases occurred in the right nasal fossa, five in the left, and in two cases bilateral rhinoliths were present. In those cases where the site was described in detail the rhinolith occupied the inferior meatus in five instances, while in three cases it lay between the septum and the inferior turbinate. In Case 1 it occupied the inferior and middle meatus.

Examination. Surrounding pus and granulations made the diagnosis uncertain in a few cases. It was usually confirmed by cocainization and probing—the gritty feel of a rhinolith being characteristic.

X-rays. These were valuable in confirming the diagnosis, and in showing the size and extent of the rhinolith and any accompanying sinus infection.

Nucleus. Of the cases carefully examined for a foreign body nucleus, one was found in eight instances. Case 6 is particularly interesting in this respect: the wire nasal dilators had become completely enclosed in deposit and formed a rhinolith in each nostril.

https://doi.org/10.1017/S0022215100047927 Published online by Cambridge University Press

Treatment. Removal was usually possible *per viâs naturales*. General anæsthesia was necessary in seven out of the fourteen cases.

Complications. Two cases suffered from otorrhœa on the same side as the rhinolith. Three cases showed evidence of infection of the homolateral maxillary antrum; this quickly resolved after removal of the rhinolith. In two cases surgical drainage was provided at the time of operation.

Progress. Complete relief of all symptoms occurred in all but four cases within one month after removal of the rhinolith.

Remarks

The incidence of rhinoliths in this hospital during the past four years leads one to believe that they are not so rare as suggested in previous articles on the condition. Key-Aberg in his classical monograph, after collecting cases from his own and another hospital over many years, could muster eleven cases. Polson in his exhaustive review of the literature on the subject up to 1943 discovered descriptions of 396 rhinoliths and estimated that 111 other rhinoliths might have been described in inaccessible literature. Since that time records of eight other rhinoliths have appeared. No doubt many go unrecorded, being considered of insufficient interest.

Polson estimated that 139 out of the 158 rhinoliths which have been carefully examined had proved to have a foreign body nucleus. The proportion in the above cases is roughly similar; namely 8:1. In Case 14 the foreign body was of endogenous origin.

The condition should be considered in a patient of any age who complains of unilateral nasal discharge. Diagnosis is made relatively certain if the nose is cocainized and then probed.

It is probably wise to X-ray all cases in which the extent of the rhinolith is not obvious, before attempting its removal.

If adequately treated prompt relief of all symptoms is to be expected.

The preponderance of the female sex may possibly be explained by their more passive attitude to physical discomforts.

Acknowledgments

I wish to thank Mr. S. E. Birdsall for his encouragement and help in producing this report, also those surgeons at the Royal National Throat, Nose and Ear Hospital who have kindly allowed me to publish details of the cases under their care. Dr. Lucas of the Pathology Department and members of the Pathology, Photographic and Librarian's Departments of the Hospital have been most generous and free with their help.

https://doi.org/10.1017/S0022215100047927 Published online by Cambridge University Press

Rhinoliths

REFERENCES

CUNNINGHAM, A. T., LORD, O. C., MANLEY, C. H. and POLSON, C. J. (1945) *J. Laryng.*, **64**, 21.

KEY-ABERG, H. (1921-22) "La Rhinolithase: Monographie et etude de cas", *Acta Oto-laryng., Stockh.*, **3**, 449-72.

POLSON, C. J. (1943) *J. Laryng.*, **58**, 79.

WALKER, A. S. (1950) *J. Laryng.*, **64**, 21.

https://doi.org/10.1017/S0022215100047927 Published online by Cambridge University Press