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New bone formation in nasal polyps

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INTRODUCTION

The tendency of nasal polyps to recur after surgery is well known, although the etiology of this clinical entity is not yet fully understood. As reported by Friedmann and Osborn in 1982 new bone formation occasionally occurs in nasal polyps. We describe a case of a patient with extensive new bone formation in recurrent nasal polyps.

CASE REPORT

In October 1987, a forty year old man presented to the outpatient department of Otolaryngology/Head and Neck surgery of the Free University Hospital Amsterdam, with a history of nasal obstruction – left more than right –, headache, anosmia and fatigue. Because of a previous history of nasal polyposis, he had undergone bilateral Caldwell Luc procedures in 1980 and 1981, and a bilateral transantral ethmoidectomy in 1983. Since the last operation the patient had used Budenoside spray twice daily.

At anterior rhinoscopy and with nasendoscopy, massive polyposis was seen, while the middle concha appeared to have been removed at previous surgery. Total IgE was 400 I.U./ml while in RAST and skintests atopy for housedustmite and housedust was found. CT scan (Figure 1) showed massive polyposis, a mis-

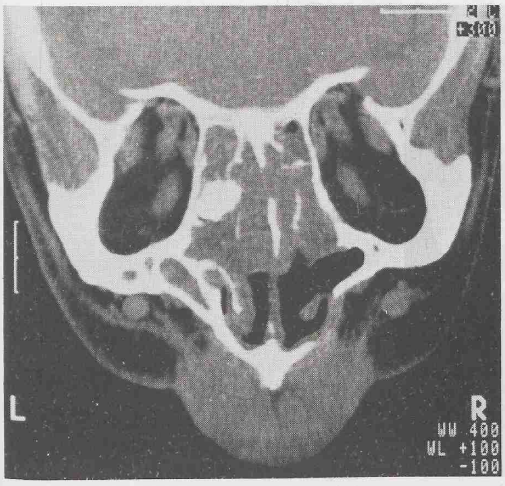

Figure 1. Coronal coupe of the ethmoid labyrinth, at the level of the basal lamella.

sing middle concha on both sides and bone formation in the left ethmoid near or connected with the lamina papyracea. In the anterior-posterior direction this bony structure was situated at the level of the former basal lamella. On conventional tomograms and during surgery in 1983, this structure was not seen.
In December 1987 endoscopic sinus surgery, according to Stammberger (1986) under general anaesthesia was performed. The nasal polyps of the anterior ethmoid of the left side were removed. Then the bony structure which was found to be completely covered with polypoid mucosa could be removed using microinstruments without difficulty. A connection with the lamina papyracea could not be detected. Therefore, the orbit was not opened. Posterior to the bone structure, which had a diameter of 2 cm, an even larger number of polyps than in the anterior ethmoid could be removed from the posterior ethmoid. Afterwards a total ethmoidectomy at the right side was performed. Histological examination showed nasal polyps with focal eosinophilia. The bony tumour consisted of normal new bone. The postoperative course was uneventful; the nasal passage and sense of taste and smell improved, while the headaches disappeared.

DISCUSSION

Nasal polyps and their tendency to recur after surgery, are well known problems in ENT practice, even when a topical corticosteroid spray is administered. It is not fully understood, why in some cases polyps recur more frequently and earlier than in others. Our patient had had extensive sinus surgery three times in seven years. Although it might be speculated that the repeated surgery stimulated new bone formation from the lamina papyracea, we have the strong impression that the bone was completely covered with polypoid mucosa, and was therefore not

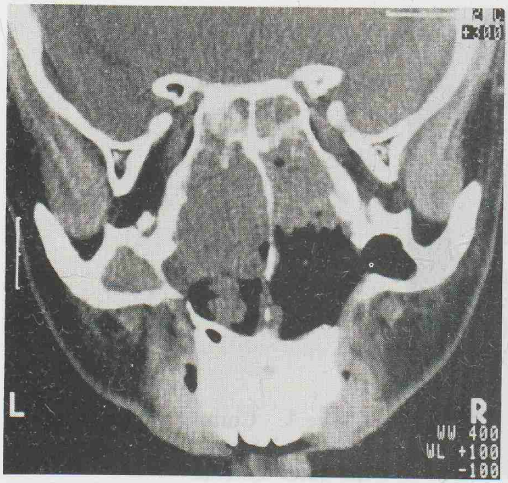

Figure 2. Coronal coupe of the ethmoid labyrinth, at the level of the posterior ethmoid.

connected with any pre-existing bony structure. Therefore it is tempting to postulate that new bone formation occured in the nasal polyps themselves possibly from bony remnants left behind during previous surgery. The round form of the bony structure (Figure 1) also leads to the assumption that the new bone was formed around a nidus, rather than that the new bone originated from the lamina papyracea. New bone formation in nasal polyps has been described before by Friedmann and Osborne (1982). In this report it was not stated whether previous surgery had been performed, as in our case. The clinical importance of the new bone formation was its obstruction of the posterior ethmoid. Apparently this caused the development of more new polyps in this region than in the ipsilateral anterior ethmoid aircells, or in the total contralateral ethmoid complex (Figure 2).

REFERENCES

1. Friedmann I, Osborn DA. Miscellaneous granulomas and nasal polyposis. In: Pathology of granulomas and neoplams of the nose and paranasal sinuses. First ed, London: Churchill Livingstone, 1982; 23–35.
2. Stammberger H. Endoscopic endonasal surgery. Concepts in treatment of recurring sinusitis. Parts I and II. J Otolaryngol 1986; 409: 147–156.

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