ORIGINAL RESEARCH PAPER

Plastic Surgery

MULTI-DISCIPLINARY INTERVENTION FOR LABIAL FUSION IN A CASE OF VULVAL LICHEN PLANUS.

KEY WORDS: Vulval Lichen Planus, Reconstruction, Labial adhesion, Multi-disciplinary approach

Dr. Suma Pigilam M.S.,M.Ch (Plastic surgery), Consultant of Department of plastic and reconstructive surgery, Apollo hospital Jubilee Hills, Hyderabad-39, Telangana, India -500033

Dr. Derick Jose* DrNB Resident, Department of plastic and reconstructive surgery, Apollo hospital Jubilee Hills, Hyderabad-39, Telangana, India - 500033. *Corresponding Author

ABSTRACT

Vulvo-vaginal lichen planus is a very distressing and rare forms of non-venereal genital dermatoses. Erosive variants of Lichen planus often have a protracted course and has a higher risk of malignant transformation. This case was a 53-year-old woman, previously diagnosed with lichen planus on conservative treatment, who now presented with symptomatic labial adhesions and urinary complaints like urgency, frequency and poor urine stream. Clinical examination revealed normally developed labia majora, partially but extensively fused labia minora including the clitoral hood. Urethral opening was not visualised, while a small vaginal orifice was seen with no ulcerations. A multi-disciplinary team consisting of urologist and plastic and cosmetic surgeon dissected out the labial adhesions with the electrocautery and reconstructed the vaginal and urethral openings. Cystoscopy followed by urethral dilatation was done for urethral narrowing. Postoperatively, on following up the patient the adhesions were completely separated, and the area healed well. No recurrences were noted. Though aggressive management with topical steroids and other measures often improves symptoms on short term basis, few patients may require long term management by multi-disciplinary team to optimize the outcomes.

INTRODUCTION:

Lichen planus (LP) is a chronic inflammatory mucocutaneous condition which is T- cell mediated and rarely involves the genitalia. Any untreated erosive LP has a malignant potential and will manifest as synechia formation along with deep irreversible scarring [1]. Labial adhesions or fusion or synechiae formation due to LP in adulthood is fairly a rarer clinical entity and only few cases have been reported in the literature in the peri- menopausal age [2].

The various clinical manifestations include dyspareunia, urinary complaints like dysuria, haematuria, urinary incontinence, vaginitis, epidermal atrophy or erosions (cigarette paper wrinkling) [3]. LP occurs due to alteration in the antigenic expression at the basement membrane zone with over expression of collagen 4 and 7 and due to reduced expression of anchoring filaments and hemi-desmosomal proteins. Contributing factors to this condition includes local trauma, lacerations to vagina during childbirth, lichen sclerosus, chronic vaginal inflammation, lack of sexual activity, hypoestrogenism and rarely it can be idiopathic also [4]. This case reports a rare presentation of LP, a multidisciplinary surgical approach and related literature search.

Case Report:

A 53 year old female presented in the outpatient department with poor urine stream and feeling of poor stream or obstruction while passing urine and had urgency. She had no history of dysuria, incontinence, increased frequency of micturition. She was a diagnosed case of lichen planus with an initial manifestation of itching and indurations over abdomen, back and both forearm for which she was started on topical steroids. The lesions resolved in two months with topical steroids and had a period of remission of four to five months. She continued topical steroid for a period of five years and during this course she developed oral lesions too.

She had discontinued the medication after five years and tried alternative medicines for next two years. Later she developed symptoms like vaginal itching and burning sensation. She had consulted dermatologist for the same small ulcerations and for the above mentioned symptoms. Histo-pathological examination from this site was suggestive of lichen planus. She was started on methotrexate 500 milligrams twice daily and prednisolone 4 milligrams for this relapse. Concurrently she noticed that the labia minora started closing progressively over the last three years. She had menarche at the age of 11 and was having 27-28 days of menstrual cycle with 5 days of bleeding. She got married at age of 20 and two normal vaginal deliveries at the age of 21 and 26 years. Following vaginal prolapse she underwent vaginal hysterectomy at the age of 44 years of age. No significant family and personal history. No history of sexual assault.

On examination, vitals were stable with normal systemic examination. Multiple hyper pigmented lesions over abdomen (mainly on lower abdomen), back and both forearm were noted. Lesion were black in colour and indurated with largest solitary lesion measuring 1 x 1.5 cm in size and few other lesions which were coalesced. It was not associated with itching. No active lesions were noted in the oral cavity. Vulval examination showed normal labia majora. Labia minora was fused including the clitoral hood to the anterior three-fourth of the vulval opening. Vaginal orifice was visible. Urethral opening was not visualised. No active ulcerations were present in the vulval area. Basic blood investigations and urine analysis were normal. Urine culture showed no growth of any organisms.

