

Perniosis: Clinical and Epidemiological Study in Iraqi Patients

Adil A. Al-Nuaimy, Basman M. Fadheel

ABSTRACT:

BACKGROUND:

Perniosis(chilblains) is a common skin problem. This condition results from abnormal reaction to cold which is usually seen during the cold months of year.

OBJECTIVE:

The aim of the present study is to shed a light on different clinical and epidemiological aspects of perniosis in Iraq.

METHODS:

A total of 40 patients with perniosis were seen between January to march 2008 in the department of dermatology and venereology of Baghdad Teaching Hospital.

A detailed history was taken from each patient regarding age, sex, occupation, duration of attack, family history, smoking, drug history, medical history, relieving and aggravating factors and previous treatment modality.

Full examination was done to each patient to assess the distribution and extent and morphology of the lesions and to see if there other skin diseases. Biopsies was done for 6 patients for histopathological study.

RESULTS:

A total of 40 patients were assessed. Their ages ranged from 5-60 years with a mean age of 22 SD± 6.2, 31 females and 9 males (3.5:1).

Main sites of involvement were; toes 39% , fingers 22% ,heels 10% and nose 2.5% .

Main types of lesions were ; erythematous cyanotic swellings 82% , vesicular lesions 23% ,ulcerations 10% and erythema multiforme like lesions 15%. Family history was positive in 22.5% of patients.

CONCLUSION:

Perniosis occur mainly in females between 10-20 years . Most common sites of involvement are toes and fingers . genetic susceptibility is an important factor in the development of the disease. Majority of patients are healthy without any medical or dermatological diseases .Majority are non smokers and did not have any history of drug intake.

KEY WORDS: Perniosis , clinical , epidemiological , Iraqi patients.

INTRODUCTION:

Perniosis(chilblains) is a common dermatological problem. The condition result from abnormal reaction to cold⁽¹⁾. Thus its seen during cold months of winter^(2,3). In people predisposed by poor peripheral circulation, even moderate exposure to cold may be predispose for perniosis^(4,5).

Perniosis occurs chiefly on the hands, feet, ears and face, especially in children^(6,7). Patients are usually unaware of injury at first, but later burning, itching and redness call to their attention⁽⁵⁾.

Typically there is localized erythema and swelling

but in severe cases blistering and ulceration may develop⁽⁵⁾. Sometimes the condition shows a familial tendency⁽²⁾.

The main histopathological features include, dermal papillary odema and marked perivascular lymphoid infiltrate^(8,9).

Main step in treatment is protection of the affected parts agains further exposure to cold. Local remedies are of little help but many systemic agents had been used in the treatment of perniosis⁽⁸⁾.

The aim of the present study is to shed a light on different clinical aspects of perniosis in Iraq.

PATIENTS AND METHODS:

This is an open clinical and epidemiological study on perniosis in Iraq.

Department of Dermatology and Venereology ,
College of Medicine , University of Baghdad.

PERNIOSIS

A total of 40 patients with perniosis were seen between December 2007 to march 2008 in the department of dermatology and venereology of Baghdad teaching hospital.

A detailed history was taken from each patient regarding age, sex, occupation, duration of attack, family history, smoking, drug history, medical history, relieving and aggravating factors and previous treatment modalities.

Full examination was done to each patient to assess the distribution and extent and morphology of the lesions and to see if there are other skin diseases. Incesional biopsies were performed from 6 patients for histopathological study.

RESULTS:

A total of 40 patients were assessed. Their ages ranged from 5-60 years with a mean age of 22 SD± 6.2, 31 females and 9 males (3.5:1) (table no.1).

The duration of attacks ranged from 1-8 weeks with a mean±SD = 18 ±4 days. 39% of patients had

previous attacks. Family history was positive in 22.5% of patients.

Majority of patients were non smokers. All our patients did not complain of other dermatological diseases or medical illnesses except one patient had SLE and another patient with G6PD deficiency. All our patients had negative drug history.

Main sites of involvement were; toes 39%, fingers 22%, heels 10% and nose 2.5% (table no.2).

