

Long-term Follow-up of Lichen Planus

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Several large series of patients with lichen planus were reported some 30 years ago but no recent large surveys have been published. In this study, detailed enquiry was made into the natural history of the disease in 214 patients followed up 8 to 12 years after presentation to the Dermatology Department. The key findings from this study showed that the mean age of onset of lichen planus in males was significantly lower than in females (40.3 years in males compared with 46.4 years in females, $p < 0.05$). The main eruption of lichen planus cleared within one year in 68% of the patients but we found a higher recurrence rate than in previous series at 49%. Many patients suffered from persistent brown staining many years after the rash had cleared.

(Accepted October 29, 1990.)

Acta Derm Venereol (Stockh) 1991; 71: 242-244.

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METHOD

All definite cases of lichen planus seen at the Dermatology Department, Cambridge, including those cases seen at seven other hospitals served by the same Department, were included. These hospitals together serve a population of about 600,000 people. A total of 384 patients diagnosed between 1972 and 1980 were sent comprehensive postal questionnaires. Only patients with the cutaneous eruption of lichen planus were accepted for the study. Those with scarring alopecia or oral lesions alone were excluded, as were patients with lichenoid drug eruptions. The questionnaire sought details of duration, distribution, symptoms, treatments and recurrence of the eruption as well as information about close contacts who developed lichen planus and patients' own views on aetiology. The enquiries were constructed as 'multiple choice' questions where possible so that the patients would find it easier to complete the forms. A total of 15 questions were included and the form could be completed in a few minutes. The information from the forms was correlated with that from the hospital notes.

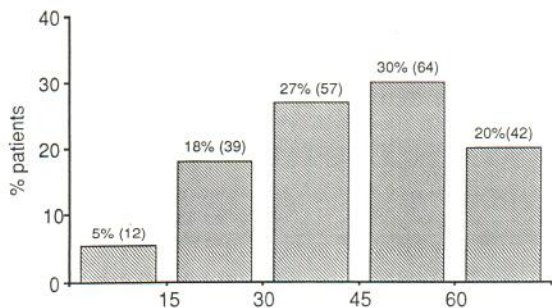


Fig. 1. Age at onset of lichen planus in years.

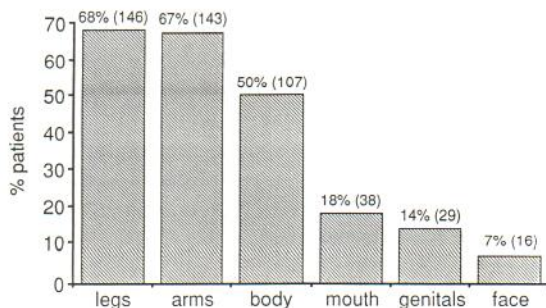


Fig. 2. Sites of lichen planus eruption. (Many patients had more than one site affected.)

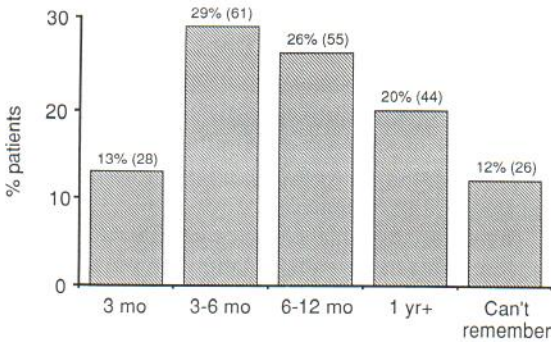


Fig. 3. Duration of inflammatory lichen planus.

RESULTS

There were 225 (59%) responders yielding 214 (56%) forms suitable for analysis. Eleven forms were inadequately completed and were discarded. The results from the 214 patients analysed showed an equal sex distribution, with 107 male and 107 female patients. The age at onset of lichen planus overall was mainly in young to middle adult life as shown in Fig. 1, but when examined separately, the mean age at onset of lichen planus in men was 40.3 years with 95% confidence interval (36.8, 43.9) compared with 46.4. years (43.5, 49.3) in women.

