Angiectatic Nasal Polyp - The Great Imitator

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Citation

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Abstract

Introduction: Angiectatic nasal polyps are a rare and distinct type of inflammatory sinonasal polyp, which can clinically and radiologically mimic a sinonasal neoplasm. We describe a unique case of an angiectatic nasal polyp in an 80 year old lady presenting with recurrent epistaxis and radiological features suggestive of an inverted papilloma.

Management: Initial biopsies proved inconclusive. Complete resection was performed through an endoscopic medial maxillectomy approach based on the suspicion of an inverted papilloma. Initially, the histopathology was reported as an inflammatory polyp but this was subsequently revised to an angiectatic nasal polyp. Histopathology Findings: A well-defined polyp with stromal degenerative hyaline change, stromal haemorrhage and telangiectasia, lined by flattened surface epithelium.

Conclusion: Angiectatic nasal polyps are a rare pathological entity and as such can cause a significant diagnostic dilemma as illustrated in this case. Therefore, an awareness of different clinical presentations and distinct histopathological features is important in establishing an early definitive diagnosis. Furthermore, there is little precedent in the literature to guide management in such a case, and we therefore consider this report to be noteworthy and instructive in this respect.

INTRODUCTION

Angiectatic nasal polyps, also known as angiomatous nasal polyps, are rare and only account for approximately 5% of all inflammatory sinonasal polyps.1 Indeed only a very small number have been reported within the literature to date. These polyps present in a myriad of ways, often simulating other pathologies including malignancy.

We present the case of an 80 year old patient presenting with a unilateral nasal mass and epistaxis in whom the radiological findings were initially suggestive of an inverted papilloma, but the histopathological findings subsequently revealed an angiectatic nasal polyp.

CASE REPORT

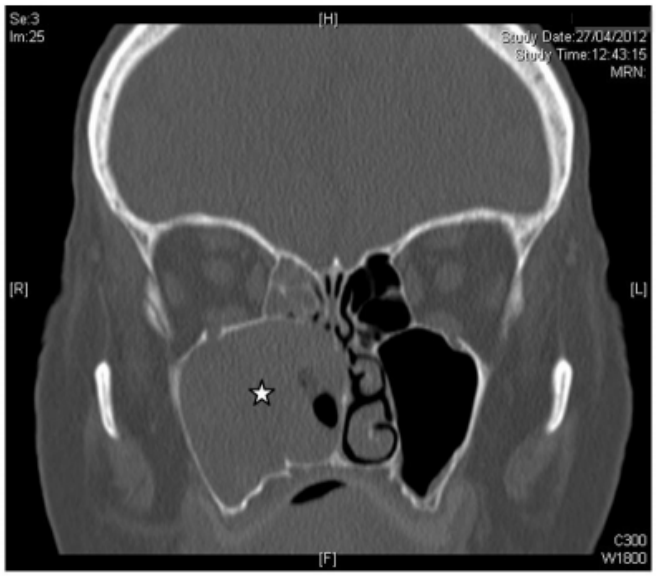
An 80 year old lady presented to accident & emergency (A&E) with a 5 week history of recurrent epistaxis. Inability to control the bleeding with conservative measures during the presenting episode led to anterior nasal packing by the referring ENT unit. Her co-morbidities included hypertension which was well controlled with anti-hypertensives, and previous transient ischaemic attacks for which she was on Aspirin.

On admission bilateral nasal packs were in situ, and there was no active bleeding. The patient was admitted for observation. On removal of the packs 48 hours later the bleeding recurred. A bedside rigid endoscopy performed to identify the cause of intractable epistaxis revealed a polypoidal mass filling the posterior half of the nasal cavity and extending into the middle meatus. An examination under general anaesthetic was therefore undertaken where the mass was biopsied and cautery applied to the bleeding surface. After a further 24 hour period of observation, the patient was discharged and a computed tomography (CT) scan of the sinuses arranged as an outpatient to assess the extent of the pathology.

