



A Rare Case of Symptomatic Recurring Decidual Polyp in Each Pregnancy in a Woman with Primary Infertility

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Abstract

Introduction: Decidual polyps are protruding nodules of ectopic decidual stroma that occur during pregnancy. They are benign changes, associated with recurrent vaginal bleeding and infections, which can result in miscarriage, preterm premature rupture of membranes (PPROM), premature labor and/or delivery. There are no strict guidelines for treating decidual polyps.

Case presentation: 27-year-old first gravida, treated for infertility was admitted at 6 weeks of gestation with history of vaginal bleeding. Colposcopic examination and vaginal ultrasound showed 22x10mm decidual polyp, which was removed with a forceps. In the 10th week of pregnancy she had a missed abortion. In her second pregnancy she experienced the same diagnosis of decidual polyp 40x10mm, which was not removed but regularly monitored. She had recurring infections of the urinary tract. Oral antibiotic was administered every time, but at 22 weeks of gestation she presented with PPROM and had an induced abortion. Fetal autopsy showed inflammation of the placenta due to infection. Seven weeks into her third pregnancy, she yet again had vaginal bleeding as a result of yet another decidual polyp 20x18mm. Polypectomy was performed; Urethral swabs were positive for pathogen bacteria and doxycycline was administered. She delivered a healthy baby at 38th week of pregnancy.

Conclusion: This showed a rare case of recurring symptomatic decidual polyp in each pregnancy, which led to loss of fetus in the first two. In lack of clear guidelines, we claim that frequent check-ups, urethral swabs and polypectomy in first trimester should result in a delivery of a healthy baby.

Introduction

Decidual polyps are protruding nodules of ectopic decidual stroma that occur during pregnancy. They are benign changes, associated with recurrent vaginal bleeding and infections, which can result in miscarriage, preterm premature rupture of membranes (PPROM), premature labor and/or delivery. Decidual polyps are not that rare, being found in up to 34% of all pregnant women, but symptomatic decidual polyps are something that a gynecologist does not see that often. We present a unique case of a woman with reappearing decidual polyp in every pregnancy and we discuss the different management methods that still have the experts divided.

Case presentation

27-year-old first gravida was admitted at 6 weeks of gestation with a history of vaginal bleeding. She was treated for infertility with recombinant hFSH and recombinant hCG stimulation followed by intrauterine insemination (IUI) and had a history of CIN 3 with LLETZ excision and hysteroscopic removal of an endometrial polyp. Colposcopic examination and vaginal ultrasound (VUS) showed a 22x10mm decidual polyp, which was removed with a forceps later that week. Histological analysis showed decidualised and hypersecretory transformed endometrium, without any signs of trophoblast or fetal tissue. After the polypectomy, the bleeding ceased and she did not have any other symptoms. However, in the 10th week of pregnancy, she had a missed abortion.

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Six months later, she went through another cycle of IUI. She presented to the clinic at 10 weeks of pregnancy with lower abdominal cramps and brownish-yellow vaginal discharge with an unpleasant odor. Yet another decidual polyp 40x10mm was seen upon examination and urinalysis showed a urinary tract infection. An oral antibiotic was administered. This time, the polyp was not removed, but monitored and treated conservatively. During the pregnancy, she had occasional vaginal bleeding and recurring infections of the urinary tract, treated with antibiotics every time. The fetal growth parameters were within the normal range. At 22 weeks of gestation, she presented with preterm premature rupture of membranes (PPROM). Considering the low gestation, signs of chorioamnionitis and bad prognosis, abortion was induced. The fetal autopsy showed no developmental anomalies, normal male karyotype, but an inflammation of the placenta due to infection. The Committee for induced abortion suggested regular urethral swabs before and during the next pregnancy. Following the instructions, a urethral swab before the beginning of the third cycle of IUI showed presence of the pathogen *Ureaplasma parvum*, therefore treatment with doxycycline and dequalinium chloride was administered. At 7 weeks of pregnancy (now gravida 3 para 0) she returned to the clinic because of vaginal bleeding the previous day. As expected, the cause of the bleeding was a decidual polyp, 26x18x13mm. The urethral swab was positive for *Alloscardovia omnicolens*, Gram-positive bacteria rarely encountered in clinical specimens, which can be associated with urinary tract infections but can also be a member of the urinary tract microbiota. Microbiologists advised taking probiotics per os and repeating the swab in two weeks. Polypectomy with electrocoagulation was performed in the 10th week of pregnancy. During the rest of the pregnancy, she did not have vaginal bleedings, the urethral swabs were occasionally positive only for commensal bacteria and the test for sexually transmitted diseases was negative. At 14 and 22 weeks of gestation, she had asymptomatic bacteriuria, diagnosed during regular screening. Antibiotic was prescribed both times. The rest of the pregnancy was uneventful. She delivered a healthy female baby in the 38th week of pregnancy.