The sites of predilection of the rash are shown in Fig. 2. Many patients had more than one site affected. Involvement of the mouth is probably under-represented as it is often asymptomatic and was not always detailed in the medical records. Lichen planus on the face developed in only 16 (7%) of our patients. The duration of the inflammatory eruption of lichen planus, or the main attack in patients who suffered more than one episode, showed that in over two-thirds of patients the rash cleared within one year, as shown in Fig. 3.

Fig. 4 shows the response to the question about

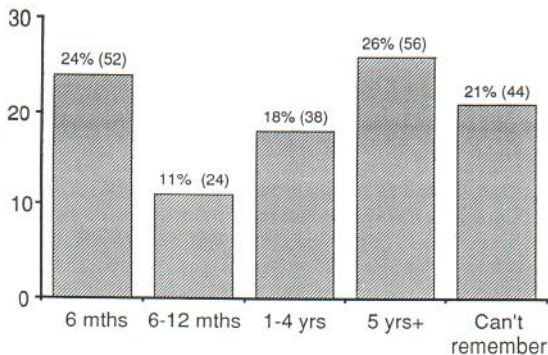


Fig. 5. Duration of brown staining.

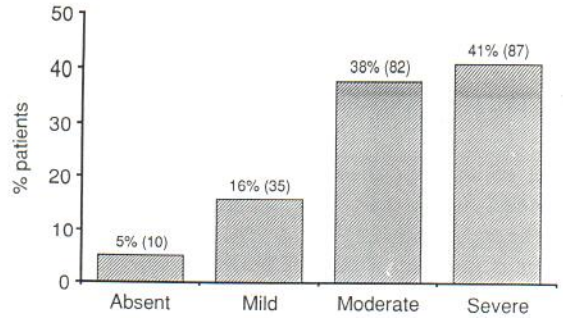


Fig. 4. Severity of itching associated with lichen planus.

itching in which they were asked if itching was mild, moderate, severe or absent. This was the main symptom and was severe in 87 patients (41%). Itching was absent in only 10 patients (5%). The brown staining of the skin after the acute eruption persisted for less than 6 months in a quarter of the patients (52 patients or 24%), but it lasted for more than a year in 94 patients (44%) as shown in Fig. 5. Seventy-four patients (35%) had persistent staining at the time of answering the questionnaire, the follow-up period ranging from 4 to 33 years after the initial rash of lichen planus. Of these, 56 patients (26%) had had staining for more than 5 years and still present at the time of the study. One hundred and four patients or almost half of our series reported a recurrence of the acute eruption some time after it had first cleared and 48 patients (22%) had more than one recurrence, many of these being documented in the medical records. In 15 patients, the first or major attack had occurred prior to their first hospital attendance. Another interesting finding was that 15 out of 214 patients (7%) knew of a close contact, either blood relation (9 patients) or close contact (6 patients) who also developed lichen planus. Of the blood relations, 8 of the 9 were first degree relations (parent, child,

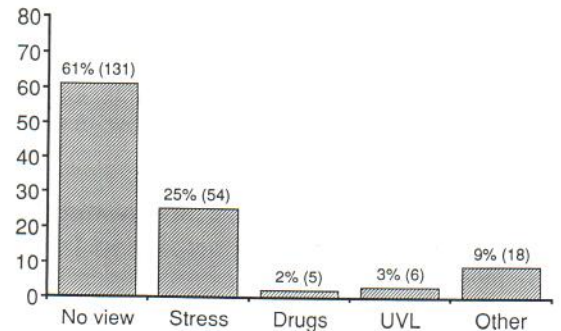


Fig. 6. Patients' views about aetiology of lichen planus.

sibling) while the remaining one was a cousin. Although most patients (61%) did not express any view on the cause of their lichen planus, some did have theories which included such varied ideas as insect bites, garden chemicals, dust, diesel oil. However, the commonest theory was that the eruption was brought on by stress and 54 patients (25%) felt this to be so, as shown in Fig. 6. The treatment of lichen planus varied considerably between patients studied and within the same patient, so the therapeutic benefit of any individual modality could not be studied.

