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Original Research Article

Lichen sclerosus: a clinical study

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ABSTRACT

Background: Lichen sclerosus (LS) is a chronic inflammatory disorder that preferentially affects the anogenital region and rarely extra genital sites. It is more common in women and has a bimodal peak of incidence. The objective of the study was to document the clinical, demographic pattern and associated systemic diseases of lichen sclerosus (LS) among patients attending skin OPD, RIMS, Imphal.
Methods: All patients presenting with signs and symptoms suggestive of lichen sclerosus (LS) were studied for a period of 24 months from March 2014 to February 2016. Clinical examination and relevant investigations including histopathology were performed.
Results: A total of 54 patients were studied (17 males and 37 females). M:F ratio was 1:2.2. Majority belonged to 25-44 years age group (29.6%). Ano-genital LS comprised 81.4% of the cases. All patients presented with hypopigmented atrophic plaque (100%). The commonest site was prepuce (53.3%) in males and labia majora, labia minora and clitoris (62%) in females. There were 2 cases of balanitis xerotica obliterans (BXO). Ten patients (18.6%) had extragenital LSA and the sites involved were trunk, waist and extremities. Associated systemic diseases were detected in 6 patients.
Conclusions: Lichen sclerosus is not an uncommon disease. Varied presentations ranging from asymptomatic white patch to severe inflammation and scarring were noted. Complications especially with genital involvement can be prevented by early diagnosis and adequate treatment. Screening for associated systemic disease may prove useful.

Keywords: Lichen sclerosus, LSA, Anogenital, Extra-genital

INTRODUCTION

Lichen sclerosus (LS) is a chronic inflammatory disorder predominantly involving the anogenital skin and rarely extra genital site. It is more prevalent in females accounting for a 5:1 gender ratio.[1] There is bimodal peak of incidence from prepubertal children to post-menopausal group in women and 30-50 years of age in men.[2] Aetiology is multifactorial which includes autoimmunity, hormonal factors, infections, local factors, genetic factors.[3] Clinical pattern range from asymptomatic to pruritic sclerotic plaques and end stage balanitis xerotica obliterans in men. The objective of this study was to document the clinical, demographic pattern and associated systemic diseases of lichen sclerosus (LSA) in patients attending Skin OPD, RIMS, Imphal.

METHODS

Inclusion criteria

Inclusion criteria was all patients presenting with signs and symptoms consistent with LSA either clinically or histopathologically.

Exclusion criteria

Exclusion criteria was biopsy negative doubtful cases.

All patients attending Skin OPD, Regional Insititute of medical sciences, Imphal Manipur, presenting with signs and symptoms suggestive of LSA were studied from March 2014 to February 2016. Detailed history regarding demographic data, onset, duration, symptoms, menstrual status, associated medical disorders etc. were elicited and recorded. Clinical examination and relevant investigations including histopathology were performed. The data collected was tabulated in Microsoft Excel Worksheet and computer-based analysis was performed using the SPSS software (version 21).

RESULTS

A total of 54 patients (17 males and 37 females) were enrolled in the study. Male to female ratio was 1:2.2 (Table 1). Age of the patients ranged from 4 to 75 years (mean age 32.8 years). Majority of the patients were in the age group 25-44 years (29.6%). Out of 37 females, 14 (37.8%) had not attained menarche, 13 (35.2%) were in reproductive age group and 10 (27%) were post-menopausal. Most of the patients (38.8%) presented after 1 year of disease onset.

Table 1: Age group distribution.

Age group (in years)	Male	Female	Total (%)
<15	1	13	14 (25.9)
15-24	3	5	8 (14.8)
25-44	7	9	16 (29.6)
45-64	3	7	10 (18.5)
>65	3	3	6 (11)
Total	17	37	54 (100)

Table 2: Symptoms in anogenital LSA.

