

ERYSIPELAS: CLINICAL AND STATISTICAL DATA

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ABSTRACT

The aim of this retrospective statistical study was to analyse the clinical manifestation and laboratory evidence of erysipelas in consequently hospitalized patients in the Clinic of Dermatology and Venereology, Prof. Paraskev Stoyanov Medical University of Varna, for a two-year period (2002-2003). The study included a total of 78 patients with erysipelas (27 males, 51 females) aged between 30 and 82 years (mean age $58,28 \pm 19,89$ years). The diagnosis of erysipelas was based on generally accepted clinical and laboratory criteria. The prevalence of erysipelas was 10,3% of all hospitalized patients during this period. The disease predominated in females: male:female ratio was 1:2,65. The morbidity was higher in hot seasons - spring and summer and the lower limb was affected more often - in 63 patients (80,8%). The count of mild and severe forms was almost equal, and local complications were found in 17 patients (21,8%). Recurrent erysipelas affected more commonly females. All the patients with primary and recurrent erysipelas were treated with parenteral antibiotics. Benzathine penicillin G prophylaxis was performed in 33 patients (42%).

Key words: erysipelas, epidemiology, clinical manifestations, laboratory diagnosis, treatment

INTRODUCTION

Erysipelas is a widespread pyoderma caused mainly by beta-haemolytic streptococci of group A (5,6,8). They cannot be always isolated from affected area using ordinary methods. The location of invasion cannot be determined, too (2,10). Diagnosis is based on a typical course of disease: acute onset of locally spreading swollen erythematous painful and tender area (usually lower limb, face or genital location) and systemic symptoms such as malaise, chills and fever. These symptoms lead to hospitalization of most cases. Erysipelas is specified as the most frequent pyoderma causing hospitalization, with raising participation from 2,18% to 6,48% for a 20-year period (1). The great number of recurrences, up to 30% to the end of fifth year, contributes to enlarge this share (3,9). Predisposing factors such as tinea pedis, other splitting soles diseases, post-thrombophlebitic syndrome, lymphoedema, chronic ulcers, neoplasms, trauma etc, maintain the wide dissemination of erysipelas (4,7). Serial clinical and statistical data aim at revealing the risk factors for disease and its relapse (4,7,9).

The purposes of the present study were: to determine the percentage of patients with erysipelas treated for 2 years; to follow-up the clinical manifestations and to analyze the common predisposing factors for disease.

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MATERIAL AND METHODS

The study included a total of 78 patients with erysipelas treated in the Clinic of Dermatology and Venereology, Prof. Paraskev Stoyanov Medical University of Varna, during a 2-year period (2002-2003). They represented 10,3% of 799 patients hospitalized in the Clinic during the same period. Diagnosis of erysipelas was based on generally accepted clinical and laboratory criteria.

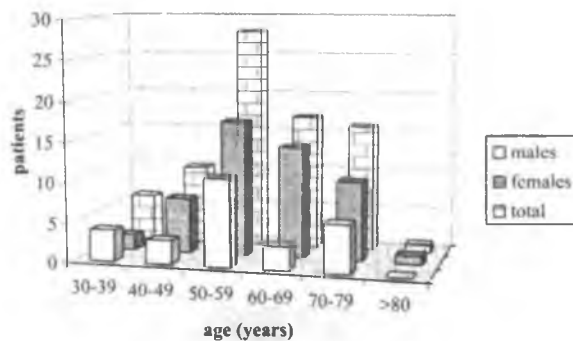


Fig. 1. Distribution of patients with erysipelas according to gender and age

Patient's records were analyzed by means of special file card taking into consideration the following items: from the anamnesis and status - gender, age, location of lesions, accompanying disorders, duration of remission, number of recurrences and predisposing factors; from the paraclinical parameters - ESR, leukocyte count, blood sugar and urea,

and from the treatment - type and dose of antibiotics for achieving the recovery and efficacy of prophylaxis. The total hospital sojourn of the patients with erysipelas amounted to 988 days (675 for females and 313 for males). This was 9,8% of the days of all the patients. This group included 27 males (34,6%) aged between 33 and 73 years and 51 females (65,4%) aged between 30 and 82 years (Fig. 1). Erysipelas affected the lower limbs in 63 (88,8%) patients - crura in 39,7%, sole and crura in 26,9%, thigh and crura in 14,1% followed by face location in 8 (10,3%), upper limbs in 5 (6,4%) and genital location in 2 (2,3%) patients (Fig. 2).

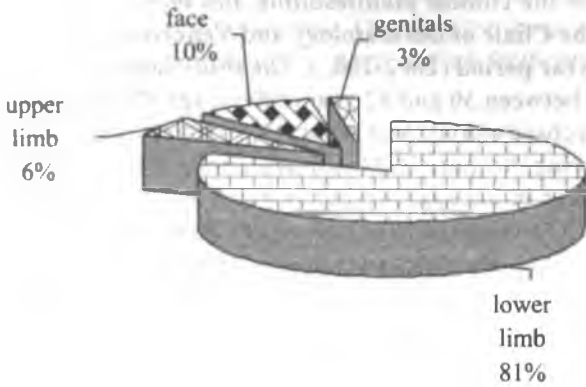


Fig. 2. Localization of erysipelas

The prevalence of mild, erythematous form of erysipelas in 15 (55%) males and 24 (47%) females was almost equal to severe erythemo-bullous and necrotic forms. Primary erysipelas was diagnosed in 21 (77,7%) of males and 21 (41%) of females but recurrent one was found in 6 (22,2%) males and 30 (58,8%) females (Fig. 3).