The initial biopsy results proved inconclusive with features of an organising thrombus. The CT scan revealed a completely opacified right maxillary antrum , with the antral disease being contiguous with further soft tissue thickening within the right nasal cavity and enveloping middle and inferior turbinates (Fig 1).

Figure 1

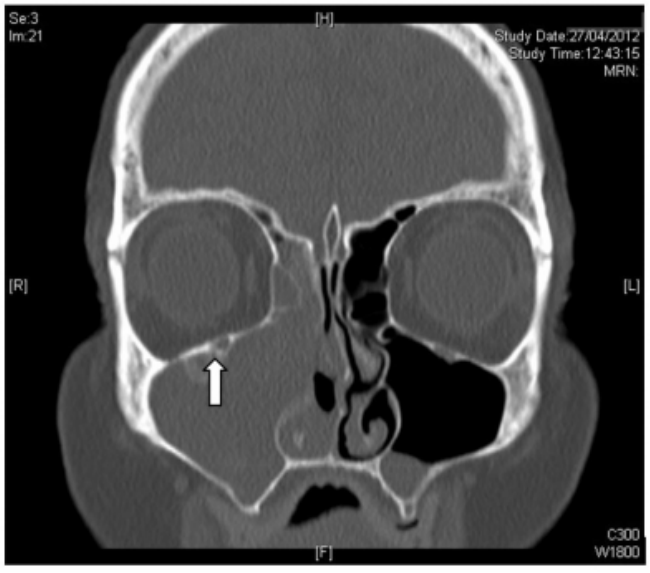
Coronal computed tomography scan revealing a completely opacified right maxillary antrum (white star), with further soft tissue thickening within the right nasal cavity enveloping the middle and inferior turbinates.



Demineralization of the medial wall of antrum was noted. There was associated hyperostosis of the floor of the orbit around the infra-orbital canal (Fig 2).

Figure 2

Coronal Computed tomography scan highlighting demineralisation of the medial wall of antrum and associated hyperostosis of the floor of the orbit (white arrow) around the infra-orbital canal.

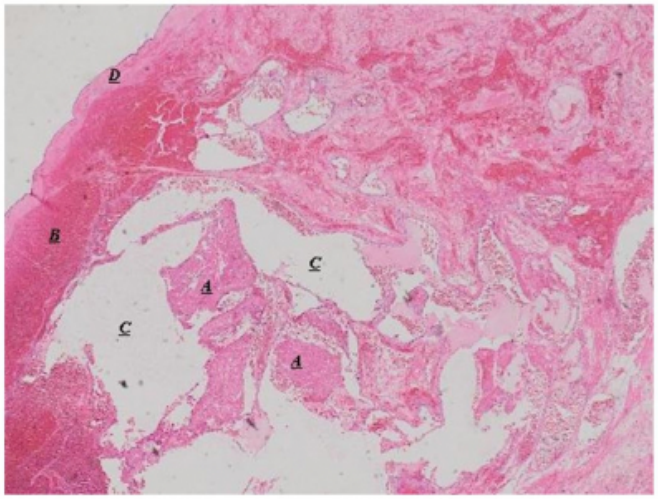


The radiological features were consistent with a sinonasal inverted papilloma. Therefore a definitive endoscopic medial maxillectomy was scheduled where a haemorrhagic polypoidal mass was seen originating within the maxillary antrum with dehiscence of the medial wall and extension into the nasopharynx. The mass was pedicled at a bony prominence on the infra-orbital canal corresponding to the area of hyperostosis seen radiologically. Division of the attachment at this site led to brisk arterial bleeding which was controlled with bipolar diathermy. The bone at this site of origin was also drilled down with a diamond burr at the end of the procedure to ensure complete clearance. The per-operative findings were consistent with a sinonasal inverted papilloma.

