PHYTOPHOTODERMATITIS. CLINICAL AND ETIOLOGICAL ASPECTS

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Abstract

Phytophotodermatitis being and affection induced by the simple touching of the skin with a large variety of plants together with the exposure in the sun, needs to be analyzed clinically and etiologically, for this reason we registered statistically the incidence of the disease in a dermatologic medical practice (Longhin S., Popescu A., 1972). By this study it is wanted the prominence of the particular cases from the point of view of the aspect of the injuries, of their localization and the natural environment and the conditions of appearance of the disease.

An important and relevant aspect of the study was also the etiologic one. The most frequently involved in etiology were the culture plants, with a percentage of 60,86% of the cases. We specify that all the cases responded to the local and general treatment given and to the eliminating of the etiological agent. The institution of the measures of phytophotoprotection and the corresponding education of the patients in order to avoid in the future the plants that produce such reactions were recommendations that completed the therapy.

Key words: hytophotodermatitis, clinical aspect, etiological agent

INTRODUCTION

Phytophotodermatitis is a particular type of phototoxic dermatitis (Longhin, Popescu, 1972). The cutaneous manifestations appear due to the contact to some plants that contain photosensitive substances together with the exposure to the sun.

The injures are limited to the photoexposed areas and which come in contact with the respective plant. They appear at 24-48 hours from the exposure. Clinically the phytophotodermatitis is manifested by an erythema accompanied by a sensation of burn, vesicles, blisters, in awkward configuration, local itching and are healed with residual hyperpigmentation (Kwangsukstith C., Maibach Hi., 1995). The families of plants most frequently involved in etiology are Apiaceae, Rutaceae, Fabaceae, Moraceae. The disease can be produced by more species of plants that contain especially furocoumarins substances as, the parsley, the celery, the parsnip, the carrot, the dill, the bean, the tomatoes, the rattle, the mint, the primrose, different herbs and chrysanthemums.

The pathogenic mechanism has at the basis the capacity of the photosensitive substance to absorb the radiant energy and to pass to an activated status. Thus they transfer the energy absorbed to other molecules producing cutaneous inflammatory phenomena.

MATERIAL AND METHOD

The study was accomplished with the purpose to underline some particular clinical and etiological aspects in a group of patients with the diagnosis of phytophotodermatitis.

This study was performed for a group of 23 patients, with the ages between 6 and 70, for a period of 5 years, respectively 2010-2014, in the months of summer, the period between 1 June – 31 August of each year, in a medical practice of dermatology form a Private polyclinic from Oradea.

From the group studies 15 were women and 8 men.

The positive diagnosis was established on the basis of the anamnesis data and the dermatological clinical examination.

Were evaluated the following data: age, sex, the origin environment (urban, rural), the occupation, the anamnesis of the affection, the type of photosensitivity agent with which was made the contact, the period of exposure to the sun.

The clinical dermatological examination followed:

- the distribution of the injuries (the spreading, the symmetry or asymmetry, the localization of the injuries on photoexposed areas)
- the type of injuries (the size, the form, the margins)
- the configuration of the injuries.

The treatment consisted of the setting up of the measures with the sensitive agent, local therapy with wet compresses, topic dermatocorticoides and general therapy with antihistaminic and corticoids where it was the case.

RESULTS AND DISSCUSIONS

The study included a number of 23 cases, of which 15 were women and 8 men.

The distribution on groups of ages is presented in table 1.

The results of the study underline more aspects. It was observed that a number of 16 cases come from the rural area respectively 73,91 % and 7 cases come from the urban, respectively 23,09 %. The larger frequency of the disease was registered at feminine sex, respectively 65,21 %, compared to the masculine sex, to which the frequency of the disease was a percentage of 34,79 %.

Table 1

The distribution on groups of age of the cases of phytophotodermatitis

No. crt.	Group of age	Number of cases with phytophotodermatitis
1	1-10	3
2	11-20	0
3	21-30	2
4	31-40	6
5	41-50	7
6	51-60	4
7	61-70	1

The results of the study show that the occupation had an important role in the activation of the affection. Thus 9 of the patients developed different activities in the agriculture, a number of 6 patients worked in the garden and the rest of 8 patient developed different activities in the nature.

The plants that activated the appearance of the disease were especially culture plants from the garden as the parsley, the carrot, the parsnip, the celery, the tomatoes, the bean.

A different variety of this group is represented by the plain or grazing dermatitis which appears following the contact of the skin with the grass and which was met at 5 cases. The activating plants of the disease couldn't be identified with precision for a number of 4 cases.

