

THE SKIN BIOPSY IS REALLY REQUIRED FOR CONFIRMATION OF A CLINICAL DIAGNOSIS OF PSORIASIS?

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Abstract: *Psoriasis has different clinical variants that mimic diverse dermatological conditions. Often these cases remain a diagnostic dilemma for the clinician and warrant a histopathological confirmation. The present study was designed to determine the aspects of psoriasis in our casuistry and to identify the clinical-pathological concordance for these cases.*

Key words: *psoriasis, histopathological examination.*

1. Introduction

Psoriasis is a chronic, non-infectious, proliferative skin disease, characterized by erythematous inflammatory lesions, covered by multilayered silvery white scales over a glossy homogenous membrane [10].

Psoriasis affects 2-3% of the world's population, the mean age at onset in females (5-9 years of age) is significantly lower than in males (15-19 years of age). In adulthood, gender prevalence equalizes. Psoriasis shows a bimodal distribution for the age at diagnosis, around 75% of cases occur before the age of 40, the second peak is near to 55-60 years of age [5].

2. The aim

The aim of the study was to determine the aspects of psoriasis from the casuistry of the Pathology Laboratory from Tîrgu Mureş in the time period of 2008 to 2012. The second objective was to determine the clinico-pathological concordance for these cases in order to initiate an individualized biological therapy.

3. Material and method

We performed a transversal (cross-sectional), retrospective study, for a period of five years (2008-2012). Clinical, demographic and histopathological data were obtained from the records of the Pathology Laboratory from Tîrgu Mureş

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Emergency Clinical Hospital. Following data were recorded: demographic information (age, gender of patients), year of diagnosis, clinical and histopathological diagnosis, localization of lesions and the type of biopsy performed.

Inclusion criteria were: patients with a clinical diagnosis of psoriasis who underwent a diagnostic biopsy.

4. Results

From 2008 to 2012, in the Pathology Laboratory there were 112 skin biopsy specimens processed from patients with a clinical diagnosis of psoriasis, in order to histologically confirm or disaffirm the clinical diagnosis (Fig. 1). From the total number of cases, histopathological examination confirmed the clinical diagnosis of psoriasis in 78 cases (69.64%), the remaining 34 (30.35%) represented the cases of mismatch diagnosis.

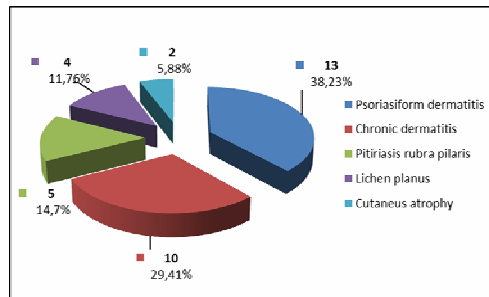


Fig. 1. *Clinical-pathological inconsistency cases*

In the 34 cases where the clinical diagnosis did not correspond to the histopathological diagnosis we revealed the following: psoriasisform dermatitis in 13 cases (38.23%), nonspecific chronic dermatitis in 10 cases (29.41%), pityriasis rubra pilaris in 5 cases (14.70%), lichen planus in 4 cases (11.76%) and skin atrophy in 2 cases (Fig. 1).

The demographic characteristics of our study showed that from the total number of cases with definitive diagnosis of psoriasis, 41 cases were male and 37 cases were female (Fig. 2).

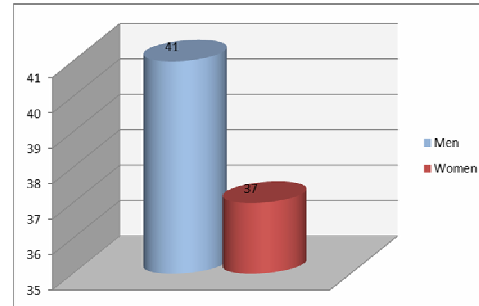


Fig. 2. *Gender distribution of psoriasis cases*

Distribution by age showed that the mean age at the moment of diagnosis was 48 years of age. Extreme ages were 9 respectively 82 years (Fig. 4).

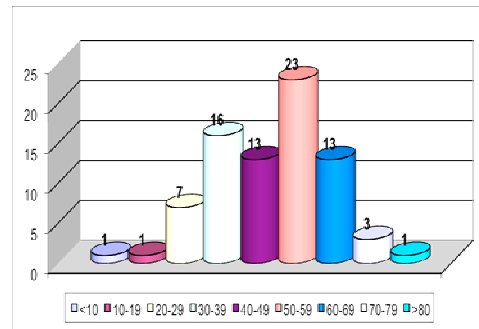


Fig. 4. *Age distribution of psoriasis cases*

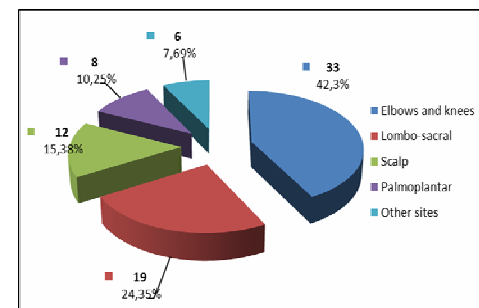


Fig. 5. *Psoriasis lesions sites*

The most common sites affected by psoriasis plaques included elbows and knees in 33 cases (42.30%), lumbosacral region in 19 cases (24.35%), the scalp in 12 cases (15.38%), palmoplantar region in 8 cases (10.25%) and other areas in 6 cases (7.69%) (Fig. 5).

In 53 cases the tissue fragments were obtained by excisional biopsy, in the remaining 25 cases punch biopsy was performed at the site of psoriasis lesions (Fig. 6.).

