

THE COURSE OF LICHEN SCLEROSUS IN PREGNANCY

Kamila Pencko^{1A,B,C,D}, Izabela Płonka^{1A,B,C,D}, Justyna Kot^{2C,D,E,F}

¹Student's Scientific Group of Department of Mother and Child Health, Institute of Nursing and Midwifery, Faculty of Health Sciences, Jagiellonian University Medical College, Cracow, Poland

²Department of Mother and Child Health, Institute of Nursing and Midwifery, Faculty of Health Sciences, Jagiellonian University Medical College, Krakow, Poland

Authors' contribution:

A. Study design/planning • B. Data collection/entry • C. Data analysis/statistics • D. Data interpretation • E. Preparation of manuscript • F. Literature analysis/search • G. Funds collection

Address for correspondence:

Dr. Justyna Kot
Department of Mother and Child Health
Institute of Nursing and Midwifery
Faculty of Health Sciences
Jagiellonian University Medical College
Krakow, Poland
e-mail: justyna.k.kot@uj.edu.pl

SUBMITTED: 20.05.2023

ACCEPTED: 10.06.2023

DOI: <https://doi.org/10.5114/ppiel.2023.130714>

ABSTRACT

Lichen sclerosis is a chronic inflammatory dermatosis of unknown aetiopathogenesis. It is a common disease among women. The highest incidence is observed between the fifth and sixth decade of life and before puberty. Women of reproductive age, including pregnant women, may also be affected, but limited data are available in this population. The purpose of the study was to present the current state of knowledge on the impact of lichen sclerosis on the course of pregnancy and the method of delivery. The literature used in the article comes from the PubMed database. The articles were searched using the keywords: lichen sclerosis and pregnancy.

The analysis showed that lichen sclerosis, when properly treated, does not complicate the course of pregnancy and does not affect the delivery method.

Key words: pregnancy, delivery, lichen sclerosis.

INTRODUCTION

Lichen sclerosis (LS) is a chronic skin disease that usually affects the genital area. It is most commonly diagnosed in older women, both perimenstrual and postmenstrual, although cases can occur before puberty and during reproductive age. The clinical features of LS include smooth white bumps that tend to merge and scar. In advanced stages of the disease, there may be atrophy of the labia minora and majora. Common symptoms include severe itching of the vulva, burning, chronic pain in the genital area, urinary symptoms, and sexual dysfunction related to pain. Anxiety and depression can also occur during the course of the disease. Some cases may be asymptomatic. Due to the varied course of the disease, the exact frequency of LS has not been established [1, 2].

Although the exact aetiology of the disease remains unknown, several theories have been proposed to explain the pathogenesis of LS. Studies on aetiology have shown a relationship between LS and autoimmune diseases, particularly Hashimoto's and Graves' disease. Genetic factors are also believed to play an important role in the pathogenesis of LS. Lichen sclerosis may be more common in genetic disorders such as Down syndrome or Turner syndrome. Hormonal factors (reduced oestrogen levels) and infectious factors (*Borrelia burgdorferi* bacteria) are also considered in the aetiology of this disorder [2, 3].

The basis of diagnosis is clinical evaluation, but if it is unclear or suggests a neoplastic process, biopsy material should be taken for histopathological evaluation. Lichen sclerosis should be differentiated from atopic dermatitis, other types of lichen, psoriasis, and vitiligo. Patients with this disease should have regular medical check-ups because the presence of LS increases the risk of vulvar cancer [2-4].

Considering the cases of LS in women of reproductive age, the potential impact of LS on pregnancy and delivery should be considered. Due to the limited number of publications on the occurrence of this disease during pregnancy, selection and analysis of the available data are necessary.

The purpose of this study was to present the current state of knowledge on the impact of lichen sclerosis on the course of pregnancy and the method of delivery.

REVIEW METHODS

The PubMed database was used to conduct the review. The search strategy involved the use of the keywords "lichen sclerosis" and "pregnancy". Publications were searched without any time restrictions. A total of 32 results were obtained, of which 4 different studies conducted in the United Kingdom, Australia, and the United States were finally analysed. The review was carried out in the period of November–December 2022.

