TWO SYMPTOMLESS RHINOLITHS*

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As Van Alyea and Makart (1952) remark, the discovery of a nasal calculus is an unusual and interesting experience, despite the fact that 400 cases have so far been reported. Even more unusual is the accidental discovery of a rhinolith on routine examination. The following cases were therefore considered worthy of note.

CASE NO. I

On *March 4th, 1953*, a male, L.C., aged 21 years, presented for routine E.N.T. examination having volunteered for regular service in the Royal Air Force.

He gave no history of any previous ear, nose or throat trouble.

On examination, anterior rhinoscopy disclosed what appeared to be a lump of chewing-gum in the left nasal cavity, lying between the septum and the inferior turbinate. Probing showed it to be stony yet friable, whilst the mass itself was not fixed, but slightly mobile.

There was nothing else abnormal in the ear, nose or throat.

The patient would not admit to any present or past nasal symptoms, nor could he recollect the insertion of a foreign body into the nose.

After skiagrams had been taken—Figs. 1 and 2—it was decided, in view of its mobility, to attempt removal of the rhinolith under topical analgesia. After the application of cocaine-adrenalin, the body was successfully extracted with the minimal abrasion to the nasal mucosa. Other than a moderate septal deviation to the right, no further abnormality was evident.

The specimen was submitted for a pathological report.

Radiography. An occipito-mental, an occipito-frontal and a lateral view demonstrated, in the left nasal fossa, an opaque body 1·5 cm. long, 1 cm. broad and 1·5 cm. high, extending as a lamella superiorly into the olfactory sulcus for another 1·5 cm. In addition, the frontal sinuses were absent.

Pathological Report. An irregular mass of crumbling, partially calcified material, hard on the outside and pulpaceous at the centre. It is light brown in colour. Weight, 2·1 gm.

Microscopically (*vide* photomicrograph Fig. 3), it consists of an irregular laminated shell of calcified material, which is not bone, on the surface of which lies a single layer of degenerate respiratory epithelium. The centre consists of completely amorphous granular material which does not stain by routine histological stain; it contains a few spicules of colourless material which has occasional transverse bands, suggesting a possible vegetable origin.

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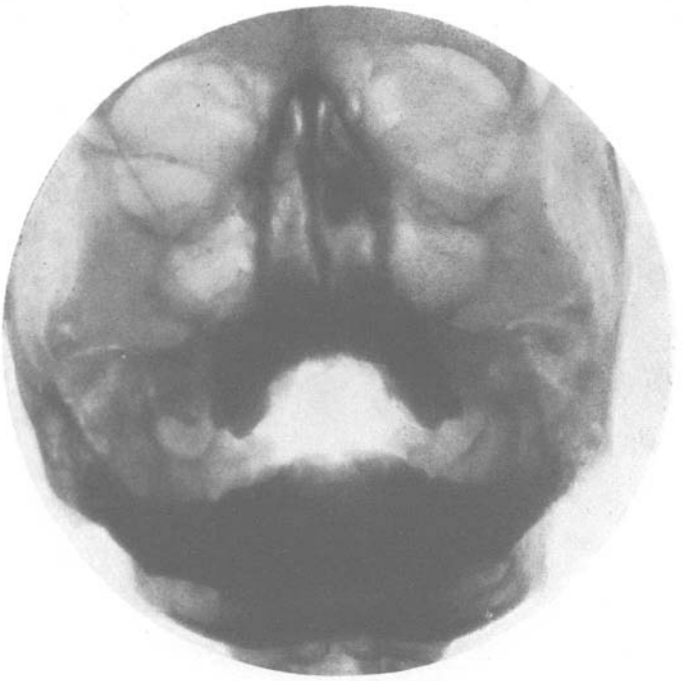


FIG. 1.
Case No. 1 (L.C.). Occipito-mental view showing rhinolith in left nasal cavity.



FIG. 2.
Case No. 1 (L.C.). Lateral view showing rhinolith.

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FIG. 3.
Case No. 1 (L.C.). Photomicrograph ×40 rhinolith.

The appearances are thus fairly typical of a rhinolith, though the ætiology remains obscure.

CASE NO. II

On *March 21st, 1953*, another male, L.J.H., aged 21 years, presented for routine examination.

He, like the previous man, gave no history of any ear, nose or throat trouble.

On examination, anterior rhinoscopy disclosed in the floor of the right nasal cavity a foreign body, which had the appearance of a lump of coal.

There was nothing else abnormal in the ear, nose or throat. On questioning, this patient did admit to a history of slight nasal block on the left side for three years, but could not remember the insertion of coal or any other object into the nose. Moreover, the right side felt normal.

After radiography, the body was easily removed without anæsthesia. No further abnormality was disclosed, other than a moderate degree of septal deviation to the left.

Radiography. The skiagrams (Figs. 4 and 5) demonstrated an opaque body 1·5 cm. long, 1 cm. broad and 1·5 cm. high, resting on the floor of the right nasal fossa.