	Symptoms (%)
Females (n=29)	
Pruritus	29 (100)
Color change	25 (86.2)
Dryness	10 (34.5)
Burning sensation	12 (41.5)
Dysuria	13 (44.8)
Dyspareunia	2 (6.8)
Constipation	4(13.7)
Males (n=15)	
Color change	15 (100)
Pruritus	13 (86.6)
Pain & soreness	5 (33.3)
Difficulty in retracting prepuce	6 (40)
Difficulty in passing urine	2 (13.3)

Morphologically, ano-genital LSA comprised 81.4% of the cases (15 males and 29 females). Pruritus (95.4%) and color change (90.9%) were the most common presenting symptoms (Table 2). Clinically all patients had hypopigmented atrophic plaque (100%). The most common site in females was labia majora, labia minora with clitoris (62%) and prepuce in males (53.3%) (Table 3) (Figure 1A, 1B, 1C). Secondary changes like erosions, fissures and telangiectasia were seen in 20 (45.5%), 10 (22.7%), 10 (22.7%) respectively. There were no case of mucosal involvement and introitus narrowing in any of the female patients. There were 2 cases of balanitis xerotica obliterans (BXO). No case of malignancy was detected.

Table 3: Site of involvement (anogenital).

	Number (%)
Female (n=29)	
Labia majora+labia minora+clitoris	18 (62)
labia majora+labia minora	5 (17.2)
Labia majora &minora fused+clitoris obliterated	2 (6.9)
Figure of 8 pattern	4 (13.7)
Male (n=15)	
Prepuce	8 (53.3)
Prepuce along with glans	5 (33.3)
Glans	2 (13.3)

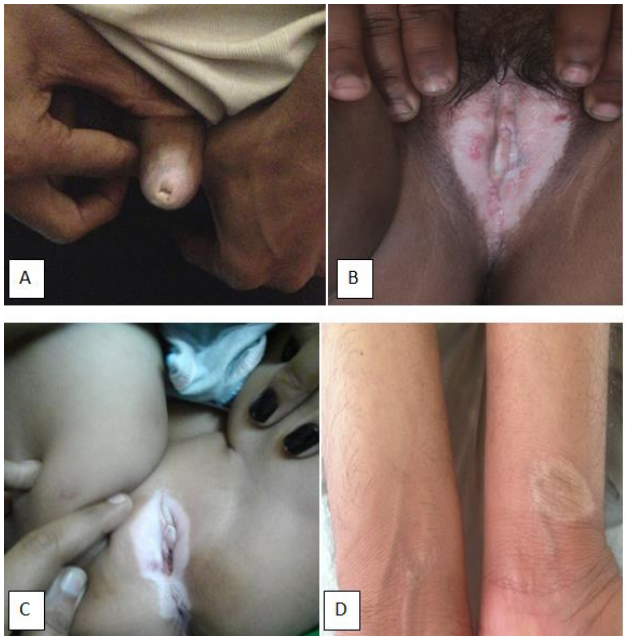

Figure 1 (A): hypopigmente DD sclerotic plaque involving the prepuce; (B): LSA involving the labia majora, minora and clitoris with areas of erosion; (C): LSA in "Figure of 8" pattern; (D): Hypopigmented atrophic plaque involving bilateral wrist.

Extragenital LSA was seen in 10 (18.6%) cases. Sites involved were extremities (n=5), upper back (n=3), waist (n=1) and neck (n=1) (Figure 1D). Associated systemic diseases detected were dyslipidemia (n=3), hypertension (n=2) and hypothyroidism (n=1).

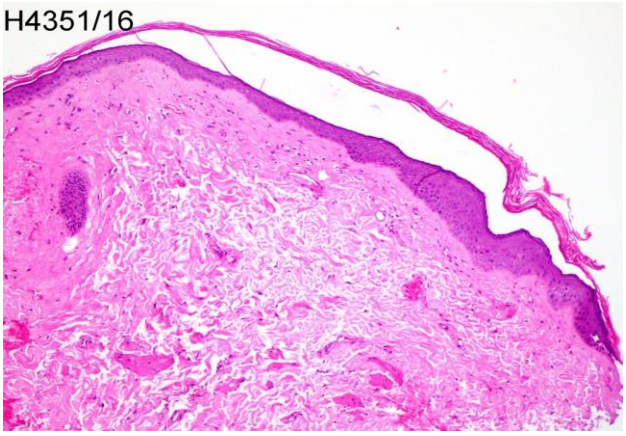

Figure 2: Orthokeratotic epidermis with flattened rete pegs with upper dermis showing hypocellular collagenised zone. Deeper areas shows mild lymphocytic infiltration [H&E 100X].

