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CLINICAL, DEMOGRAPHIC AND LIFESTYLE CHARACTERISTICS OF MEN WITH GENITAL LICHEN SCLEROSUS

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The aim of the paper was to evaluate the clinical presentation, demographic and lifestyle characteristics of men with genital lichen sclerosus (LS).

This study examined the cases of 73 men with genital LS who appeared at the City Institute for Skin and Venereal Diseases in Belgrade between January 2007 and December 2008. The diagnosis of LS was established by history and physical examination. Data about demographic and lifestyle characteristics were obtained by the use of a questionnaire.

Nearly 60% of men with LS were older than 45 years. The most frequent complaint was a tight foreskin which was detected in 70% of men. White atrophic lesions, fissures and cracking were recorded in the majority of the patients. The most frequently affected site was prepuce in 76% of cases. More than 70% of participants had frequent sexual activities and 57.5% were exposed to stress.

LS is disease with a wide spectrum of clinical manifestations, such as prepuce lesions, which increases the risk for acquiring some sexually transmitted pathogens. That fact stresses the importance of LS patients counseling on consistent condom use and importance of early diagnosis and early treatment which may prevent further penile lesions, complications and diminish vulnerability to sexually transmitted infections and HIV. *Acta Medica Medianae 2012;51(3):24-28.*

Key words: *genital lichen sclerosus, men, clinical features*

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Introduction

Male genital lichen sclerosus (LS) is a chronic inflammatory dermatosis of undetermined etiology, which occurs in all age groups. The exact pathogenesis is unknown, but an autoimmune etiology have been proposed (1-4). The prevalence of genital LS is difficult to estimate, but it is usually underestimated. Some patients are asymptomatic and are unaware of the disorder, moreover, the majority of male patients are referred to different specialists (e.g. dermatologist, urologist, surgeon). In the study of Kizer et al., the prevalence of male genital LS was 0.07% (5).

Clinical features of penile lichen sclerosus varied from mild pallor and atrophic ivory-white macules to erosions, fissures, urinary obstruction and phimosis, which could result in severe sexual dysfunction. Penile erosions and fissures could become a port of entry for various sexually transmitted pathogens including HIV. The association between LS and vulval squamous cell carcinoma (SCC) is thoroughly documented (6), but recent studies have reported the definite association between penile LS and penile SCC [7-9] as well.

The aim of this study was to evaluate the clinical presentation, demographic and lifestyle characteristics of men with genital LS.

Patients

The case group comprised 73 men with LS consecutively diagnosed at the City Institute for Skin and Venereal Diseases in Belgrade between January 2007 to December 2008. The diagnosis of LS were established by history and physical examination. The vast majority of cases appeared at the City Institute because of a tight foreskin and the fear that it could be some sexually transmitted infection.

One dermatologist interviewed all participants. The following data were obtained by the use of a questionnaire: basic demographic characteristics, alcohol and tea consumption, smoking habits and sports activities, sexual history and sexual behavior.

Table 1. Self- reported demographic and lifestyle characteristics of men with genital lichen sclerosus

Variables	Number N=73	%
Demographic characteristics		
Age (years)		
<25	6	8.2
25-34	14	19.2
35-44	10	13.7
45-54	12	16.4
55+	31	42.5
Formal education		
Elementary	5	6.9
Secondary	39	53.4
High	29	39.7
Marital status		
Single	18	24.7
Married	46	63.0
Divorced	4	5.5
Widowed	3	4.1
Common Law Marriage	2	2.7
Lifestyle characteristics		
Current – smoker	24	32.9
Past – smoker	16	32.7
Coffee consumption	56	76.7
Alcohol consumption	28	38.4
Tea consumption	30	41.1
Sports activities	40	54.2
Stress	42	57.5
Sexually behavior Frequency of sexual activity		
1-2 times per month	4	8. 2
3-4 times per month	10	20. 4
5-8 times per month	20	40. 8
9+ times per month	15	30. 6
Personal history of sexually transmitted infections:	33	45. 2

Results

Demographic and lifestyle characteristics of participants are outlined in Table 1. Nearly 60% of men were older than 45 years, 40% had postsecondary education and the majority was married (63%).

Coffee consumption was reported in 76.7%, alcohol and tea consumption in about 40% of men, and 1/3 of participants were past or current smokers. About 54% of cases reported taking part in sports activities, and 57.5% were exposed to stress.

More than 70% of patients had frequent sexual activities (5+ times per month) and 45.2 % had a personal history of sexually transmitted infections.

The most frequent complaint was a tight foreskin (69.9%). About 1/3 of patients reported cracking or bleeding and 20% had painful erection (Table 2). Majority of LS patients reported more than one symptom, and other symptoms all presented in the Table 2. Patients had symptoms for many months and sometimes years before a diagnosis was established.

Clinical findings showed that tight foreskin, especially sclerotic ring at the prepuce edge was a predominant sign in 70% patients (Table 3). White atrophic lesions (58.9%) and fissures and cracking (39.7%) were noticed in the majority of patients, but purpura and telangiectases, meatal stricture and adhesions of prepuce to glans were also recorded.

The most commonly affected sites were the prepuce in 56 (76.6%) and the glans penis in 44 (60.3%) men. The meatus was affected in only 4 (5.5%) patients, although difficulties in passing urine were reported in 9 (12%) men.