DISCUSSION

Several large series of patients with lichen planus were reported some 30 years ago. In Denmark, Schmidt (1) studied 181 patients seen between 1947 and 1948 but did not follow them up, while Altman & Perry (2), at the Mayo Clinic looked at a cohort of 197 patients with lichen planus between 1950 and 1954 and documented the natural history of the disease in USA. Samman (3) reported on a personal series of 200 patients seen between 1951 and 1961. Despite the obvious shortcomings of retrospective studies, our own survey of 214 patients provides an interesting modern comparison. Schmidt (1), reviewing the 181 Danish patients, found that the greatest number of cases in men occurred between the ages 30 and 39 years, while in women it was between 50 and 59 years of age. We also found in our series that the mean age at onset of lichen planus in men was lower than in women ($p < 0.05$) differing by 6.1 years (1.6, 10.6). The mean age at onset in men was 40.3 years (36.8, 43.9) compared with 46.4 years (43.5, 49.3) in women. Only one girl developed lichen planus below the age of 15 years, compared with 11 boys.

Our recurrence rate of 49% (104 patients) was much higher than in previous series, where only 12–16% patients developed recurrences. This may be due to the use of potent topical steroids in recent years. These agents were not available at the time of the previous studies and it is interesting that the duration of the eruption of lichen planus was generally longer in those series; 66% clear in 15 months (2) and 61% clear in 12 months (3) apart from the Danish study (1), where 80% were reported to be 'symptom-free' within one year of starting treatment, not one year after onset of disease. This compares with a duration of rash of less than one year in 68% of our patients, and in 42% the eruption lasted

less than 6 months. Although we cannot report accurately on treatment, we do know that most of our patients received some form of topical steroids during the acute attack of lichen planus. It may be that withdrawal of the topical steroid as the rash fades allows a recrudescence of the eruption which is recognized as a 'recurrence'.

There was also a higher incidence of lichen planus in close contacts (friends or family) in our series, 9 patients reporting lichen planus in family members and 6 patients in unrelated friends. Altman & Perry (2) found a family history in only 4 out of 307 cases while Samman (1) reported a family history in 3 out of 200 cases. A viral aetiology for lichen planus has long been proposed but firm evidence for this has not been forthcoming, although clustering of cases or 'outbreaks' of lichen planus are well known anecdotally. Familial occurrence of lichen planus is well documented and a genetic predisposition to development of lichen planus has been proposed (4,5).

Altman & Perry (2) in the American series, found that 60% patients felt that emotional tension played some part in the occurrence of lichen planus and this was the case in 25% of our patients. However, 'stress' is probably the commonest 'cause' proposed by patients to explain many dermatoses of otherwise unknown aetiology. Stress is a difficult entity to qualify and quantify objectively. Lichen planus is an intriguing dermatosis about which much remains to be discovered.

ACKNOWLEDGEMENTS

We would like to thank Drs Stephen Roberts and Richard Pye at Addenbrooke's Hospital for allowing us to review their patients and also Dr Margaret Corbett for her help with the statistics.

REFERENCES

1. Schmidt H. Frequency, duration and localization of lichen planus. A study based on 181 patients. *Acta Derm Venereol* 1961; 41: 164–167.
2. Altman J, Perry H. The variations and course of lichen planus. *Arch Dermatol* 1961; 84: 47–59.
3. Samman P. Lichen planus. An analysis of 200 cases. *Trans St John's Hosp Dermatol Soc* 1961; 46: 36–38.
4. Copeman PWM, Tan RSH, Timlin D, et al. Familial lichen planus. *Br J Dermatol* 1978; 98: 573–577.
5. Mahood JM. Familial lichen planus. A report of nine cases from four families. *Arch Dermatol* 1983; 119: 292–294.