

## Case Report

# Severe epistaxis and pregnancy "about two cases" and review of the literature

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## ABSTRACT

Epistaxis is a health ENT problem which is still current, this is one of the commonly encountered emergencies in Rhinology. The nasal mucosa suffered influence systemic, local, metabolic or hormonal disorders causing a slowdown of muco-ciliary function during pregnancy. These observations relate the clinical and therapeutic particularities of the management for severe epistaxis in women during the last trimester of pregnancy. The woman's hormonal system is unique in its kind due to cyclic changes during pregnancy, the menstrual cycle and menopause. Our clinical observations confirm the effects of these metabolic, endocrinological and physiological alterations related to pregnancy. In a tropical environment with the inadequacy of ENT specialists, base medical personnel is often confronted with delicate clinical situations in the evolution of ENT diseases. Management for epistaxis during pregnancy is special because of its context, well evident diagnosis requires vital gestures as evidenced by our observations. The ear, nose and throat specialist must necessarily be well warned of its physiological changes during pregnancy to better understand the clinical evolution of certain common throat diseases as epistaxis. Epistaxis during pregnancy is a subject that remains topical in the field of care, it is promoted directly or indirectly by hormonal changes. Multidisciplinary management in coordination must be done in a timely manner because the risks are not negligible for the health of the mother and the child.

**Keywords:** Severe epistaxis, Pregnancy, Management

## INTRODUCTION

Epistaxis is an ENT health problem that is still relevant, it is one of the emergencies in rhinology commonly encountered. The nasal mucosa is influenced by systemic, local, metabolic or hormonal disorders that cause slowed mucociliary function during pregnancy.<sup>1-3</sup>

The otolaryngological (ENT) symptoms encountered during pregnancy are most often mild, sometimes indicative of a specific pathology.<sup>1,2</sup>

Pregnancy promotes a set of physiological changes in the female body, The ENT organs undergo the influence of

its changes by certain manifestations within it such as rhinitis, epistaxis, and some disorders of the inner ear.<sup>1,2,4</sup>

Prevalence of epistaxis in non-pregnant female population is estimated at 6%, but this rate doubles in pregnant women.<sup>1-4</sup> Nasal bleeding during pregnancy in some cases can be a life-threatening risk to both the woman and the fetus.<sup>1,3,5</sup> These observations report the clinical and therapeutic features of management of severe epistaxis in women during last trimester of pregnancy.

## CASE REPORT

Patient M, aged 32, carrying a second pregnancy at term (35<sup>th</sup> week) is admitted to the emergency room with

epistaxis of high abundance of repetitive character. The history of the disease has not revealed a particular history of rhinological pathologies (epistaxis, sinusitis) or taking anticoagulants, anterior rhinoscopy has not objectified suspicious local lesions (tumor, vascular spot, atrophic process of the nasal mucosa), The paraclinical assessment is not in favor of particular bleeding disorders, hemoglobin was low (7.2 g/dl). In general, there was conjunctival pallor with a blood pressure of 10/7. Our action was to do an anterior nasal packing, with the antibiotic cover therapy, anticoagulants, as well as macromolecules to compensate for blood loss.

The first 36 hours of follow-up did not see a desirable improvement in bleeding control. A blood transfusion was required. This led us to do a posterior nasal packing following which no anterior or posterior bleeding was observable. Hemoglobin had risen to 10.20 g/dl. During this compression gesture the patient underwent a caesarean section whose suite were simple. The general status of the newborn was good. A dismantling was carried out.

Patient B, aged 36, 8 months and one week pregnant, third pregnancy, is referred by her obstetrician nurse for repeated epistaxis for almost 10 days, she wore an anterior packing set up in a peripheral care structure. His general status was altered and there was a conjunctival pallor. Questioning the patient revealed no notion of pathologies of the nasal and/or sinus sphere, or ongoing anticoagulant therapy. No general pathology related to current epistaxis has been detected. Blood pressure was 9/7 and haemoglobin was 8.10 g/dl.

Anterior rhinoscopy has eliminated local endonasal pathologies: neoplasia, capillary fragility, mucosal atrophy lesions.

