Nasal Granuloma Gravidarum Presenting with Recurrent Massive Epistaxis

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Abstract

Nasal granuloma gravidarum is a rare condition associated with pregnancy and minor trauma. This condition presents with a nasal mass with varying degree of bleeding and obstruction. We report a patient with nasal granuloma gravidarum in the third trimester of pregnancy. Surgical excision is the definite treatment for this condition in order to stop the vicious cycle of recurrent massive bleeding. Possible etiology, clinical features and management are discussed.

Key word : Epistaxis, Pregnancy, Granuloma Gravidarum

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J Med Assoc Thai 2003; 86: 473-476

Nasal granuloma gravidarum has been seldom reported in the literature. It is believed to be a rare tumour occurring during pregnancy. From Thai index medicus search, We found an article that reported 3 cases of granuloma gravidarum in the oral cavity, but no research has reported on this tumour in the nasal cavity[1]. This tumour is primarily composed of immature capillaries which can cause minor to massive bleeding. We present a case of nasal granuloma gravidarum with recurrent massive epistaxis during late pregnancy.

CASE REPORT

A thirty-five-year-old woman with a thirty-week pregnancy was referred to Siriraj hospital from a general hospital in a suburb of Bangkok. This was her

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first pregnancy after five-year of marriage. She had had nasal obstruction and recurrent bouts of epistaxis from the right side of her nose for the past 4 weeks. She also noticed a fleshy reddish mass in the right nasal cavity. Her obstetrician and otolaryngologist suggested that this condition would spontaneous involute after the delivery and prescribed a topical nasal decongestant. The day before she came to the hospital, she had a massive bleed of about 500 ml from her right nostril. The bleeding was stopped after using a topical nasal spray and a cold pack on the dorsum of the nose. On examination, she had a fibrin covered polypoid mass occupying most of the right nostril (Fig. 1). After removing the fibrin, there was some bleeding that required packing with a few pieces of cottonwool strips soaked with 0.05 per cent oxymetazoline. Her hemodynamic status was still stable. Hematocrit was 38 per cent, compared to 41 per cent before bleeding. She was admitted to Siriraj Hospital for observation of bleeding. After a long and informative discussion of a management plan, the patient insistently declined any therapeutic intervention with high hopes of spontaneous resolution after delivery. She had been informed of risks and benefits of the "wait and see" policy. The patient was informed that if there had been another massive epistaxis, surgical excision would be unavoidable. After one week of admission she had no active bleeding and was discharged from the hospital. One week later, she came to the emergency room with another 500 ml bleed from her right nostril. Examination revealed a purple polypoid mass with a stalk on the anterior septum. With the patient's permission, surgical excision was performed under local anesthesia using 1 per cent xylocaine with 1 : 100,000 adrenaline. The stalk was snared using a snaring loop. Bleeding on the rough surface of the septum was controlled by electrical cauterization. Estimated blood loss during surgery was 10 ml. Vital signs were stable during the operation. The hematocrit was 36 per cent. She was observed for a day and then discharged. Microscopic examination revealed a polypoid mass, partially covered by respiratory epithelium with superficial ulceration. The ulcer was covered by fibrin, densely infiltrated by inflammatory cells, mainly polymorphonuclear neutrophils. The connective tissue of the lesion was composed of a large number of blood vessels which were at several different developmental stages (Fig. 2). There were also some foamy cytoplasmic cells in the lesion (Fig. 3). The pathological report confirmed the diagnosis of nasal granuloma gravidarum. There was no report of epistaxis or recurrent tumour during the follow-up period until the delivery of her baby. At the last check-up (six months after delivery), there was still no evidence of recurrent tumour. She and her baby were in good health.

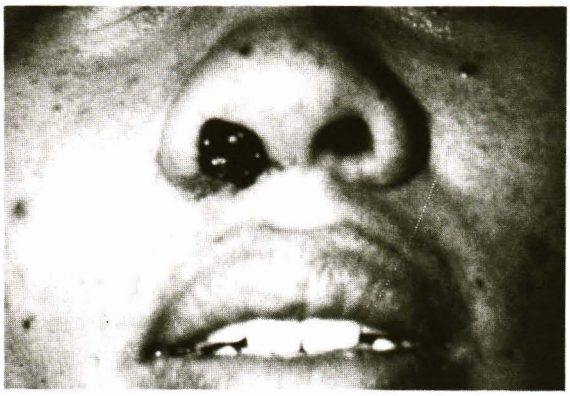

Fig. 1. Granuloma gravidarum in the right nasal cavity.

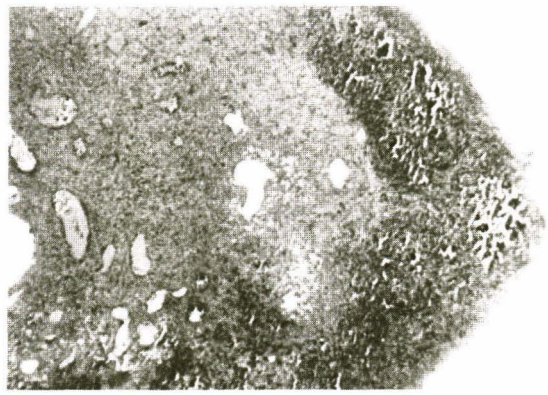

Fig. 2. The figure shows a polypoid mass, partially covered by respiratory epithelium with superficial ulceration. The stroma is composed of numerous capillary type vessels. (H&E X 20)