RESULTS OF THE REVIEW

The analysis included 4 studies, which described a total of 79 pregnancies in 61 women with LS. The effect of pregnancy on the symptoms of the disease is individual and variable. Among the pregnant women studied, 45% reported mild to moderate symptoms during pregnancy, 37% did not report symptoms or experience any changes compared to the period before pregnancy, while 18% reported severe or exacerbated symptoms of the disease [5-8].

According to the data collected, 85% of the pregnancies ended in a vaginal delivery (VD), 14% were terminated by caesarean section (CS), and in one case the termination method is unknown. Regarding caesarean section deliveries, 9 were performed for obstetric reasons, and one case did not specify the reason. Only one caesarean section was performed due to LS. This was related to the severe disease of the patient and existing scars [5-8].

Taking into account complications during natural delivery, 3 analysed studies (Haefner *et al.* [5], Koltitz *et al.* [8], Trokoudes and Lewis [7]) reported a total of 17 cases of perineal tear. Fourteen patients had first-degree tears, 2 had second-degree tears, and one patient had a third-degree tear. No patient developed LS in the delivery scars. Only one woman reported exacerbation of symptoms after delivery, which decreased after an increase in dose of local corticosteroids (TCS). The study by Nguyen *et al.* [6] did not provide detailed data on perinatal complications, but the authors reported that perineal and abdominal scar healing was performed without complications in almost all women. In one case, LS was observed in the perineal wound area after natural delivery [5-8].

Among the women studied, 97% used topically applied corticosteroids during pregnancy. The commonly used drug was 0.05% clobetasol propionate ointment. In 2 pregnant women, TCS therapy was discontinued due to concerns about its impact on pregnancy [5-8].

A summary of the included publications, which examined the relationship between LS and pregnancy and delivery outcomes, is presented in Table 1.

DISCUSSION

Lichen sclerosus is a chronic dermatosis that belongs to diseases with multifactorial aetiopathogenesis. The preliminary diagnosis of the disease is based on the patient's medical history and the identification of characteristic clinical features. Due to the often-ambiguous changes in the vulvar area and the potential for carcinogenesis, a histopathological examination is recommended to confirm the diagnosis. Although this condition is more common in the perimenopausal period, younger women of reproductive age are also at risk of developing the disease. Based on a review of the literature, it can be concluded that there is a lack of data on LS in pregnant women. Available studies focus mainly on the treatment and impact of the disease on the delivery process [4-8].

The studies analysed did not provide evidence for the effect of LS on pregnancy, delivery, or potential postpartum complications. The course of the disease during pregnancy varies in terms of severity of symptoms. The authors suggest that most women with LS can complete pregnancy through natural childbirth. Regarding to postpartum complications, the impact of lichen sclerosus on infections in the perineal area was not identified. Similar observations were presented by Kirtschig *et al.*, who showed that among 18 pregnant women with LS, 14 delivered naturally [9]. Only one case had problems with wound healing after episiotomy. The authors also suggested that the course of LS during pregnancy is milder compared to its activity before and after childbirth. Similar results were obtained by Gunthert *et al.* [10], who showed that all 4 pregnant women participating in their study achieved complete remission of LS during pregnancy [5-10].

Table 1. Characteristics of case studies examining the relationship between lichen sclerosus (LS) and the course of pregnancy and delivery

Citation	Country and year of publication	Reasons		Mode of delivery	Reasons for CS	LS symptoms during pregnancy	LS treatment during pregnancy
		Cases	Deliveries				
Haefner <i>et al.</i> [5]	United States, 1999	2	2	VD (2)	–	Asymptomatic (1) Symptomatic (1)	TCS (2)
Nguyen <i>et al.</i> [6]	Australia, 2018	29	33	VD (29) CS (4)	Obstetrical reasons (3) LS (1)	Mild (12) Moderate (11) Severe (8) Very severe (2)	TCS (33)
Trokoudes and Lewis [7]	United Kingdom, 2019	22	36	VD (33) CS (3)	Obstetrical reasons (3)	No change (22)	TCS (22)
Koltitz <i>et al.</i> [8]	United States, 2021	8	8	VD (3) CS (4) Unknown (1)	Obstetrical reasons (3) Unknown (1)	Asymptomatic (1) Symptomatic (5) Exacerbation (2)	TCS (6) Non recommended (2)

LS – lichen sclerosus, VD – vaginal delivery, CS – caesarean section, TCS – topical corticosteroids

The studies analysed did not take into account the impact of LS and corticosteroid treatment on the course of lactation [5-8].

