

CASE REPORT

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Effects of vaginal lichen planus on pregnancy

Brynn Franz, Eliana Fine, Joseph W Bacchi III

ABSTRACT

Introduction: Lichen planus is an inflammatory condition that can affect the vulva and vagina. Although more common in women over 50 years of age, lichen planus can affect younger women and complicate pregnancy. During pregnancy, lichen planus can cause vaginal irritation, antepartum bleeding, and postpartum hemorrhages. It is imperative to maintain good control of the disease during pregnancy with topical corticosteroids.

Case Report: A 35-year-old female with a history of vaginal lichen planus, on vaginal hydrocortisone, presented to the labor and delivery ward in the active stage of labor. She proceeds with a vaginal delivery that is followed by a postpartum hemorrhage requiring a blood transfusion. The postpartum hemorrhage was secondary to bleeding from the vaginal mucosa that was intolerant to sutures. Bleeding was then controlled with topical hemostatic agents as well as vaginal packing.

Conclusion: Uncontrolled vaginal lichen planus can be associated with postpartum hemorrhage at the time of delivery. Some providers may recommend a cesarean section to prevent these outcomes; however, instead it is recommended to focus on adequate control of the disease prior to delivery and to proceed with a vaginal delivery. Standard regimens of topical corticosteroids can be safe and effective at preventing flares of lichen planus in pregnancy. In the event of a postpartum hemorrhage secondary to lichen planus, topical hemostatic agents

and vaginal packing should be implemented as means to minimize blood loss.

Keywords: Complications, Lichen planus, Pregnancy, Treatment

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INTRODUCTION

Lichen planus is an idiopathic, inflammatory condition caused by a dysfunction in cell-mediated immunity that can affect the vulva and vagina as well as the skin and oral mucosa [1]. This disorder is more common in women in their 50s and 60s with a prevalence of up to 3.7% [2, 3]. Vulvovaginal lichen planus can be categorized into three main types: classic, hypertrophic, and erosive [3]. The erosive type is the most common type of lichen planus that typically presents with erosions on the vulva and/or vagina that contain a white stria along with symptoms of dyspareunia, pain, and soreness [4].

Lichen planus is often treated with topical corticosteroids, which can be easily applied to the affected areas [5]. A typical treatment plan may include a 2–3-month course of high potent topical corticosteroids followed by a maintenance period to prevent recurrences. Second line agents used in the treatment of lichen planus include systemic corticosteroids given either orally or intramuscularly, and tacrolimus.

As lichen planus typically affects women in their 6–7th decade of life, it is an uncommon finding in obstetrics. The objective of this case report is to present a case of lichen planus during pregnancy, including the antepartum management and postpartum complications

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that can be associated with the disorder. Additionally, we will discuss the ideal route of delivery for a patient with lichen planus.

CASE REPORT

A 35-year-old female with a history of two previous vaginal deliveries presented to the labor and delivery ward at 39 weeks' gestation and was found to be in the active stage of labor. The patient had a known past medical history of lichen planus, left vulvar varicosities, and two prior uncomplicated vaginal deliveries. During the pregnancy, the patient had several episodes of vaginal spotting and irritation. She was noted to have thin, friable vaginal mucosa at various stages of her antepartum course. The patient had been on vaginal hydrocortisone throughout the pregnancy for her lichen planus. She noted that she did have exacerbations of the lichen planus in each of her prior pregnancies, however it was overall well controlled without any major complications at the time of delivery. She did require vaginal packing at her previous delivery, but her bleeding was controlled, did not have a postpartum hemorrhage, and did not require a blood transfusion.

Upon initial presentation to labor and delivery, the patient was found to be in active labor. She had a controlled delivery by the midwifery team. The physician group was then called to the room for assistance due to increased bleeding. Soon after delivery, she was noted to have a significant amount of vaginal bleeding. She was subsequently taken to the operating room for an exam under anesthesia to assess the etiology of her bleeding as visualization was difficult in the labor room. Although some uterine atony was appreciated, the patient's vaginal mucosa appeared raw and emaciated throughout. The major source of her bleeding was via the vaginal mucosa secondary to her lichen planus. Multiple areas on the patient's vaginal mucosa were bleeding profusely, the worst being in the posterior fornix between the cervix and rectum. Multiple 2-0 polygalactin-910 sutures were placed throughout the vagina, specifically on the right vaginal wall, posterior fornix, posterior cervix, and left vaginal wall. The sutures were easily tearing through the thin, friable mucosa, so a topical hemostatic agent (Surgicel powder) was applied to the vaginal mucosa and the vagina subsequently packed with vaginal packing. The patient had an intrapartum blood loss of 2166 mL and was transfused 1 unit of packed red blood cells. The patient subsequently had a routine postpartum course with no long-term complications. An experienced obstetrician should attend to such patients who are at high risk for intrapartum or postpartum hemorrhage to reduce the morbidity.

DISCUSSION

Although more common in women in their 50–60s, lichen planus can affect women of any age, including

younger, obstetrical patients [6]. Vaginal and vulvar lichen planus can contribute to complications during pregnancy. Complications of this disorder can include vulvar/vaginal irritation, unpredictable antepartum bleeding, and increased bleeding at time of delivery including postpartum hemorrhage.

