PHOTODYNAMIC THERAPY IN WOMEN WITH VULVOVAGINAL CANDIDIASIS

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Efficacy and safety of 5-ALA based medicinal formulation ALAsense in PDT treatment of vulvovaginal candidiasis.

Introduction. In the past decade has seen a sharp increase in resistance of many strains of bacteria and fungi to antibiotics and antymycotics. Therefore the problem of unconventional therapies with new techniques classified gynecologists as primary in reproductive capacity of women.

The aim of this study was to estimate the clinical efficacy and safety of 5-ALA based medicinal formulation ALAsense in PDT vulvovaginal candidiasis in women with application of 1,5 % of a solution ALAsense (5 – ALA).

Materials and methods. To achieve the objectives of the study was conducted in several stages. At the preliminary stage were selected women with complaints of itching, burning, flushing and swelling of external genitalia. Further symptoms were evaluated in the study per vaginum fence and smear on the flora of the posterior vaginal fornix and, upon confirmation of the diagnosis, bacterial cultivation in nutrient media.

In order to determine the accumulation alasens-induced protoporphyrin IX in the first stage of studies of 5 patients with vulvovaginal candidiasis was conducted fluorescence spectroscopic study on the diagnostic setting "Spectrum-Cluster"(excitation wavelength 405 nm). It was noted that within a specified time after drug administration alasens in the mucosa of the vulva and vagina recorded intense fluorescence of protoporphyrin IX in the red spectrum. The intensity of fluorescence of protoporphyrin IX in the skin of thigh and vulva was 3 - 7 times lower.

In a second study we conducted PDT 15 patients with vulvovaginal candidiasis. For irradiation used LED device "APS" (OOO "Polironik") (wavelength 400 ± 10 nm). Each patient performed 4 sessions of PDT with an interval of 7-8 days. Before and after each treatment was estimated microscopy of smears stained by Gram, and crops on nutrient medium with the counting of the colonies and the definition of Candida species of pathogens.

Age of women in the study ranged from 22 to 59 years (average age 33 years). Duration of disease vulvovaginal candidiasis ranged from 6 months. to 5 years. The number of recurrences ranged from 3 to 10 per year. In 9 patients (60%) observed in the average severity of symptoms in 6 patients (40%) - a significant degree of severity of symptoms.

Drug tolerance alasens determined on the basis of subjective symptoms and sensations, of which the patient self-reported and objective data obtained by a doctor.

Results. In all 15 patients immediately after the first PDT disappeared or significantly decreased complaints of itching and burning. In 6 (40%) patients remained on a small amount of complaints, but in 4 patients, they were immediately after the second PDT. In 5 (33%) patients there was increased amount of bleeding after the 3rd session.

In assessing the stroke patients, a positive dynamics. Immediately after PDT virtually all patients had been observed 3-fold reduction of Candida and leukocytes. A week before the next session achieved efficiency decreased in 2 times.

The final performance was recorded 4 weeks after the 4th session of PDT. Full effect was observed in 10 patients and was 67%.

In 9 patients (60%) patients after PDT sessions in the smears was determined by an increase in lactic acid bacteria. This fact demonstrates the positive effect of PDT on the vaginal microflora, as lactic acid bacteria involved in the formation of environmental barrier and, thus, provide resistance vaginal biotope.

Assessment of side effects in 6 patients (40%) experienced discomfort in the vagina after the introduction of solution of 5 - ALA. In 3 (20%) patients observed discomfort at the site of PDT after the session, which was manifested as a slight burning sensation. All adverse events were independently and medical treatment is not required.

Conclusion. Analyzing the results, we can conclude that a sufficiently high efficiency of this method. This is evidenced by the disappearance of complaints from patients (itching, discomfort, isolation), and microbiological
characteristics of the stroke (the disappearance of fungi of the genus Candida). It should also be noted, of course, a positive effect on vaginal microflora of photodynamic therapy (decrease in the number of leukocytes, as well as the emergence and increase in lactic acid bacteria in the smear). All patients reported good tolerability of the procedure and the disappearance of the severity of symptoms after the first session of PDT. To increase the effectiveness of the method seems appropriate to reduce the interval between PDT up to 2 days.