

## ANTIBIOTIC THERAPY AND PROPHYLAXY OF PATIENTS WITH ERYSIPELAS

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### ABSTRACT

78 patients with Erysipelas, treated in the Varna clinic of dermatology are evaluated regard to clinical manifestation and treatment modalities. The duration of therapeutic courses varies 3 to 33 days (med. 12, 7 days). All patients received parenteral antibiotic therapy in a regimen depending on location and severity of infection and number of recurrences. The mild and moderate cases are treated with penicillin and cephalosporines- I and II generation. Severe and complicated erysipelas cases are managed with III generation cephalosporines. Penicillin with depo action is applied as a prophylaxy in 33 (42%) patients. Predisposing causes for recurrence of infection are reported as follows:

- tinea pedis - 32%
- lymphostasis and edema - 23%
- obesitas - 19,2%
- diabetes - 22%
- trauma - 16,7%
- palmo - plantar psoriasis-7,7%

**Key words:** erysipelas, therapy

### INTRODUCTION

Erysipelas is an acute dermo-hypodermic infection of the skin caused by beta-hemolytic group-A streptococci, that tends to turn the most common cause for hospital admission, the number of treated patients increasing from 2, 18% to 6, 48 % in 20 years period (1). The disease manifest itself with a fever, erythema and a local tenderness in the affected area (limbs, face, genitalia).The commonly reported cases of recurrences of erysipelas decrease the patients quality of life for a long period and require antibiotic therapy and prophylaxy (2, 3, 9).

Routinely laboratory methods for streptococcal identification and antibiotic susceptibility that define selection of appropriate therapy are not sensitive enough.

Retrospective clinical studies report only in 2% of patients positive for causative agent hemocultures and 3,6% show contaminated cultures.(2) Material from involved skin scraping, used for culture examination proves to be of low sensitivity.

Intradermal needle aspiration (positive in 5 - 25%) and

punch biopsy (positive in 10 - 20%) cultures are of little despite being highly specific. (4, 2, 6)

The above mentioned difficulties in laboratory diagnostics of erysipelas often lead to an empiric choice of antibiotic therapy, the clinical response being the only criteria for efficacy.

### AIM OF STUDY

1. To evaluate the results of antibiotic therapy of erysipelas patients treated in Dermatology clinic for a two years period.
2. To analyse the most common treatment regimens, regarding the clinical form and severity of disease.
3. To assess efficacy of erysipelas prophylalaxy with depo penicillin.

### RESULTS

1. 78 patients - 27 male, 57 female with erysipelas are treated in the Varna dermatology clinic, in a two years period - 2002 - 2003. They comprise 10,3% of number of admitted patients; they account for 9,8% of hospital treatment duration.

2. Distribution of patients according to sex and age - fig. 1

3. Location of disease - fig. 2
  - legs in 63 patients (80, 8%)
  - face - 8 (10,3%)
  - arms - 5 (6,3%)
  - genitalia - 2 (2,3%)

4. Number of patients with mild and moderate form - 15 male (55,5%) and 24 female (47%) is almost equal to the number severe cases - bullous, hemorrhagic and necrotic.

5. Predisposing factors - fig. 5
  - lymphostasis and edema - 18 patients (23%)
  - tinea pedis - 25 patients (32%)
  - obesitas - 15 patients (19,2%)
  - diabetes - 17 patients (22%)
  - palmo - plantar psoriasis- 6 patients (7,7%)

6. Primary erysipelas was diagnosed in 77,7% male patients (21), and in 41% (21) female patients; recidivant cases - in 22,2% (6) male and in 58,6 (30) female patients. Fig. 3

7. Morbidity is found to be at highest in summer - 42,3% (33) patients followed by spring - 24,4% (19) patients, fall - 23% (8) patients, and winter - 19,3% (8) patients. Fig. 4

8. All patients received parenteral antibiotic therapy, therapeutic regimen moderated according to clinical type and location of erysipelas.

Various clinical data suggest empiric therapy regimens for erysipelas, with respect to the estimated antibiotics susceptibility. In most of them penicillin is considered a drug of choice for uncomplicated erysipelas cases, despite its relatively low activity to latent and slowly dividing microorganisms (5, 8, 10). A number of dermatologists begin the treatment course with penicillase resistant penicillin agents to prevent complications by penicillase-producing staphylococci.

### RESULTS OF OUR STUDY PROVE:

1. Penicillin in a regimen 4 times by 2 (3) mln. IU applied intramuscularly proved ineffective in 1/3 of erysip-

elas patients that required change another antibiotic on the 3-6 day from beginning of therapy. fig. 6.

2. Use of semi-synthetic penicillin antibiotics provided no advantage compared with penicillin only with regard to clinical response and duration of treatment course.

3. Cefalosporines - I and II generation achieved good clinical results in a mild and moderate erysipelas cases.

4. Cefalosporines III generation and second generation macrolides - claritromycin and azitromycin applied in a parenteral route for 5 - 7 days showed good clinical resolution in severe haemorrhagic and necrotic erysipelas. fig. 6

Preventing practices in patients with recurrent erysipelas are targeted to treatment of endogenic streptococcal foci and elimination of predisposing factors. Benzatine penicillin prophylaxy applied once a week for a different period has provided beneficid effects in recurrent cases, only when combined with elimination of triggering factors (3, 7, 9). Applied as a single measure it does not eliminate the risk for erysipelas recurrence and thither complications.