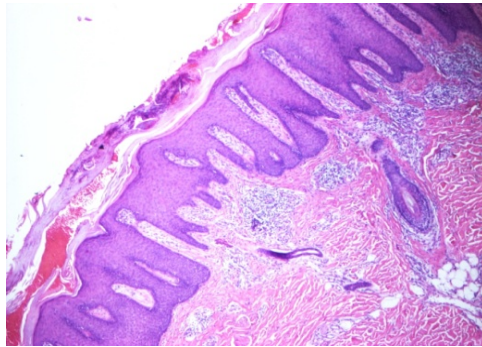


Fig. 6. *Psoriasis vulgaris, Munro-Sabouraud microabscesses, Ob. 4x, HE staining*

5. Discussions

Histopathological examination of psoriasis lesions include the following changes: hyperkeratosis with parakeratosis, loss or thinning of the granular layer especially in the areas of parakeratosis, acanthosis with elongation of epidermal ridges and the characteristic thinning of suprapapillary area (which explains the clinical Auspitz sign), Munro-Sabouraud microabscesses, dilated vessels in the papillary dermis and numerous mitoses arranged both in the basal and squamous layer [2].

After analyzing the concordance between clinical and histopathological diagnosis, in 78 cases (69.64%) histopathological examination confirmed

the clinical diagnosis of psoriasis. Although the clinical diagnosis of psoriasis is relatively easy, based on traditional criteria, there are still cases of inconsistencies.

We noted a first peak of incidence in patients aged 30-39 years (16 cases) and a second peak, more important, in patients aged 50-59 years (23 cases). The maximum incidence among men was in the 4th and 6th decade of life, in women it was highest in the 6th decade of life. From all cases of psoriasis, 65 cases (83.33%) were diagnosed between the 4th and 7th decade of life.

Similar studies have been reported in the current literature. In 2013 Na SJ et al. used the National Psoriasis Registry to identify 5084 cases of psoriasis diagnosed in the period of 1982-2012. Their results showed that psoriasis was more common in men than in women (M/W ratio 1.2/1), similar to the results obtained in our study (M/F ratio 1.1/1). On the other hand, the results of the study reported that 63.5% of the patients developed the disease before the age of 30, contrary to ours which showed that the majority of psoriasis cases were diagnosed in the 4th decade of life [12]. According to another study by Fatani MI and collaborators on a group of 263 patients with psoriasis, men were more likely to be affected by psoriasis than women (M/F ratio 1.4/1) and 53% of psoriasis cases were diagnosed before the age of 30 [5].

In our study the most common sites involved were the elbows, knees (42.30%) and lumbo-sacral region (24.35%), but there were also many cases of palmoplantar involvement (10.25%). Generally the lesions were multiple, with associated locations but the facial area was uninvolved. The affected sites in our study showed the same distribution as those described in literature.

In 2010 Rigopoulos D et al., in a prospective epidemiological study on a group of 784 patients, published in the *European Journal of Dermatology*, emphasized that the most frequent areas marked by psoriasis plaques were the elbows, knees and scalp [16]. Similar results have been reported by Meier M et al. in 2009 [9].

In our study in 34 cases (30.35%), the histopathological examination did not confirm the clinical diagnosis of psoriasis. The most frequent causes of inconsistencies were psoriasiform dermatitis, 13 cases (38.23%) and nonspecific chronic dermatitis, 10 cases (29.41%).

The histopathological diagnosis of psoriasiform dermatitis may represent a case in which from histopathological point of view, not all the diagnostic elements of psoriasis are present, but clinically it overlaps the classic appearance. In the case of psoriasiform eruptions we considered as possible factors: previous treatment of the injuries, biopsy of a weak suggestive lesion, drug induced lesions. Also knowing the hereditary nature of the disease and the existence of Köbner phenomenon we could also take into consideration various other dermatoses in patients with a particularly field for developing psoriasis.

Psoriasis has different clinical variants that mimic diverse dermatological conditions. Often these cases remain a diagnostic dilemma for the clinician and warrant a histopathological confirmation. Primarily, psoriasis must be differentiated from psoriasiform dermatitis, which may show some common morphological elements. In terms of differential diagnosis, psoriasis must be set apart from chronic lichen simplex, large or small plaque parapsoriasis, mycosis fungoides, pityriasis rosea Gibert, pellagra, necrolytic migratory erythema, secondary syphilis,

various forms of eczema especially seborrheic dermatitis [2].

Pinkus defines psoriasiform dermatitis with dermal papillae elongation which may result from increased keratinocyte proliferation [15]. We defined psoriasiform dermatitis as clinically suggestive for psoriasis lesion but without sufficient changes to sustain histopathological diagnosis.

Psoriasiform rashes were reported in usage of drugs such as mitomycin C, anti-TNF-alpha agents, antituberculous medication [3], [8], [14]. Likewise eruptions have also been described in local therapy with imiquimod and silicone injection [1], [17].

Ohashi et al. reported a case of psoriasiform dermatitis occurred in the cervical area in a patient who received radiotherapy. The patient was treated with roxatidine and the rash disappeared after its discontinuation. The lesions were not histologically confirmed therefore this could actually be a case of onset psoriasis by Köbner phenomenon [13].

Dasanu et al. described psoriasiform dermatitis as a paraneoplastic cutaneous manifestation. They reported a case in which this type of eruption preceded the diagnosis of chronic myelogenous leukemia [4]. Interestingly, a case of infantile psoriasiform eruption accompanied by persistent fever has also been reported. This was effectively treated with methotrexate [18].

6. Conclusions

Psoriasis is a common disease with lesions spread on different areas of the body that requires a histopathology exam for an accurate diagnosis. Our findings are consistent with the international papers on the subject.

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