

Epidemiological Study of Lipodermatosclerosis

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ABSTRACT

Lipodermatosclerosis refers to bound down, hard, sclerotic change in the skin of the lower legs due to chronic venous insufficiency leading to chronic inflammation and fibrosis. The duration of disease ranged from 4 months-40 years. 24 patients were involved of both lower limbs (48%) followed by 20 patients with left limb alone (40%) and 6 patients with right limb alone (12%). It was also observed that there was no significant marginal increase in percentage of the extent of limb involvement with increase in BMI. While comparing venous doppler findings with BMI, we found 8 patients with normal BMI (57.14%). Venous doppler findings clinically correlates well with change in BMI. It was also noted that the biopsy site in all the 5 patients had delayed wound healing by 4-6 weeks despite primary sutural closure.

Key words: BMI, Venous doppler, Lipodermatosclerosis.

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INTRODUCTION

Lipodermatosclerosis (LDS) is a common form of chronic panniculitis associated with chronic venous insufficiency. This inflammatory condition of the skin and subcutaneous tissues affects the lower third of the leg and is because of sustained 'congestion' resulting due to high interstitial fluid and venous pressures. It is usually described with the chronic venous disease, but the common finding is that of chronic oedema. The present study was done to identify the epidemiology of Lipodermatosclerosis by means of assessing the clinical data, venous doppler and biopsy findings [1-5].

METHODOLOGY

Study design

Analytical cross-sectional study with internal comparisons.

Study area

Skin Outpatient Department, Sree Balaji Medical College and Hospital, Chennai-600 044.

Study population

All patients attending skin OPD who are clinically diagnosed with Lipodermatosclerosis.

Exclusion criteria

- Not consenting for the study.
- Pregnant and lactating women.
- Patient not willing for the investigations.
- Patients receiving psychotropic drugs.

Inclusion criteria

- Consenting for the study.
- Age above 18 years.

Sample method

Purposive sampling method

This is an Analytical cross-sectional study with internal comparisons. A pre-structured and pre-tested proforma was used to collect data and the recruited patients were subjected to the following, thorough general dermatological examination was done, venous doppler of the affected limb in consenting individuals and punch biopsy was performed.

RESULTS

We enrolled 50 subjects with the clinical diagnosis of Lipodermatosclerosis who attended skin OPD. The demographic and clinical characteristics of the participants were summarized and tested for significant differences. In our study out of 50 patients, the age of patients ranged between 24 and 89 years. Most patients were within 51-70 years age class interval (n=28, 56.00%) followed by 31-50 years age class interval (n=14, 28.00%). In our study out of 50 patients, males were commonly affected with Lipodermatosclerosis (n=40, 80.00%) than

females (n=10, 20.00%), with a male to female ratio of 4:1. In our study, the duration of disease ranged from 4 months-40 years. Most of the patients belonged to 2-5 years duration of disease class interval (n=24, 48.00%) followed by :S 1 year duration of disease class interval (n=14, 28.00%). In our study, many patients had more than one presenting complaint and among the m, itching was the primary symptom reported in 29 patients (58%), followed by pain in 25 patients (50%) and redness in 10 patients (20%). Out of 50 patients, 24 patients were involved of both lower limbs (48%) followed by 20 patients with left limb alone (40%) and 6 patients with right limb alone (12%). Thus, a total of 74 limbs affected by Lipodermatosclerosis were evaluated in this study. When looking at the limb involvements, 74 limbs were evaluated and the extent of limb involvement was restricted to lower 1/3rd of the limb in 44 limbs

(59.46%), lower 2/3rd in 26 limbs (35.14%) and >lower 2/3rd in 4 limbs (5.4%). In our study, while analysing the extent of limb involvement with standing hours per day, majority of the patients with <4, 4-7 and 8 standing hours per day, had extent of limb involvement limited to lower 1/3rd of the limbs with a class interval (n=22, 70.97%), (n=13, 52.00%) and (n=9, 50.00%) respectively. This had no clinical significance.

When comparing venous doppler findings with BMI (Table 1), we found 8 patients with normal BMI (57.14%), 14 patients in overweight category (87.50%) and 3 patients in obese range of BMI (100%) had positive venous doppler findings. It is also evident that as BMI increases from normal to overweight and obese category, the percentage of positive venous doppler findings also increases from 57.14% to 87.50% and 100.00% respectively.

Table 1: Extent of limb involvement vs. BMI.

Extent of limb Involvement Vs. BMI	Normal	Percentage (%)	Overweight	Percentage (%)	Obese	Percentage (%)	Number of limbs observed
Lower 1/3rd	17	56.67	19	61.29	8	61.54	44
Lower 2/3rd	12	40	10	32.26	4	30.77	26
> Lower 2/3rd	1	3.33	2	6.45	1	7.69	4
Total	30	100	31	100	13	100	74

DISCUSSION

Most patients were within 51-70 years age This is in close concurrence with the previous which reported the mean age of onset at 62.4 ± 12.8 years with the reference range of 25-88 years. Walsh SN et al reported in a study that females were more commonly affected with Lipodermatosclerosis with the male to female ratio of 1:12. In our study, majority of the patients belonged to above normal BMI class interval. This was found to be in close concurrence with the previous studies where the mean BMI was 29.3 ± 5.4 kg /m². In this study majority of the patients had associated comorbidities (n=29, 58%). Some patients had more than one comorbidity. This was in close concurrence to the previous study.

The venous doppler effect confirms that the site of pathology was at great saphenous vein (n=20, 36%) followed by perforator incompetency (n=16, 29%), sapheno-femoral junction incompetency (n=7, 12%), sapheno-popliteal junction incompetency (n=3.5%) and dilatation and tortuosity of short saphenous vein (n=2, 4%). Normal venous doppler was found in 8 evaluated limbs (14%). These findings were closely like the previous work done.

Biopsy can lead to delay in wound healing and is to be considered only when the diagnosis is in doubt. There is a need to evaluate all the patients of Lipodermatosclerosis with an increase in BMI, prolonged Standing hours per day and long duration of disease with a venous doppler is important for early intervention and halting the disease progression [6-10]

CONCLUSION

There is a need to evaluate all the patients of Lipodermatosclerosis with an increase in BMI, prolonged Standing hours per day and long duration of disease with a venous doppler is important for early intervention and halting the disease progression.

FUNDING

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ETHICAL APPROVAL

The study was approved by the Institutional Ethics Committee.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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