Case Series:
Lobular Capillary Hemangioma of the Nasal Cavity in Pregnancy

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Abstract

Background: Nasal Lobular capillary hemangioma (LCH) is a benign vascular lesion of unknown etiology but commonly associated with pregnancy, oral contraceptives and trauma that must be included in the differential diagnosis of vascular lesions.

Design: Following Institutional Review Board approval, seven patients who were referred to our institution between February 2006 - December 2009 complaining of recurrent attacks of epistaxis and Nasal obstruction during pregnancy were included in this study.

Material and Methods: 7 pregnant women were surgically treated for removal of vascular lesions arising from the nasal septum and the inferior turbinate. All specimens sent to histopathology. Postoperative follow-up carried out for 6 months.

Results: Seven pregnant women with Lobular capillary hemangioma (LCH), which arises from the anterior part of the nasal septum and the inferior turbinate, were presented in this study. All patients operated upon with satisfactory results. Follow-up postoperative period was uneventful.

Conclusion: It is known that the nasal cavity is a rare location for lobular capillary hemangioma and when it is seen in the nasal cavity, LCH mostly locates on the anterior portion of nasal septum (Little’s area), less frequently on anterior part of inferior turbinate.

LCH should be considered in pregnant patients, if they have a complaint of nasal obstruction and recurrent Epistaxis.

Key Words: Lobular capillary hemangioma – Nasal cavity – Pregnancy.

Introduction

LOBULAR capillary hemangioma (LCH) is a benign lesion of unknown etiology. LCH is a capillary rich, rapidly growing tumor of skin and mucous membranes. The occurrence of pyogenic granuloma during pregnancy has resulted in the popular term [1].

LCH is usually located in oral cavity and nose is an uncommon location. This tumor bleeds easily with little trauma because of its excessive vascularity.

Hormonal imbalance and microtraumas are the major etiologic factors in development of LCH. About 2 to 5 percent of pregnant women develop.

An LCH, which resolve mostly after delivery [2]. Total endoscopic endonasal excisional surgery is sufficient for treatment.

Material and Methods

Following Institutional Review Board approval, seven Patients who were referred to our institution between February 2006 - December 2009 complaining of recurrent attacks of epistaxis and Nasal obstruction during pregnancy were reviewed.

Table (1) shows patients demographics. The average age of the patients was, 31 (range 28-33). All patient presents in the 2nd trimester and beginning of the 3rd trimester. Co-morbidities included smoking (2 cases), obesity (3cases), and diabetes mellitus (1 case) and hypothyroidism (1 case).

All patients were subjected to complete history, ENT examination and endoscopic examination of the nasal cavity. There was no any history of epistaxis and nasal trauma before pregnancy.

Table (2) shows patients and surgical information. All patients were complaining from unilateral progressive nasal blockage and recurrent attacks
of mild to moderate epistaxis which occurs with mild trauma.

Endoscopic evaluation revealed a pink-red mass, arising from anterior end of the nasal septum in 6 patients and anterior end of inferior turbinate in one case (Fig. 1). One patient had incisional biopsy! With histopathology result 1 month before presentation.

Surgical procedure:
1- Anesthesia
   - General anesthesia with oro-tracheal tube, in 3 patients.
   - Local anesthesia with sedation.
2- Local infiltration anesthesia with xylocaine adrenaline 10% around the base of the mass was done 10 minutes before surgical excision.

Small cotton balls soaked with vasoconstrictor solution are packed around the mass and left for 10 minutes before surgical excision.

3- With the use of 0 degree nasal endoscope, the area anterior to the base of the mass is cauterized with the bipolar cautery. A sharp tip scissor then used to cut the cauterized septal or turbinate mucosa. The same technique used for the rest of the septal mucosa around the mass until complete excision done.

Any bleeding point can be controlled with the bipolar cautery (Figs. 1, 2).

4- Light nasal pack inserted for one day or less.

All nasal masses sent for histopathological examination (Fig. 3).

Patients followed-up 6 months after surgery.
Ahmad M.M. Al Bassiouny

Table (2): Patients and surgical information.