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

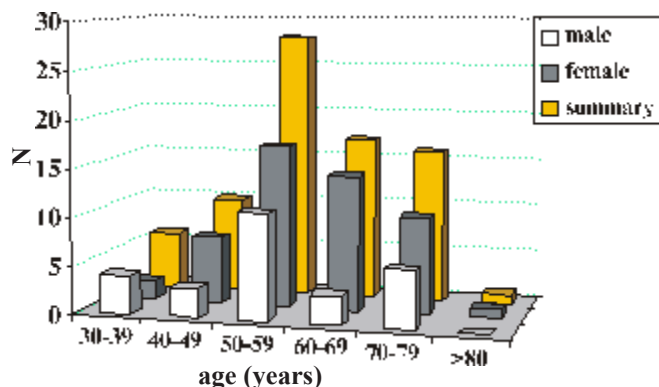


Fig. 2. Location of erysipelas

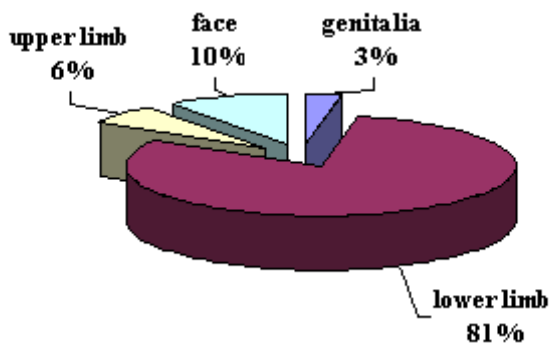


Fig. 3. Relapses of erysipelas Erysipelas relapses more frequently in femalesq p=0,02, chi-square analysis

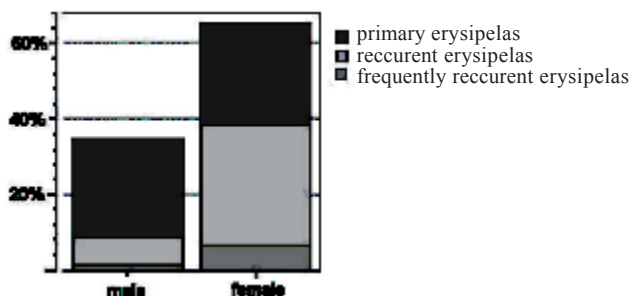
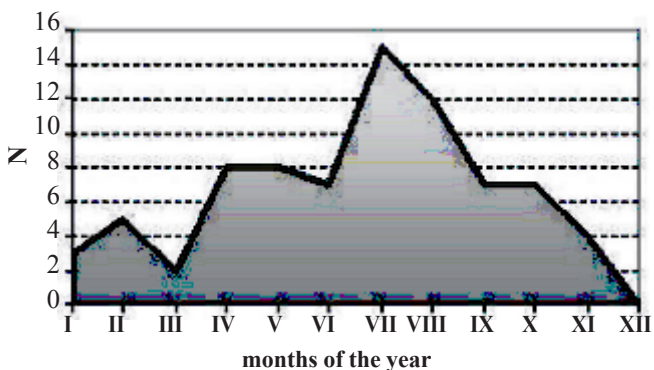
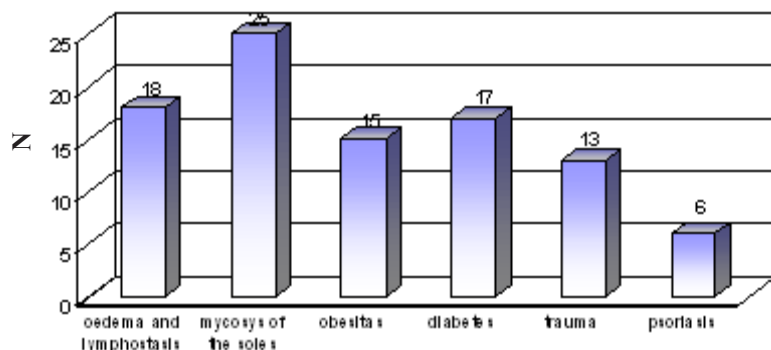


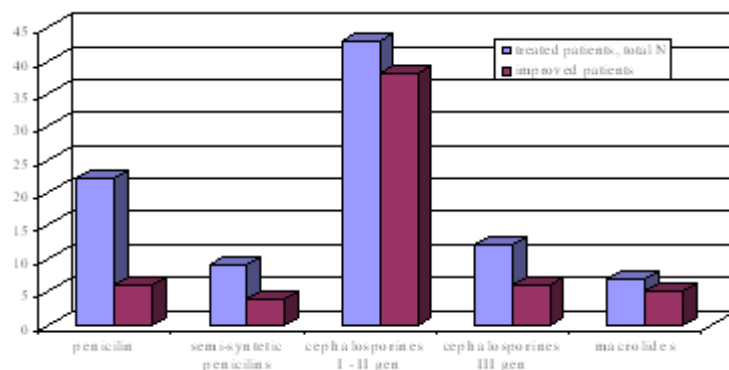
Fig. 4. Location of erysipelas



**Fig. 5.** Location of erysipelas



**Fig. 6.** Antibiotic treatment in patients with erysipelas



**\*Note:** Some patients were treated with more than one antibiotic course.

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