Treatment of LS is a long-term process. Among first-line preparations, topical corticosteroids can be distinguished. The main drug used in the treatment of LS is clobetasol propionate, which has a very strong effect. Available studies confirm that local use of glucocorticosteroids in pregnant women has no adverse effects on the foetus, such as an increased risk of foetal death, genetic defects, premature delivery, or lower APGAR score. Furthermore, a retrospective study conducted in Denmark did not find a relationship between local glucocorticosteroids use during pregnancy and the risk of foetal growth restriction or low birth weight. According to available research results, the benefits of TCS outweigh the risks during pregnancy; however, due to the limited nature of most studies, it is recommended that the treatment of skin diseases in pregnant women be based on the use of moderate- or low-potency topical corticosteroids. High-potency glucocorticosteroids should be kept to a minimum while constantly monitoring the foetal condition [11-13].

At every stage of the disease, as well as during pregnancy, proper care is recommended to reduce symptoms, consisting of the elimination of irritating and scented products, and moisturizing the skin. An important element is also the use of breathable underwear, which alleviates pain and itching. It is recommended that exposure to mechanical injuries be avoided due to the risk of exacerbating symptoms. It should be remembered that pregnancy associated with LS, in addition to regular gynaecological visits, also requires staying under dermatological control [3].

CONCLUSIONS

Lichen sclerosis, if properly treated, does not complicate the course of pregnancy and is not an indication for a caesarean section. The coexistence of lichen sclerosis does not exclude vaginal delivery. Due to limited data on the occurrence of this disease in women of reproductive age, it is necessary to report cases in detail, which will allow for further deepening of knowledge about lichen sclerosis in women planning to conceive.

Disclosure

The authors declare no conflict of interest.

References

1. Krapf JM, Mitchell L, Holton MA, et al. Vulvar lichen sclerosis: Current perspectives. *Int J Womens Health* 2020; 12: 11-20.
2. Olek-Hrab K, Jenerowicz D, Osmola-Mańkowska A, et al. Wybrane dermatozy sromu. *Ginekol Pol* 2013; 84: 959-965.
3. Jabłonowska O, Woźniacka A, Żebrowska A. Lichen sclerosis. *Dermatol Rev/Przegl Dermatol* 2021; 108: 126-136.
4. Palicelli A, Giaccherini L, Zanelli M, et al. How can we treat vulvar carcinoma in pregnancy? A systematic review of the literature. *Cancers (Basel)* 2021; 13: 836.
5. Haefner HK, Pearlman MD, Barclay LM, et al. Lichen sclerosis in pregnancy: presentation of two cases. *J Low Genit Tract Dis* 1999; 3: 260-263.
6. Nguyen Y, Bradford J, Fischer G. Lichen sclerosis in pregnancy: A review of 33 cases. *Aust N Z J Obstet Gynaecol* 2018; 58: 686-689.
7. Trokoudes D, Lewis FM. Lichen sclerosis – the course during pregnancy and effect on delivery. *J Eur Acad Dermatol Venereol* 2019; 33: e466-e468.
8. Kolitz E, Gammon L, Mauskar M. Vulvar lichen sclerosis in women of reproductive age. *Proc (Bayl Univ Med Cent)* 2021; 34: 349-351.
9. Kirtschig G, Becker K, Gunthert A, et al. Evidence-based (S3) Guideline on (anogenital) lichen sclerosis. *J Eur Acad Dermatol Venereol* 2015; 29: e1-43.
10. Gunthert AR, Faber M, Knappe G, et al. Early onset vulvar lichen sclerosis in premenopausal women and oral contraceptives. *Eur J Obstet Gynecol Reprod Biol* 2008; 137: 56-60.
11. Chi CC, Wang SH, Wojnarowska F, et al. Safety of topical corticosteroids in pregnancy. *Cochrane Database Syst Rev* 2015; 10: CD007346.
12. Worm Andersson N, Skov L, Traerup Andersen J. Evaluation of topical corticosteroid use in pregnancy and risk of newborns being small for gestational age and having low birth weight. *JAMA Dermatol* 2021; 157: 788-795.
13. Chi CC, Wang SH, Mayon-White R, et al. Pregnancy outcomes after maternal exposure to topical corticosteroids: a UK population-based cohort study. *JAMA Dermatol* 2013; 149: 1274-1280.