The patient's recovery was uneventful. The histopathology was reported initially as a simple inflammatory polyp. In view of the discrepancy between the clinical/radiological findings and the histopathology, this case was discussed at the ENT Pathology meeting. On review of the slides, it was felt that the marked stromal reactive vascular and hyaline change seen in these polyps were more suggestive of an angiectatic nasal polyp (Fig 3).

Figure 3

Low to medium power photomicrograph showing a well-defined polyp with stromal degenerative hyaline change (A), stromal haemorrhage (B) and telangiectasia (C), lined by flattened surface epithelium (D). (H&E; x10)



DISCUSSION

Inflammatory sinonasal polyps are histologically divided into five main groups: oedematous, glandular, fibrous, cystic and angiectatic (angiomatous). Angiectatic nasal polyps (ANP) are rare, accounting for only 4-5% of all nasal polyps.2 This pathological entity has a number of alternative names within the literature including: nasal polyp with haemorrhage and necrosis, sinonasal organized haematoma, inflammatory granuloma telangiectaticum, vascular

granuloma, pseudo-angioma, and angiomatous polyp. The most common presentation is with recurrent epistaxis, but they can display aggressive clinical behaviour, rapid growth and widespread bone destruction with deformity, thereby simulating a malignancy.

Angiectatic nasal polyps are considered to be a variant of antrochoanal polyp.3,4 Batsakis hypothesised that vascular compression of the polyp at the ostium leads to infarction followed by reparative changes and neovascularisation.3 Four sites of vulnerability to vascular compromise were identified: the ostial exit site, the posterior end of the inferior turbinate, the posterior choana, and the most dependent part within the nasopharynx. Compression, followed by infarction and stasis is thought to lead to extravascular oedema producing both polyp growth and the characteristic histological changes.3 Compared to non-angiomatous polyps, ANP have a prominent component of capillary-type blood vessels and intraluminal thrombosis, as seen within this case. Since they are often infarcted, they tend to be fragile and hence difficult to remove en bloc. Extravasation of blood components through the thin walled blood vessels leads to large perivascular pools of eosinophilic material. Hence the classical histological picture of clusters of dilated, thin walled blood vessels embedded in pools of Congo red-negative eosinophilic material, associated with patchy necrosis and atypical stromal spindle cells.1

Histologically and radiologically the differential diagnosis includes juvenile angiofibroma, hemangioma and inverted papilloma. Angiofibromas occur almost exclusively young adolescent males, thus ANP should always be considered in elderly or female patients presenting with similar features. However in contrast, any sizable nasopharyngeal mass growing sufficiently forward to involve and expand the posterior nasal vault and not extending into the pterygopalatine fossa or sphenoid sinus is extremely uncharacteristic of an angiofibroma, pointing towards the diagnosis of ANP.4 Haemangiomas can usually be distinguished as they classically arise from the nasal septum or vestibule, and on CT scanning they show greater contrast enhancement then ANPs. Inverted papillomas are difficult to distinguish from ANP based on clinical, radiological and often histological features, as illustrated in this report. However ANP show more prominent vascular changes, which when present should alert further histological and radiological examination, enabling an accurate diagnosis to be made.

In general the radiological features of ANP include a minimally enhancing lesion involving the maxillary sinus and the nasal cavity with demineralization of adjacent bony wall on CT scanning.5 Magnetic resonance imaging can also demonstrate certain characteristic features including peripheral hypointense rim, hypointensity on T1 weighted images and areas of mixed signal intensity on T2 weighted images due to extensive thrombus and necrosis.6,7 In younger individuals, hypovascular or avascular appearance of these lesions on angiography can help differentiate them from angiofibroma.8 Transnasal endoscopic surgical excision is the treatment of choice and these lesions rarely recur.1

SUMMARY

- Angiectatic nasal polyps (ANP) are a rare and distinct type of inflammatory sinonasal polyp which can radiologically mimic a sinonasal neoplasm
- ANP can create a diagnostic dilemma as illustrated in this case
- An awareness of different clinical presentations and distinct histopathological features is important in establishing an early definitive diagnosis and guiding management.

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