Histopathological examination was done in 34 patients. Out of the total, 30 was confirmative and 4 demonstrated inconclusive findings. There was no evidence of dysplasia or carcinoma in situ in any case (Figure 2). Treatment modalities included were topical and intra-lesional steroids, topical tacrolimus, antimalarials and systemic steroids.

DISCUSSION

Lichen sclerosus (LS) is an uncommon chronic inflammatory disorder with both genital and extra genital presentations. It is more prevalent in females which our study also recorded (37, 68.5%). Most of the patients (38.8%) presented after 1 year of disease onset which could be due to the asymptomatic nature of the disease in extra-genital cases, ignorance and embarrassment leading to delay in seeking medical care in ano-genital cases.

LS affects the ano-genital region in 85-98%.[2] It can lead to substantial discomfort and morbidity both physically and psychologically. In our study ano-genital LS comprised 81.4% of the study group. Pruritus (95.4%) along with color change (90.9%) was the most common presenting symptom. Four female (9.1%) patients had only pruritus as the presenting complaint and never noticed the color change. This signifies the importance of proper clinical examination in any case presenting with vulval pruritus. Labia majora and minora with clitoris was the most common site of involvement (50%) which is similar to the findings observed by Singh et al.[4]

In men, LS occurs in the age group 30-50 years. The glans penis and prepuce are most commonly affected site.[2] In our study, males formed 31.5% of the study group and majority of them (42.2%) were in the age group 25-44 years. Prepuce was the most common site of involvement (55.3%) followed by prepuce along with glans (33.3%). This finding is different from the study done by Kantere et al where prepuce along with glans was the most common site of involvement.[5]

The close resemblance of LS to vitiligo also warrants proper differentiation both clinically and histo-pathologically. There were two cases of Balanitis xerotica obliterans (BXO), both presented clinically as thickened, contracted fissured prepuce fixed over the glans leading to phimosis. As BXO can be associated with urological complication like urinary obstruction, early diagnosis and timely treatment can help prevent it. The risk of squamous cell carcinoma (SCC) is estimated to be 4-5% in vulva LS.[3] There was no case of malignancy detected in this study but long term follow up is necessary to document these changes.

Extra-genital LSA may occur in 10% of the cases.[3] Most common sites are trunk, upper back, sites of pressure,thighs.[2] In this study 10(18.6%) cases of extragenital LSA were detected. All were asymptomatic and presented clinically as hypopigmented atrophic patches. Extra-genital LSA is more difficult to diagnose clinically and needs to be differentiated from morphea and atrophic lichen planus which can lead to diagnostic confusion.[6] In such a situation, histopathological confirmation can help differentiate from other differentials like vitiligo, atrophic lichen planus which may simulate LSA clinically.

Autoimmune diseases, infectious etiology, local trauma, co-morbid conditions like diabetes and thyroid disease etc. are the associated factors implicated in the pathogenesis of LSA and should also be evaluated.[3,7,8]

Treatment options available for LSA are potent topical steroids, topical tacrolimus, topical calcipotriol, oral acetretin and antimalarials.[2] Management is purely dermatological in its early stages but inputs are required from different disciplines as the disease progresses. Topical steroids and topical tacrolimus were used in all patients and antimalarials and systemic steroids were added according to disease severity. Of the total, 10 patients followed up regularly and all showed good clinical improvement.

CONCLUSION

Lichen sclerosus is not an uncommon disease. It is usually ignored due to its asymptomatic nature and its site of involvement leading late presentation. In this study of 54 cases anogenital LSA was found to be the common type. Varied presentations ranging from asymptomatic white patch to severe inflammation and scarring were noted. Complications associated with anogenital involvement can be prevented by early diagnosis and

adequate treatment. Looking for associated co-morbidities may prove useful.

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Conflict of interest: None declared
Ethical approval: The study was approved by the institutional ethics committee

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