The posterior nasal packing and the parenteral treatment (macromolecules, anticoagulants) constituted the mainstay of our therapeutic approach. Given the general status of the patient, we considered it appropriate to indicate a blood transfusion to quickly compensate for the blood loss. After 36 hours of antero-posterior nasal packing, the epistaxis was perfectly controlled, hemoglobin rose to 10.80g./dl. Our patient was exeat with a gynecological-obstetrical follow-up. A planned caesarean section considering the particular clinical context at the end of pregnancy was performed with simple postoperative follow-up. The child showed no signs of fetal distress at birth.

Consent was taken from all patients involved in the study.

## DISCUSSION

A woman's hormonal system is unique due to cyclical changes seen during pregnancy, the menstrual cycle and menopause.<sup>1-3,6</sup>

These physiological changes occur due to increased values of two hormones (estrogen and progesterone).<sup>1,5,7</sup>

Our clinical observations confirm the effects of these metabolic, endocrinological and physiological alterations related to pregnancy.<sup>1-3</sup>

There is also an increase in total body fluid believed to cause mucosal congestion (nasal, gingival and laryngeal mucosa) and swelling of the extremities.<sup>3,4</sup> Postpartum leads to a rapid decrease in plasma volume and a slow decrease in interstitial fluid.<sup>7</sup>

Epistaxis during pregnancy can have various etiologies (chronic rhinitis, rhinosinusitis, granulomas, angiofibroma, bleeding polyp of the septum).<sup>7,8</sup>

Pregnancy-related hypertension and toxemia are other important causes for severe epistaxis.<sup>1-4</sup>

In tropical environments with the lack of ENT specialists, basic medical staff are often confronted with delicate clinical situations in the evolution of ENT pathologies. Most caregivers are not well prepared to handle some ENT emergencies that could fall within the realm of primary care. We must also mention the delay in referring patients, a factor aggravating the condition of patients, as evidenced by our observations. Pregnancy is a factor in increasing the volume of blood that circulates, mainly in plasma.<sup>5,6,9</sup> Estrogen also has a direct cholinergic effect on the nasal mucosa, causing vascular engorgement and hyperactivity of the mucous glands.<sup>1-4</sup>

The management of epistaxis during pregnancy is particular, because of its context, the diagnosis although obvious requires vital gestures as demonstrated by our observations. Both patients had high abundance of epistaxis requiring anteroposterior nasal packing, indicating the impact of pregnancy-related changes. It is very important that the obstetrician nurse carefully monitors her women with epistaxis to avoid a late referral to a specialized care structure because serious clinical situations such as those observed in our two patients may occur. The ENT doctor must make a healthy assessment of the state of severity of the bleeding in order to initiate appropriate and adequate therapeutic means by not neglecting the obstetrical status (indication of a caesarean section for certain particular clinical situations). Any delay in the conduct to be taken can jeopardize the life of the future mother and her child. It is particularly important to also consider the possible effects of certain drug products on the mother and fetus.<sup>11</sup>

The multidisciplinary nature of this management is important (Otolaryngologist, obstetrician surgeon and obstetrician nurse).<sup>6,9,11</sup> We followed such a course of action, which made it possible to opt for a caesarean section for our two patients. The post-operative follow-up was simple for young mothers and newborns.

The otolaryngologist must necessarily be well informed of his physiological changes during pregnancy to better understand the clinical course of certain common ENT conditions such as epistaxis.

Its severe epistaxis require appropriate gestures especially during the third trimester of pregnancy as evidenced by our observations.<sup>1,2,12,13</sup>

After the failure of the anterior nasal packing, we had to resort to posterior nasal packing for perfect hemostasis in our two patients. No indication for surgery to help with anticoagulants has been made.

Our observations bring to the fore the importance of basic ENT care.<sup>14</sup> The majority of healthcare workers often lack practical knowledge in ENT primary care as they are confronted with life-threatening common ENT pathologies (affecting the health of the mother and child at an early stage). Particular emphasis must be placed on continuous training to better equip health personnel with skills to better cope with certain common ENT emergencies in the periphery.

## CONCLUSION

Epistaxis during pregnancy is a topic that remains topical in the field of care, it is favored directly or indirectly by hormonal changes. Multidisciplinary care in coordination must be done in a timely manner because the risks are not negligible for the health of the mother and the child.

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