Main types of lesions were; erythematous cyanotic swellings 82%, vesicular lesions 23%, ulcerations 10% and erythema multiforme like lesions 15% (table no.3).

The main histopathological changes were included the following points: parakeratosis in 2 cases, spongiosis in 3 patients and necrotic keratinocytes in 2 cases. While in the dermis there were superficial and deep dense perivascular lymphocytic infiltrate in all cases.

Table (1): Age and sex distribution of cases of perniosis.

Age of patients	Male	%	Female	%	Total	%
< 10	1	2.5	4	10	5	12.5
11-20	1	2.5	11	27.5	12	30
21-30	3	7.3	9	25	12	30
31-40	2	5	6	15	8	20
41-50	1	2.5	1	2.5	2	5
51-60	1	2.5	0	0	1	2.5

Table (2): Sites of lesions in patient with perniosis.

Site of lesion	No. of patients	%
Toes	16	39%
Fingers	9	22%
Heels	10	10%
Toes and fingers	11	26%
Nose	1	2.5%

Table (3): Types of lesions in patients with perniosis.

Type of lesion	No. of patients	%
Erythematous cyanotic swelling	33	82%
Vesicular	9	23%
Ulceration	4	10%
EM like lesions	6	15%

DISCUSSION:

Perniosis is a common dermatological problem. The condition result from abnormal reaction to cold. Thus it is seen during cold months of winter (1).

Although Iraq is one of the subtropical countries still perniosis is a common disease because there is always diurnal and seasonal fluctuation of temperature between day and night, summer and

PERNIOSIS

winter. These fluctuation of temperature are often important in precipitating the disease than cold alone (10).

In this study perniosis occur at different age groups but mainly in females between 10-20 years and this may propably related to genetic factors, hormonal influence and female fashion of clothing (11)

The present work had shown that sudden change in temperature and cold exposure that occur in November and December is the most important precipitating factor. In addition repeated immersion of hands and feet in cold water as a part of housewife work might increase the incidence of the disease.

Familial tendency is an important factor in the development of the disease as family history was positive in 22.5% of cases.

The histopathological findings in the present work is similar to what has been mentioned in the literature ,but in some cases there was erythema multiforme like changes in which necrotic keratinocytes were observed (8-11).

The clinical picture of perniosis as demonstrated by previous Iraqi study

Did not much differ from what had been reported in this study regarding ages most commonly affected, morphology,hisopathology and distribution of lesions (11).

REFERENCES:

1- Wall LM, Smith NP: Perniosis : A Histopathological Review . Clin Exp Dermatol 1981;6 ,263-271 .

2-Hunter J ,Dahl M. Perniosis. In, Clinical Dermatology. 3rd edition. Blackwell Publishing 2002 , 132.

3-Crowsen AN ,Maro CM . Idiopathic Perniosis and its Mimics : A clinical and histopathological study of 38 cases. Hum Pathol .Apr 1997 ;28,478-84.

4-Spittel JA ,Spittel PC.Chronic Perniosis Another Cause of Blue Toes .Int Angiol . 1992 ;11,46-50.

5- Odom RB ,James WD , Berger TG . in, diseases of the skin, clinical dermatology.9th edition .WB ,Pheladelphia ,Saunders Company 2000 ,25-26.

6- Goette DK :Chilblains(perniosis). J Am Acad Dermatol1990; 23 ,257-262..

7-Simon TD , Soep JB ,Hollister JR. Pernio in Pediatrics . Pediatrics . 2005 ;116,472-5.

8-Penny SN.Disorders Associated with Physical Agents. In, Levers Histopathology of skin. 8th edition. Lippincot-Ravin Publications, 1997 , 312-313.

9-Viguiet M , Pinguier L , Cavelier B . Clical and Histopathological features and immunologic Variables in Patients with Sever Perniosis . Medicine(Baltimore) . 2001 ;80,180-8.

10-Shauiq K E.,Perniosis in Iraq. 3rd scientific Medical Congress , College of Medicine , Baghdad University 1984.

11-Ebraheem M. Perniosis in Iraqi Patients ,cinical and Histopathological study .Diploma Thesis. College of Medicine ,University of Baghdad ,1993.