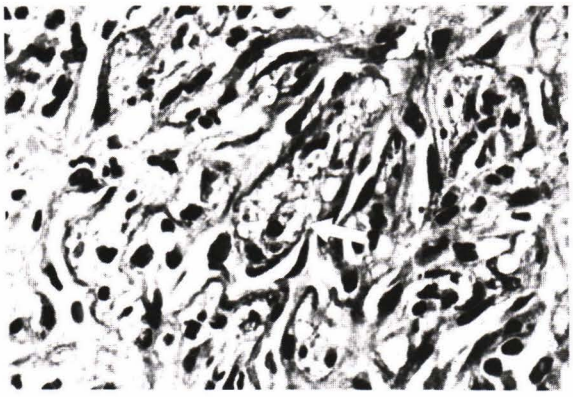

Fig. 3. The figure shows the stromal part of the lesion demonstrating numerous capillary type vessels and some foam cells (arrow). (H&E X 200)

DISCUSSION

Nasal granuloma gravidarum is an uncommon vascular tumour arising in the nasal mucosa. The prevalence rate varies between 0.5 per cent and 5 per cent in pregnant women[2]. It can be sessile or narrow base which usually locates on the anterior part of the nasal septum or the anterior end of the inferior turbinate. Although the etiology is unclear, pregnancy and trauma are the major contributing factors[3-5]. In pregnancy a varying degree of congestion and hyperemia of the nasal turbinate or septum may occur. Trauma to the nasal mucosa in pregnant women is believed to cause excessive healing which results in neovascularization and granuloma formation. Minor trauma may result from nose picking, cold climate, infection, chewing etc. Actually, granuloma gravidarum have been reported on the gingivae in more than 50 per cent of cases and described throughout the oral cavity [3]. It has been reported in any stage of pregnancy but usually in the last trimester[4-6]. Most of the patients present with a unilateral lesion. However, there has been a case of bilateral lesions reported[7]. Nasal granuloma gravidarum tends to occur in multipara more frequently than primigravida[4-6].

The tumour is hormonal dependent in nature. It can involute post-partum, but can also recur after excision[5]. Clinically, it may appear as a nasal polypoid mass with problems of bleeding and obstructive symptoms. On examination, the tumour can vary in size, not tender, purple in color, smooth surface with some areas of ulceration and easily bleeds on probing. Histologically, the lesion is covered by a surface layer of keratinized stratified squamous epithelium, often demonstrating patchy ulceration. The stroma of the mass is loose and edematous, with a prominent vascular component of thin-walled immature capillaries and a variable amount of inflammatory cell infiltrate. It is similar to a pyogenic granuloma except that it shows foamy histiocytes[5,7].

The strategy to treat this tumour is to select the proper method and time for therapeutic intervention. In cases with severe profuse nasal bleeding, surgical excision is recommended. Less serious cases without troublesome symptoms can be observed since spontaneous involution may occur post-partum. However, the nature of granuloma gravidarum in each patient may be unpredictable. The tumour can grow rapidly at anytime and change from a non-bleeding nasal polypoid mass to a huge obstructing polypoid mass with massive bleeding. The latter condition is difficult to excise and stop bleeding. Selection of the time for surgical treatment should be considered properly and carefully by the doctor and patient. Risks and benefits to both mother and baby have to be discussed clearly. Excision at an early stage when the polyp becomes troublesome may be a good option especially in cases whose bleeding has caused alarm or obstructive symptoms. It also provides pathological confirmation and rules out malignant tumour in cases that it may be suspected. Although the tumour may involute post-partum, the operation should be considered at whatever stage the pregnancy is, if the risk of the tumour remaining outweighs that of excision. Once the tumour has bleed, it is not reasonable to wait for spontaneous regression. Watching and waiting for too long can put the patient at risk of massive blood loss as in this case. A small tumour can be removed easily under local anesthesia with a low risk of uncontrolled bleeding. In contrast, excision of a huge tumour may require general anesthesia and increase the risk of massive bleeding. Close observation after excision is needed since recurrence may occur even if post-partum.

SUMMARY

Nasal granuloma gravidarum unusually occurs during pregnancy. The treatment is observation if the lesion does not cause any serious problems since spontaneous involution can occur after delivery.

Surgical excision should not be deferred if the lesion causes significant bleeding and obstructive symptoms. Early therapeutic intervention is probably more beneficial than observation in some cases. Close observation post-partum and after excision are essential.

(Received for publication on October 7, 2002)

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ภาวะเลือดกำเดาปริมาณมากออกซ้ำจาก Nasal granuloma gravidarum

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Nasal granuloma gravidarum เป็นภาวะที่สัมพันธ์กับการตั้งครรภ์พบได้ไม่บ่อยนัก สาเหตุนำมักเกี่ยวเนื่องกับการกระทบกระเทือนต่อเยื่อบุจมูกโดยตรง ผู้ป่วยมาพบแพทย์ด้วยปัญหาก้อนเนื้อในจมูกและมีอาการคัดจมูกร่วมกับเลือดกำเดาออก คณะผู้รายงานนำเสนอตัวอย่างผู้ป่วยที่ได้รับการวินิจฉัยเป็น Nasal granuloma gravidarum ในช่วงไตรมาสสุดท้ายของการตั้งครรภ์ ผู้ป่วยได้รับการรักษาด้วยการผ่าตัดก้อนเนื้อในโพรงจมูกขวาออกเพื่อทำการห้ามเลือดกำเดาปริมาณมากที่ออกซ้ำ รายงานฉบับนี้ได้สรุปรวบรวมถึงสาเหตุที่เป็นไปได้ ลักษณะอาการทางคลินิกและแนวทางการรักษาที่เหมาะสม

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จดหมายเหตุทางแพทย์ ฯ 2546; 86: 473-476

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