Table 2. Symptoms in men with genital lichen sclerosus

Symptom	Number of men with symptoms	% of men (n=73)
Tight foreskin*	51	69.9
Cracking/bleeding	25	34.2
Painful erections	15	20.5
Redness	12	16.4
Itching	11	15.1
Difficulty passing urine	9	12.3
Soreness	8	10.9
Tight frenulum	5	6.8

*Majority of patients reported more than one symptom

Table 3. Clinical signs in men with genital lichen sclerosus*

Signs	Number of men with signs	% of men (n=73)
Tight foreskin*	51	69.9
White atrophic lesions	43	58.9
Fissures/cracking	29	39.7
Purpura/Telangiectasia	11	15.1
Meatal stricture	4	5.5
Adhesions of prepuce to glans	3	4.1

*Majority of patients had more than one sign on examination

Discussion

Lichen sclerosus may occur at any age but more frequently among middle aged men from 30 to 50 years of age (10). In our study, ¾ of patients were older than 35 years.

As shown in Table 3, there is a wide spectrum of clinical manifestations in men with genital LS. Tight foreskin, the main skin symptom in our sample, might provoke the difficulties in foreskin movement, especially during penile erection and sexual activities, which is followed by bleeding, erosions, fissures and cracking in about 40% of participants.

Riddall et al. (11) reported that pallor/ atrophy was the predominant sign (in 73% men)

of genital LS while the meatal stricture affected about ¼ of men. Tight foreskin, ulcers and fissures were noticed in less than 15% of participants. In the same study, 30% of men had no symptoms related to LS at the time of diagnosis and they were referred to genitourinary medicine department for other reasons. In the retrospective study of male lichen sclerosus conducted in Leicester, phimosis was found in 40.8% with meatal stricture in 19.7% of cases (12).

In the present study all participants were symptomatic, and LS was the only reason of their visiting the Institute.

In the study of Hagedorn et al. (13), the main complaint in 56% men was pain during sexual intercourse. Yet, according to our results, painful erection was reported in 20% of our LS cases.

The most commonly affected sites of penile LS in the current study were the prepuce and the glans penis, and that was concordant with data from some other studies (14,15). In the study of Riddell et al. (11), the meatus was involved in 64.1% of men and prepuce in 54.7%. According to Barbagli et al., LS urethral involvement appears to be a much more common than previously reported (16).

Tight foreskin, bleeding, fissures and painful erection could cause sexual dysfunction and psychosexual disturbances. Since our study participants reported frequent sexual activities, the observed penile lesions may increase the risk of acquiring some sexually transmitted infections (STIs).

STIs cause mucosal disruption and inflammation that would be expected to facilitate HIV acquisition (17). Furthermore, the personal history of our patients revealed that 43.9% of them had some of STIs. Several studies have shown that uncircumcised men are at higher risk for acquiring some STIs and HIV (18,19). Majority of our LS cases (95.1%) were uncircumcised and prepuce was the most commonly affected site. Prepuce lesions in LS patients increase the susceptibility to sexually transmitted microbes, however, the foreskin contains high concentrations of superficial Langerhans cells, macro-phages and CD4+ T cells – all target cells for HIV infections (20).

Recent studies have shown that patients with genital LS are at considerable risk for the development of penile squamous cell carcinoma (SCC) (7,8,21). Perceau et al. (9) observed that LS in penile SCC is not always associated with oncogenic human papillomavirus, which supports the hypothesis that LS itself is a precancerous condition.

Results of the population study conducted among 4.761 men in Serbia in 2000 showed that 48.0% of men are smokers, 70.5% used alcohol and about 30.0% were involved in sport activities (22). Comparing results of this study with our results, it is essential to note that men with genital LS are much more involved in sport activities (28.7% vs. 54.2%) (22). Sport activities are often associated with injuries. Koebner phenomenon which occurs on sites of injured or traumatized skin is a well-known manifestation of LS, so trauma, injury, and sexual abuse have been suggested as possible triggers of symptoms in genetically predisposed people (4, 6).

Our study highlights the importance of LS patients counseling on consistent condom use and importance of early diagnosis and early treatment which may prevent further penile lesions, complications and diminish vulnerability to sexually transmitted infections and HIV. However, prevention of penile SCC requires a long-term clinical follow-up of patients with penile LS.

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KLINIČKE I DEMOGRAFSKE KARAKTERISTIKE I ODLIKE STILOVA ŽIVOTA MUŠKARACA SA GENITALNIM LICHEN SCLEROSUS-OM

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Lichen sclerosus (LS) je hronično inflamatorno oboljenje nepoznate etiologije koje često zahvata genitalnu regiju muškaraca različite starosti. Cilj rada bio je evaluacija kliničkih i demografskih karakteristika kao i stilova života muškaraca sa genitalnim LS. U ispitivanje su uključena 73 muškarca koja su se javila dermatovenerologu zbog promena na genitalijama. Dijagnoza LS postavljena je na osnovu anamneze i kliničkog pregleda. Svi bolesnici su intervjuisani, a upitnik je obuhvatio osnovne demografske karakteristike, seksualnu anamnezu i odlike stilova života. Skoro 60% bolesnika bilo je starije od 45 godina. Najčešći simptom LS bio je tesan prepucijum, što je potvrđeno pregledom kod 70% bolesnika. Ostale najčešće manifestacije bolesti bile su atrofične lezije i fisure na prepucijumu, koji je bio zahvaćen kod 76% obolelih. Preko 70% bolesnika imalo je česte seksualne aktivnosti, a 57,5% bilo je izloženo stresu. LS je bolest sa širokim spektrom kliničkih manifestacija, kao što su prepucijalne lezije, koje mogu povećati rizik za prenošenje seksualnih patogena. Neophodna je rana dijagnoza i terapija obolelih da bi se sprečile lezije i vulnerabilnost prema polno prenosivim infekcijama, a savetodavni rad i promocija kondoma neophodni su i kod obolelih od genitalnog LS. *Acta Medica Medianae 2012;51(3):24-28.*

***Ključne reči**: genitalni lichen sclerosus, muškarci, klinička slika*