Case was discussed with the multi-disciplinary team including urologist, plastic and cosmetic surgeon. Surgical reconstruction was done where the labia mineral adhesions were released with electrocautery and the raw area was closed with 4.0 rapid vicryl. Urethral opening was visualised. Clitoral hood was released. Cystoscopy followed by urethral dilatation was done for urethral narrowing. Foley's urinary catheter was placed in-situ. The dressing was packed with neosporin and cuticle for 48 hours. Histopathological report of the vaginal biopsy specimen showed a tissue lined by a stratified squamous epithelium showing hyperkeratosis and acanthosis. Basal edema was present along with mild exocytosis of lymphocytes. Subepithelial mild infiltration of lymphocytes was seen along the significant pigment incontinence. Focal ulcerations covered by granulation tissue with a dense lymphoplasmocytic infiltrate were also noted. Findings mainly indicated lichenoid reaction pattern and therefore lichen planus. Post-operative follow up after 6

weeks showed proper healing of labial tissues with no recurrence of symptoms.

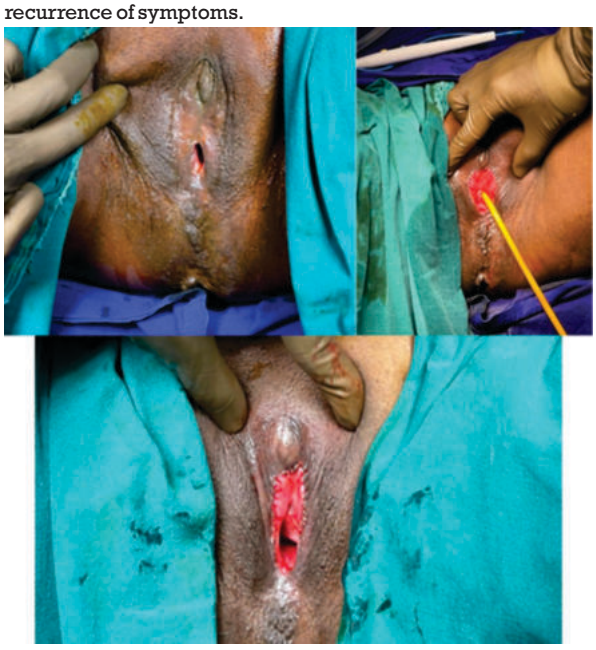

Figure1: Genital Lichen planus with prominent scarring sequelae. Note the resorption of labia minora to anterior ¾ rd of the vulval opening including the clitoral hood. A small vaginal orifice is visible without visualisation of urethral opening (*top right corner image shows the pre-operative view)*. *Bottom image* shows the post-operative view of sutured edges of the released adhesions.

DISCUSSION:

Long standing vulvo-vaginal LP is a persistent and painful disease. The co-existence of oral and vulo-vaginal lesions is common among the erosive form of LP with a prevalence rate of 59% cases of LP being associated with oral manifestations unlike this case were only vulvo-vaginal lesions were present without oral lesions [5]. In this case, she had none of the predisposing factors leading to labial synechia except lack of sexual activity.

This patient was diagnosed with erosive vulval LP as it satisfied 7 out of 9 diagnostic criteria features like presence of well-demarcated erosions at the vaginal introitus, symptoms of burning, scarring/loss of normal architecture, presence of vaginal inflammation, presence of a well-defined inflammatory band in the superficial connective tissue that involves the dermo-epidermal junction, presence of an inflammatory band that consists predominantly of lymphocytes and signs of basal cell layer degeneration like abnormal keratinocytes and basal apoptosis[6].

Surgical treatment was sought as the topical and systemic treatment failed to eradicate her symptoms as in this case. Blunt dissection of the vaginal lesions with concomitant use of topical steroids especially in the immediate post-operative period has led to better outcomes and less recurrences [7]. Grafting is not recommended for ulcerative vulval lesions unlike cutaneous lesions. This patient had underwent the release of the adhesion and thereby symptomatic improvement following the same with no recurrence till date.

CONCLUSION:

Erosive vulvo-vaginal lichen planus is a very painful, chronic and emotionally disturbing condition. Though topical steroids and other symptomatic measures provide a short term relief, a long term multi-modal surgical intervention is warranted to prevent progressive architectural changes. These patients must be diligently monitored for any neoplastic changes on long run.

REFERENCES:

1. Mauskar M. Erosive Lichen Planus. Obstet Gynecol Clin North Am. 2017; 44(3):407-420.
2. Ozekinc M, Yucel S, Sanhal C, Erman Akar M. Labial fusion causing coital and voiding difficulty in a young woman. Adv Sexual Med .2013;3:11-13.
3. McPherson, T. and Cooper, S.Vulval lichen sclerosus and lichen planus. Dermatologic Therapy.2010;23:523-532.
4. Syed, Fatima BS, Vyas, Anuja MD Case Report: Management in a 25-year-old with Severe Erosive Vulvovaginal Lichen Planus. Obstetrics & Gynecology. 2018;13:196S
5. Eisen D. The vulvovaginal-gingival syndrome of lichen planus: the clinical characteristics of 22 patients. Arch Dermatol. 1994;130:1379-1382.
6. Simpson RC, Thomas KS, Leighton P, Murphy R. Diagnostic criteria for erosive lichen planus affecting the vulva: an international electronic- Delphi consensus exercise. Br J Dermatol. 2013;169:337-43.
7. Zaki I, Dalziel KL, Solomonsz FA, Stevens A. The under-reporting of skin disease in association with squamous cell carcinoma of the vulva. Clin Exp Dermatol. 1996;21:334–7.