To help prevent some of these complications, it is important for pregnant women to have good control over their disease throughout their pregnancy. Compliance with topical corticosteroid application could reduce the likelihood of adverse perinatal outcomes [5]. Studies on treatment of vaginal and vulvar lichen planus in pregnancy are limited, but there is an abundance of treatment options for the non-pregnant person that can be applied during pregnancy. A 2006 study including 114 non-pregnant women with erosive lichen planus of the vulva were followed for five years to see their response to different treatment options. Out of the 114 women followed, 89 women were treated with 0.05% clobetasol propionate ointment. This treatment led to symptomatic improvement in 94% of women, with 71% of them being symptom free while on the treatment. Women who were then transitioned to maintenance therapy of 0.05% clobetasol propionate ointment were shown to have a 68% improvement in symptoms [7].

In addition to topical corticosteroids, antihistamines can be administered to reduce itching caused by lichen planus. Nonmedicinal treatments include sitz baths, cool compresses, and the avoidance of tight clothing [4].

Tacrolimus and retinoids can also be utilized in patients with vulvovaginal lichen planus that are not pregnant or planning to become pregnant. Tacrolimus crosses the placenta and can be found to have adverse pregnancy outcomes including low birth weight, preterm delivery, transient neonatal hyperkalemia, and neonatal renal dysfunction [8]. Retinoids, including acitretin, are category X drugs in pregnancy due to their teratogenic risk to the fetus. Patients who take retinoids during pregnancy can develop a syndrome called "retinoic acid embryopathy." This syndrome includes craniofacial and cardiac abnormalities, as well as neurologic and thymic malformations [8]. Should a patient fail first line therapies with topical corticosteroids, medical providers should refer to either high-risk maternal-fetal medicine obstetrical providers or gynecologists who specialize in lichen planus [6, 9].

Anderson and colleagues studied the treatment of vaginal lichen planus in 60 non-pregnant women [9]. These women were treated with intravaginal hydrocortisone 25 mg suppositories twice daily until improvement in symptoms, and then tapered down to twice weekly treatments for several months, or until complete resolution of symptoms. The mean duration of therapy was 28.1 months. 43 of the patients had complete records and follow-up examinations. Of these patients, 81% subjectively had improvement in symptoms and 76.8% objectively had clinical improvement in symptoms.

Medications are always of concern when dealing with pregnancy. Topical corticosteroid use has been found to be safe in pregnancy. Chi and colleagues performed a retrospective cohort study on 2658 pregnant women exposed to topical corticosteroids. When compared to 7246 unexposed pregnant women, the exposed group were found to have no increased rates of orofacial cleft, low birth weight, preterm delivery, fetal death, low Apgar scores, or differences in mode of delivery. A subgroup analysis of potent or very potent topical corticosteroids was associated with an increased risk of babies being born with low birth weights when the total dose for the pregnancy exceeded 300 grams [9].

Due to the success in the non-pregnant population and to overall safety of topical corticosteroids in pregnancy, it is recommended to continue treating vulvar or vaginal lichen planus in pregnancy with the typical courses of topical corticosteroids. However, providers should monitor total pregnancy doses of the topical steroids and limit exposure of high potent topical steroids to 300 grams for the entire pregnancy [10].

The patient in this case report did have flares of her lichen planus throughout the pregnancy with complaints of vaginal/vulvar irritation and unpredictable antepartum bleeding. It was noted in the chart that she was on hydrocortisone, however exact dosing and regimens were not listed in the charts. Having good control of the symptoms of lichen planus in the weeks leading up to delivery could have theoretically reduced the bleeding the patient encountered at the time of delivery and thus avoiding a postpartum hemorrhage. Another learning point of this case was the active management of the postpartum hemorrhage. Vaginal lichen planus leads to thin tissue that is friable and does not suture well. In this case we used topical hemostatic agents and vaginal packing that led to reduced bleeding and resolution of symptoms. Although more data, including randomized controlled trials would have to be initiated, topical hemostatic agents along with vaginal packing can offer improved outcomes for patients with vaginal bleeding at the time of delivery secondary to a diagnosis of lichen planus.

Lastly, the topic of route of delivery often arises in cases of lichen planus, as well as associated vulvar disorders (i.e., lichen sclerosis). Medical providers should use shared decision making with their patients, however based on our experience and literature review lichen planus is not a contraindication for a vaginal delivery. Cesarean deliveries can lead to both acute and chronic complications, including intraoperative bleeding, postoperative infections, and complications in future pregnancies. The risks of a cesarean section outweigh the benefits. Medical providers should focus on optimizing a patient's lichen planus prior to delivery and proceed with a vaginal delivery as opposed to undergoing a cesarean section.

CONCLUSION

In conclusion, lichen planus is a disorder that can affect both the antepartum and postpartum aspects of pregnancy. Providers should focus on having good control of symptoms throughout a patient's pregnancy, especially in the weeks leading up to delivery. Typical first line therapies including topical corticosteroids can be safe and effective in pregnancy. In the event of a postpartum hemorrhage topical hemostatic agents and vaginal packing can be considered as a first line therapy once other causes of postpartum hemorrhage have been ruled out. Although shared decision making with the patient should be applied, lichen planus is not a contraindication to vaginal deliveries and does not require a cesarean delivery.

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Authors declare no conflict of interest.

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All relevant data are within the paper and its Supporting Information files.

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