The activating plants of the disease following the contact with the tegument are presented in table 2.

Table 2.

The activating plants of the phytophotodermatitis following the contact with the tegument

No. crt.	Denomination of the plant	Number of cases
1	carrot	2
2	parsnip	4
3	parsley	2
4	tomatoes	3
5	celery	2
6	dill	1
7	different herbs	5
8	Non identified plants	4

The most frequent localization of the injuries was on the upper members met at 9 of the cases (hands, forearms, arms), at 7 of the cases the injuries were located on the lower members (especially on the legs and

hips), on the level of the anterior thorax, abdomen and back, the injures wer met at 5 of the cases and on the neck at two cases.

Clinically, the eruption has a strange character (figure 2) with lines that are crossed in different angles, by erythematous-vesicle-blisters injures, delimitated lines, type of injures met at 16 of the patients, and the injures with the form of papules and plates with irregular aspect, of different forms, were discovered to a number of 7 cases.

The sensation of bun and itching were subjective symptoms that accompanied the injuries.

An interesting aspect of the form and localization of the injuries was that of a men with the age of 45 that came with erythematous-vesicle-blisters injures disposed on the anterior thorax and abdomen and a few on the hips, in the anterior superior part of them with strange configuration in different lines and angles that appeared 24 hours before, after the grass cutting, the injuries appearing following the contract with the skin of the grass fragments that bounced and touched the skin during the cutting.

The incidence of the disease in the years from the study, reached the peak in 2012 aspect underlined in the graphic 1.

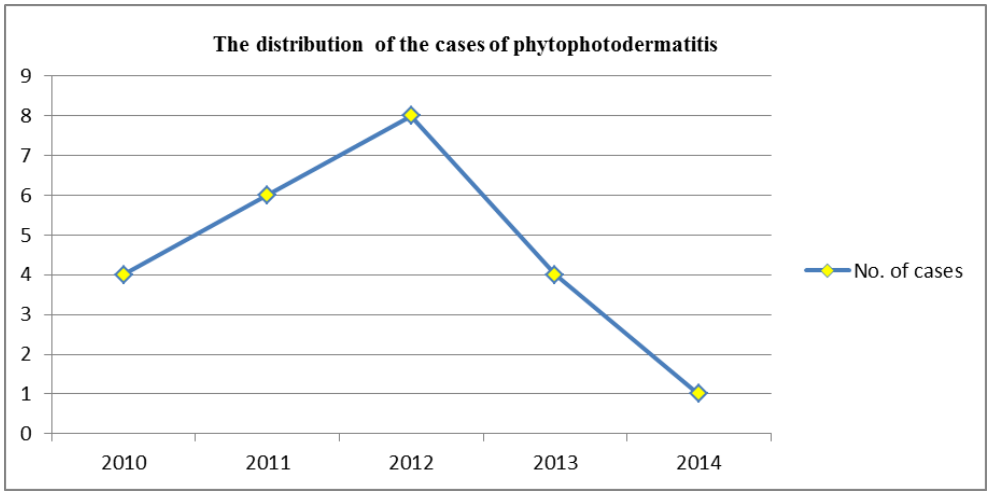

Fig 1. The distribution of the cases of phytophotodermatitis in the period 2010-2014

Fig. 2. Phytophotodermatitis with injures in remission for a girl with the age of 10

We mention the same the case of a boy of 7, that presented brownish injures with linear trajectory on the level of the neck but also on the arms where were accentuated some vesicles and blisters, accompanied by itching and that appeared 2 days after a walk in the forest.

CONCLUSIONS

Phytophotodermatitis is an affection produced by the contact of the tegument with the UVA radiations.

From the study we can see the localization of the injuries on the most photoexposed areas (hands, forearms, arms, legs) but also localizations on areas lesser exposed: thorax, abdomen, hips.

Strange clinical aspect of the injuries configuration.

In the etiology of the affection the garden plants (vegetables, sauces) had the greatest percentage in its activation.

The increased frequency of the disease was met at the feminine sex.

The greater number of patients come from the rural area, aspect related to the activities from their garden and agriculture activities.

The groups of age most affected was the group with the ages 31-40 and respectively 41-50.

The increased incidence of the disease in the years with warm and sunny summers and with reduced precipitations (2011 and 2012).

The fast elimination of the photosensitive agent, the local and general therapy, the measures of photoprotection assured a prompt therapeutic response.

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