<table>
<thead>
<tr>
<th>Case No.</th>
<th>Surgical Procedures Prior to Definitive Procedure</th>
<th>Site of origin</th>
<th>Definitive Surgical Procedure</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Non</td>
<td>Septum</td>
<td>Endoscopic excision under G.A</td>
</tr>
<tr>
<td>2</td>
<td>Non</td>
<td>Septum</td>
<td>Endoscopic excision under G.A</td>
</tr>
<tr>
<td>3</td>
<td>Punch biopsy</td>
<td>Septum</td>
<td>Endoscopic excision under G.A</td>
</tr>
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<td>4</td>
<td>Non</td>
<td>Septum</td>
<td>Endoscopic excision under L.A</td>
</tr>
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<td>5</td>
<td>Non</td>
<td>Inferior turbinate</td>
<td>Endoscopic excision under L.A</td>
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<td>6</td>
<td>Non</td>
<td>Septum</td>
<td>Endoscopic excision under L.A</td>
</tr>
<tr>
<td>7</td>
<td>Non</td>
<td>Septum</td>
<td>Endoscopic excision under L.A</td>
</tr>
</tbody>
</table>

Results

Seven pregnant women were evaluated in this study. 4 patients were in the 2nd trimester and 3 patients were in the 3rd trimester. The average age of the patients was, 31 (range 28-33).

All patients treated successfully with endoscopic excision of the lesion. No complications occurred during or after the surgery.

On histological examination of the mass, lobular arrangement of proliferated.

Capillaries surrounded by an edematous fibromyxoid stroma with overlying hyperplastic squamous epithelium was seen and reported as LCH.

Follow-up postoperative period was uneventful.

Discussion

LCH is an uncommon, benign lesion which bleeds easily by manipulations due to its high vascularity. Lobular capillary haemangioma is also called pyogenic granuloma. Mills, et al. has claimed that the term "pyogenic granuloma" is incorrect for the disease because it is neither infectious nor granulomatous in nature. The term pregnancy tumor has been used to reflect the association with pregnancy. LCH usually grows rapidly and ulceration is common in the early period of its development.

LCH is seen in both gender and almost in every age, however, it is most common in females and in the 3rd decade.

Most important underlying causes for LCH are hormonal imbalance and an excessive inflammatory response after local trauma to skin and mucosal membranes [4].

In the course of pregnancy, a direct correlation has been observed between the growth rate of the tumor and the rise in the levels of estrogen and progesterone. The higher incidence of LCH in gravid patients, woman using oral contraceptives and post menopausal women supports a hormonal etiology [1,2].

LCH is commonly seen in oral cavity, especially on gingiva and rarely in the nose. When it is seen in the nasal cavity, LCH mostly locates on the anterior portion of nasal septum (Little’s area), less frequently on anterior side of inferior turbinate [4,5]. Kurtaran, et al., reported a case arising from the lateral nasal wall, in the nasal valve area.

Epistaxis and nasal obstructions one the most marked symptoms in cases of nasal LCH, It can be pedunculated or wide based. It’s size ranges from several millimeters to centimeters. It is usually found in the anterior part of nasal septum from the little area or Kiesselbach’s triangle [7].

Histologically, it is characterized by sub mucosal vascular proliferation arranged in lobular or clusters composed of central capillaries and smaller ramifying tributaries. Proliferating lesions consists of endothelial cells, they include other cells such as fibrololasts and mast cells [8].

Differential of diagnosis include cavernous hemangioma which occurs less frequently in the nasal cavity, rhinosporidiosis which may present as a friable polyoid vascular mass with the surface studded with tiny white dots from spores beneath the epithelium giving it characteristic "strawberry-like" appearance and juvenile nasopharyngeal angiofibroma in adolescent males [9].

Total excisional surgery is sufficient for treatment. Endoscopic intervention is important in diagnosis of the lesion before biopsy and to distinguish LCH.

From malignant tumors. Endoscopy is also helpful to excise tumor totally. Recurrence is
extremely rare after total excision and most of the LCH resolve mostly after delivery anyway [8].

**Conclusion:**

Pyogenic granuloma is a rapidly growing lesion that should be considered in the differential diagnosis of any gravid patient with a mass in the nasal cavity, if they have a complaint of nasal obstruction and recurrent Epistaxis.

**References**


