Case report:

Unusual presentation of gout: management dilemma of nasal tophacecous

Manab FWA[1,2], Mutallib NSA[1], Rahman HA[1], Yusof CYC[1]

Abstract:

Tophacecous gout presenting elsewhere other than its common sites may mimics malignancy or infection. It presentation at the head and neck region especially nasal area is even unusual. The nature of slowly growing and painless nasal mass mislead to malignancy and unnecessary intervention. As discuss in the report, we compare the outcome of surgically and conservatively treated nasal gouty tophi.

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Introduction

Gout is a metabolic disorder and development of the disease requires prolonged hyperuricemia, growth of monosodium urate (MSU) crystals and interaction between MSU crystal and inflammatory system. It can either manifest as acute arthritis or chronic arthropathy, which is also called tophaceous gout. Tophaceous gout is form by deposition of monosodium urate crystal in the joints and soft tissue over time. Although hyperuricemia state is needed, other factors play a role in determining whether and where crystal formation occurs. There are few reported cases of tophaceous gout manifest over head and neck region such as cricoarythenoid, vocal folds, arytenoid and thyroid cartilage, sternoclavicular and temporomandibular joints. Involvement of tophi in the middle ear has been documented. The symptoms are base on sites of involvement, it may cause, earache, hearing impairment, facial paralysis and even airway obstruction that requires intubation has been reported[1]

Case report

A 49 years old gentleman presented with 10 years history of nasal bridge swelling. He had underlying diabetes mellitus, hypertension and hyperuricemia since 2006 and was treated with allopurinol since then.

The swelling was initially small in size but it is slowly growing and does not causing him any difficulty. He denies history of facial or head and neck trauma. He has never sought any treatment for this matter.

Examination revealed firm to hard non tender swelling over the nasal bridge measuring about 4cm x 3cm (Figure 1) .There were no skin changes, not warm, non mobile mass and no pus discharge. Nasoendoscopy examination was unremarkable. Other examination revealed bilateral multiple hand swelling. (Figure 2)

His Uric acid level was 589 umol/L and creatinine level was 134 umol/L.

Fine needle aspiration cytology was performed and result show aggregates of elongated needle-shaped crystals & a few histiocytes amidst a background of amorphous material which is consistent with gouty tophus.

1. Farah Wahida Abd Manab, Department of Otorhinolaryngology-Head and Neck Surgery, Hospital Sultan Abdul Halim, Kedah, Malaysia School of Medical Sciences, Universiti Sains Malaysia, Health Campus, 16150 Kubang Kerian, Kelantan, Malaysia
2. NSA Mutallib, School of Medical Sciences, Universiti Sains Malaysia
3. Hisham Abdul Rahman, School of Medical Sciences, Universiti Sains Malaysia
4. Che Yusfarina Che Yusof, Department of Otorhinolaryngology-Head and Neck Surgery, Hospital Sultan Abdul Halim, Kedah, Malaysia

Correspondence to: Dr Farah Wahida binti Abd Manab**,** Department of Otorhinolaryngology-Head and Neck Surgery**,** Hospital Sultan Abdul Halim, 08000 Sungai Petani, Kedah, Malaysia.
Email: farahwahida05@gmail.com

Figure 1: A huge swelling over the nasal bridge with normal overlying skin.

Figure 2: Bilateral hand swelling consistent with gouty tophi.

Discussion

Gouty tophi of nasal bridge are very rare. To our knowledge, there were only 3 reported cases of nasal gouty tophi. All were reported painless nasal swelling without other nasal symptoms. The diagnosis was made by demonstration of monosodium urate crystal in the aspirated fluid or in a tissue specimen. In all the cases surgical removal were done, each with different indications. Aesthetic is the main indication in 2 cases and the other one was indicated because patient had diplopia and it is affecting his quality of life.[2-4]

In all cases including our patient, nasal gouty tophi presented as slowly growing mass over years and it is painless even during acute attack of gouty arthritis This probably due to the intercartilagenous junction of nasal bone is non mobile and the inflammatory reaction with MSU is impossible. Due to its slowly growing character at unusual site of presentation, nasal gouty tophi may be misdiagnosed as sinonasal tumor and can leads to unnecessary intervention.

Other than its microscopic features, imaging technique also can be used as the diagnostic tool of gouty tophi, especially when it is presented at unusual site. Fernandez et al had done a study on the role of ultrasound imaging in the diagnosis of gouty tophi and found that gouty tophihas certain characteristic on ultrasound imaging. It appears generally hyperechoic, heterogenous with poorly defined contours, multiple groups and surrounded by anechoic halo. [6]

Dual-Energy Ct scan (DECT) also helpful in detection of subclinical tophaceous gout. As compare to conventional CT scan, with DECT, it can differentiate various type of deposit with colour coding. Other than that, the volume of urate deposit can be measure as well. [7]

Management of gout is mainly by medical treatment. Allopurinol is widely used urate lowering medication. [5] Despite this, chronic gouty tophi can be treated surgically. There are few indications for surgical treatment.

Based on survey done by Sunil Kumar and Peter Gow, the main indication for surgical debridement of gouty tophi were infected ulcerated tophi followed by mechanical joint dysfunction, for diagnosis purpose and pain controlled. However, they found that, the first indications is associated with high complications such as delayed wound healing. [8]

Huges et al reported a case of nasal gouty tophi who underwent surgical intervention. The reason for it was for diagnosis purposes and aesthetic reason. They used endoscopic microdebrider shaving technique and the result was excellent with no recurrence after 6 month.[2]

However, in our cases, we treated him conservatively with serial follow up to look for disease progression. We found that, there was not much disease progression and patient is asymptomatic despite cosmetically less accepted lesion on the nose.

As a conclusion, managing of tophaceous gout is very challenging. Gouty tophi presented at unsual area as reported in our case furthermore will be misleading as other malignant condition that may leads to unnecessary intervention. Instead of FNAC, imaging technique which is much acceptable and less pain can help in diagnosis. Treatment is mainly by medical treatment to control the hyperurecemic state while surgical intervention may be indicated in certain cases. As compare to a case reported by Hughes et al and our case, we conclude that nasal gouty tophi can be treated conservatively as long as patient can accept the cosmetic effect of it.

Conflict of Interest: None

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