

## Isolated massive vulval edema in pregnancy: A case report

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**ABSTRACT:** Isolated massive vulval edema in pregnancy is rare. The causative mechanisms remains poorly understood but it is probably related to mechanical, osmotic and hormonal factors. The differential diagnosis of vulval edema includes infections, tumors, lymph birth defects, trauma, inflammatory and metabolic diseases. The authors report a case of a 27 year-old primigravida woman with twin pregnancy who was admitted to the obstetrical emergency at 37 weeks of gestation for a severe anemic syndrom associated to a massive vulval edema with no sign of pre-eclampsia. Biological examination showed a severe microcytic hypochromic anemia associated to a hypoproteinemia. Other causes of vulval edema were excluded. After blood transfusion, the patient gave birth by Caesarean section. In the post-partum period, the vulval edema resolved progressively. By the fourteenth day post cesarean section, the vulval edema had completely regressed. Three weeks later, a spontaneous regression of the vulval edema was observed. The aim of this report this case is to discuss the clinical aspects, differential diagnosis, causes and evolution of vulval edema in pregnancy.

**KEYWORDS:** Massive vulval edema, twin pregnancy, anemia, hypoprotidemia, post-partum period.

### INTRODUCTION

Isolated massive edema of the vulva is a rare complication of pregnancy. We report a case of massive vulvar edema in a 27 year-old primigravida woman who presented at 37 weeks of gestation with a severe anemia associated to a subacute massive vulval edema. Other causes of vulval edema were excluded.

### OBSERVATION

Mrs B.H, 27 years old primigravida woman, with no medical and family history, especially no heart or liver or kidney disease. Her pregnancy was estimated to 37 weeks of gestation. It's a dichorionic monoamniotic twin pregnancy followed since 10 weeks of gestation. Blood pressure monitoring during the follow-up was normal, antenatal check-up including a complete blood count made during the first trimester was unremarkable. The patient consulted at 37 weeks of gestation for an extensive vulval edema of subacute onset since few days associated to an anemic syndrome. Physical examination revealed a woman with an anemic syndrome without fever, blood pressure at 130/80 mmHg with a large swelling of the vulva. Proteinuria was negative. Fundal height was 43 cm. Fetal active movements were well perceived by the patient. There was no palpable uterine contraction and fetal heart beats sounds correctly. The vulvo-perineal examination showed edematous swelling of the pubis and labia majora (Figure 1).



**Fig. 1. Edematous swelling of the pubis and labia majora**

The introduction of the speculum was difficult but with no pain. The examination of the cervix was normal and there was no bleeding. Vaginal touch objectified a long and closed cervix. There was no regional lymphadenopathy and no signs of deep venous thrombosis. Obstetrical ultrasound showed a normal twin pregnancy with both twins in breech presentation, biometrics of each twin matched the gestational age and estimation of the fetal weight was 2600 grams for the first twin and 2500 grams for the second one. Complete blood count showed a microcytic hypochromic anemia at 6.2 g / dl , low ferritin at 6 $\mu$ g / L. The platelet count was 154,000/mm<sup>3</sup> , white blood cells 7000/mm<sup>3</sup>, hemostasis tests, liver function and renal function tests were normal. Pre anesthetic consultation was done. The patient was transfused by 4 packed red blood cells with a control of hemoglobin at 10 g / dl. A matched blood request was made. A Caesarean section was performed with podal extraction of twins female baby girls, Apgar 10/10. The patient received antibiotics during the Cesarean section. The post-operative course was uneventful for the mother, who was under preventive dose of anti-coagulation for 5 days and antibiotics. A prescription of curative dose of iron was made and breastfeeding was allowed. Examination of the newborns was unremarkable. By the fourteenth day post cesarean section, the vulval edema had completely regressed. Three weeks later, a spontaneous regression of the vulval edema was observed.

## **DISCUSSION**

Isolated massive vulval edema in pregnancy is rare. The total body water increases is in the order of 6 to 8 L during normal pregnancy , with two-thirds in the extracellular space [1] . Any changes in the factors that control the sodium, interstitial water and osmotic pressure may precipitate edema during pregnancy [1-2]. The causative mechanisms of isolated vulval edema remains poorly understood but it is probably related to mechanical, osmotic and hormonal factors. Massive vulval edema was reported in specific contexts: After tocolysis, vulvovaginitis, Crohn's disease and pre-eclampsia [3-4]. The differential diagnosis of vulval edema includes infections, tumors, lymph birth defects, trauma, inflammatory and metabolic diseases. In addition, vulval swelling occurring in immediate postpartum has been reported with maternal deaths due to vascular collapse in six patients [5]. In our case, except hypoproteinemia, all other causes of vulval edema were excluded.

## **CONCLUSION**

Isolated massive edema of the vulva is a rare complication of pregnancy that can be secondary to several causes. Physicians in charge should be aware of this entity in order to provide the diagnosis and care for the patient.

## **CONFLICTS OF INTEREST**

The authors declare that they have no conflicts of interest related to this article.

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