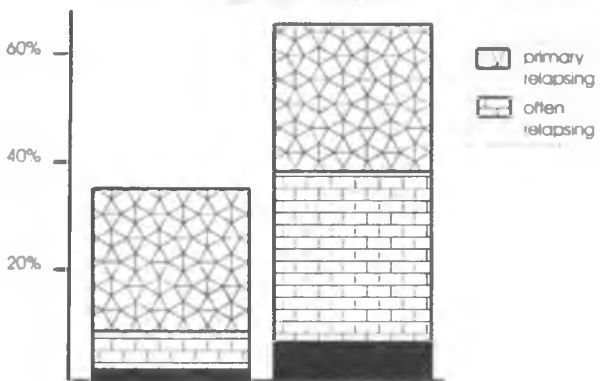


Fig. 3. Realapses of ergsipelas

High level of morbidity was assessed in summer - 33 patients (42,3%) and spring - 19 patients (24,4%) followed by autumn - 18 patients (23%) and winter - 8 patients (10,3%) (Fig. 4). Mycosis of soles was revealed in 25 patients (32%). The other predisposing factors were lymphostasis and oedema - in 18 (23%), obesity - in 15 (19,2%), diabetes - in 17 (22%),

trauma - in 13 (16,7%) and psoriasis of soles - in 6 patients (7,7%) (Fig. 5).

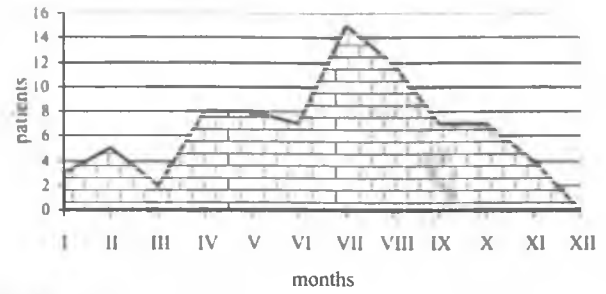


Fig. 4. Seasonality of erysipelas morbidity

Pathological rates of the following laboratory rates were registered: elevated ESR - in 58 patients (74,4%); leukocytosis - in 23 patients (29,5%) and hyperglycaemia - in 26 patients (33,3%).

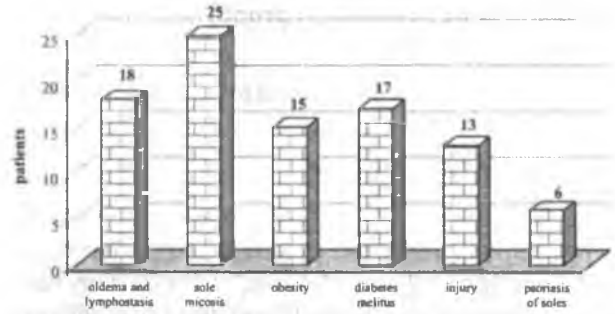


Fig. 5. Predisposing factors for erysipelas

The following local complications were detected: lymphangiitis - in 7 patients (8,8%), abscesses - in 5 (6,4%), phlebitis - in 3 (3,8%) and necrosis - in 2 (2,6%).

RESULTS AND DISCUSSION

Analysis of the data revealed that percentage of hospitalized patients and their sojourn in the Clinic were 9,8% and 10,3%, respectively. Similar data from our country defined the frequency of 2,18% to 6,48% (1). The disease predominated in females, the male:female ratio was 1:2,65. Erysipelas affected all age groups, mostly that one between 50 and 70 years (74,5%) for females and between 40 and 60 years (51,9%) for males. Two peaks of morbidity were assessed - in summer (42,3% of patients) and in spring (24,4%). Thus depicted season distribution was associated with exacerbation of mycoses of the soles and aggravation of lower limbs venous insufficiency in summer. The typical course of disease with fever, malaise, local swelling and erythema was observed in 69 patients (88%). The localization of disease in lower limbs (in 88% of patients) confirmed the last-decade tendency towards

displacement of facial erysipelas (in 10,3% of patients). Portal of infection was fixed in most cases with facial location, whereas concomitant disorders were leading cause for damaging the lower limbs. The permanent lymphoedema of lower limbs due to mastectomy appeared to precede relapse of erysipelas in 6,45% of patients. Genital erysipelas observed in 2,3% was caused by surgical intervention in the same region. Approximately three times higher relapsing rate was recorded in females as the ratio between relapses in males and females was 1:2,65 and the difference was significant.

Mycoses of the soles detected in 32% and psoriatic lesions at that region detected in 7,7% of the patients were responsible for interdigital splits that facilitate streptococcal infection. Diabetes mellitus observed in 22% and obesity observed in 19,2% of the cases were frequently combined in hospitalized patients with erysipelas. The elevated blood glucose was frequently registered, i. e., in 33% of patients at the onset of disease. The part of cases with hyperglycaemia was due to concomitant diabetes but in other patients elevated blood sugar level was observed for the first time. The transitory increase of glucose was, probably, associated with impaired glucose tolerance during infection as glucose level returned to normal after recovery. Tumefaction and lymphostasis of the lower limbs as a consequence of chronic venous or cardiovascular insufficiency were predisposing factors in 20,5% of patients. The permanent endogenous streptococcal focus was formed in the regions of injured lymph and blood circulation and this fact was responsible for the difficult accumulation of antibiotics to bactericidal concentration.

All patients with erysipelas were treated with antibiotics and in 33 patients (42%) prophylaxis with benzathine penicillin G was performed.

In conclusion, erysipelas is the most frequent pyococcal infection causing hospitalization in the Clinic of Dermatology and Venereology, Prof. Paraskev Stoyanov Medical University of Varna. Predisposing factors are found out in 60

patients (77%). The higher morbidity rate is demonstrated in summer and spring. Female gender is associated with higher risk for relapse of infection.

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