Discussion

In pregnancy, the endometrium undergoes a physiological decidual transformation as a result of elevated progesterone levels and its consequently potentiated action. However, decidual foci sometimes can be found in other parts of the female reproductive system (vagina, cervix, fallopian tubes, ovaries), rarely even in the abdominal cavity. In those cases, it is called ectopic decidua or decidualosis [1- 3].

The first case of decidual ectopy in the cervix of a pregnant patient was described in the late 19th century and for almost a hundred years it was considered a rare occurrence. Researches in the 70s and 80s found out that it might not be such a rare condition after all, reporting decidual cervical changes in 3-34% of pregnant women that were examined. Furthermore, ectopic decidual tissue in the cervix was found in up to 60% in hysterectomy specimens, removed during pregnancy for either benign or malignant disease. Interestingly, cervical decidualization has not been reported in women with an ectopic pregnancy. It has been spotted in the cervix of non-pregnant women, although it is very uncommon [1].

There are two theories that explain the decidualization of the cervix. The first one suggests that cervical stroma cells

undergo decidual metaplasia as a result of inflammation, which makes them more susceptible to stimulation by hormones (predominantly progesterone) and other signal molecules, elevated during pregnancy. The other explanation proposes the presence of endometrial foci within the cervix, which then in pregnancy undergoes the same changes as normal endometrial tissue [1,4].

Decidual cervical changes most frequently occur in pregnant women aged 20-25. Most of them are diagnosed in the first trimester (most commonly between 5 and 12 weeks of gestation) and start to regress after 25 weeks. All decidual changes regress in the period between the 38th week of pregnancy and two weeks after delivery [1,5].

On colposcopic examination they appear as multicolored (brown, yellow, pink or white), small elevated nodules, polyps or ulcerations. Diagnosis based on colposcopy only is rarely made, as cervical decidualosis can resemble cervical adenoma, polyp, dysplasia or carcinoma. Therefore, histological analysis is needed. Cytology is not accurate enough to be used as a sole diagnostic method for decidual changes. However, it helps rule out malignancy [1,3].

Cervical decidualosis is usually asymptomatic, being an incidental finding during a routine examination. Rarely, an extensive decidual change of cervical stroma forms a polypoid protrusion from the endocervix, so-called decidual polyp, which is susceptible to infection and can cause vaginal discharge. As any decidual change, it can also cause bleeding, which occurs spontaneously or following intercourse, gynecological examination or douching. Bleeding in the first trimester is especially serious, as it can be a sign of threatened abortion or extrauterine pregnancy [1,4,5,7].

Management of decidual polyps remains a gray area and a difficult topic throughout the years. Thus, there is still no unified opinion among experts. Removal of decidual polyps may cause bleeding and/or inflammation that can affect the endometrium above, so removal is associated with a higher risk of spontaneous abortion and preterm birth. Some doctors suggest, that it may be safer to let them be and excision is recommended only if malignancy cannot be excluded [6,8].

On the other hand, the environment itself in which the decidual polyp grows may also lead to complications. Genital bleeding (in this case caused by the decidual polyp) is a known risk factor for miscarriage or preterm delivery. Furthermore, the polyp may cause cervicitis, which can lead to severe inflammation and infection and spread to the endometrium, resulting in chorioamnionitis, which then can lead to the aforementioned complications [6,8].

Essentially, if the polyp is small, it should be managed conservatively, if it is big, removal and antibiotic therapy afterward is recommended. What size should the decidual polyp be to be classified as big or small is yet to be determined and at the moment depends on the treating physician's assessment. In two studies, as risk factors for delivery before 34 weeks were noted polyps bigger than 12mm, bleeding before polypectomy and polypectomy in early pregnancy (before 10 weeks of gestation). It is still unknown whether the preterm delivery is caused by the polyp itself or the polypectomy. An additional risk factor that can lead to infection and loss of the fetus is bacterial vaginosis [6].

In our case report, we present a patient with recurring decidual polyps in each pregnancy. In her first pregnancy, she

suffered a miscarriage at 10 weeks of gestation after she had a polypectomy at 6 weeks gestation. In the next pregnancy, the polyp was treated conservatively, nevertheless, she had an induced abortion because of chorioamnionitis and PPROM. In her third pregnancy we performed polypectomy with electrocoagulation at 10 weeks, urethral swabs and urinalysis were performed regularly and antibiotic therapy was administered every time it was necessary. Close monitoring and careful managing of her pregnancy resulted in term delivery of a healthy baby.

Conclusion

Our rare case report explores the subject of management of decidual polyps in pregnancy, which still has the experts divided. A unique presentation of a woman with a recurring decidual polyp in every pregnancy, once treated with polypectomy and the next time managed conservatively, led to a loss of the fetus both times. However, frequent check-ups, urethral swabs and urine analysis, combined with minimally invasive methods of removal of the polyp after 10 weeks of pregnancy can result in a delivery of a healthy baby by a healthy mother.

Conflicts of Interest

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in this manuscript.

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