Pathological report. A rhinolith, which weighs 1·7 gm. Chemical analysis reveals calcium and phosphate with a little organic matter present. No other inorganic radicals detected.

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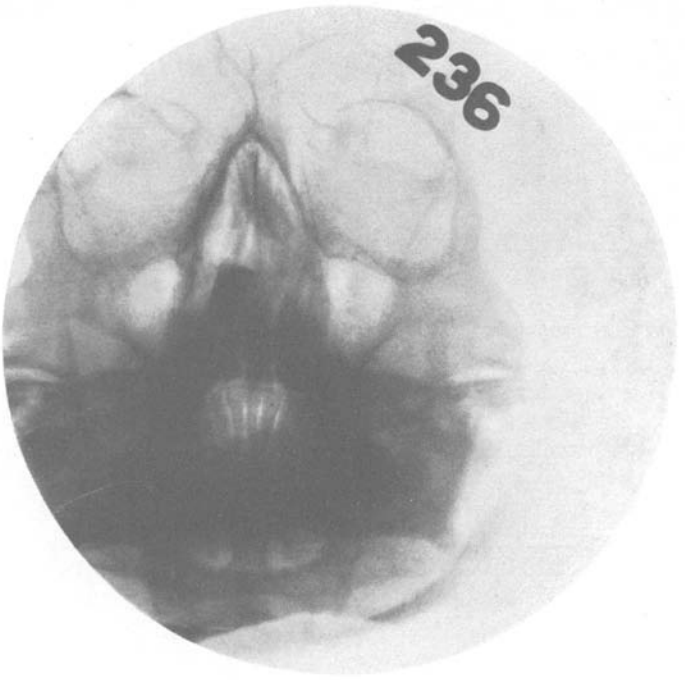


FIG. 4.
Case No. 2 (L.J.H.). Occipito-mental view showing rhinolith in right nasal fossa.



FIG. 5.
Case No. 2 (L.J.H.). Lateral view showing rhinolith.

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Remarks

The clinical appearance, radiographic pictures and pathological reports are conclusive proof that these cases were rhinoliths. Microscopical appearances were obviously suggestive of a nucleus of exogenous origin in the first case.

As was pointed out in the introduction, these cases were of interest mainly because of the absence of symptoms. Only five rhinoliths as chance findings have been previously described, and of these one had a history of rhinorrhœa (Fearnley, 1893), the second, otitis media (Bishop, 1902), the third, right nasal block (Hirschmann, 1903), and the fourth, laryngitis (Guttmann, 1922). The last was in an otherwise healthy naval rating (Camerer, 1923).

Our cases reported here were discovered in a consecutive series of 140,000 supposedly healthy volunteers who were examined with reference to fitness for service in the Royal Air Force. It is interesting to reflect that this represents an incidence of symptomless rhinoliths of 1 : 70,000, inferring a total of at least 700 in the U.K. at this moment. Taking all countries, only 400 have been recorded to date, so one must therefore conclude that the condition is much more frequent than is commonly supposed.

In view of the recent masterly and comprehensive account of rhinoliths by Polson (1943), it would be superfluous to make further remarks on rhinoliths in general.

Addendum

It is thought of interest to record another case (recently seen in the Royal Air Force), which represents the transition stage between a foreign body and a rhinolith.

A young adult male, A.C.G., complaining of nasal discharge, was seen at the out-patient clinic of Royal Air Force Hospital, Wroughton.

On examination, anterior rhinoscopy showed pus in the left inferior meatus and the presence of a foreign body, probably a nail. The upper respiratory tract was otherwise clear.

On questioning, the patient remembered inserting an iron nail into his nose at the age of 9 years. To his knowledge, this had not been removed.

After radiography, the nose was explored under general anæsthesia. Disintegrated debris, undoubtedly metallic, was removed from under the left inferior turbinate and sent for examination.

Two weeks later, rhinoscopic appearances were very satisfactory and the patient was discharged.

Pathological report. Macroscopically, the material resembles a series of small pieces of coke. Under the microscope, each piece is a black, semicrystalline, porous glistening mass.

Quantitative and qualitative analysis reveals that 35 per cent. of this material is organic and combustible. The 65 per cent. non-combustible residue consists of a 35 per cent. acid-soluble portion, the remaining 30 per cent. being insoluble, presumably carbon. The acid-soluble moiety consists almost exclusively of iron together with a trace of another metal, most probably zinc.

This analysis is fully consistent with the suggestion that the foreign bodies are the remains of a nail which has undergone partial dissolution over a long period, the organic content consisting of tissue and blood held in the spongy

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interstices of the pieces. It is suggested that, in view of the trace of zinc, the nail was galvanized.

Conclusion

The occurrence of two symptomless rhinoliths in otherwise healthy persons is recorded, together with another further case of interest and illustrating the transition from foreign body to rhinolith.

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