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USEFULL OF INTRAVESICAL INSTILLATION OF HYALURONIC ACID AND CHONDROITIN SULPHATE IN PREVENTING RECURRENT BACTERIAL CYSTITIS

Hypothesis / aims of study
To evaluate efficacy and tolerability of intravesical therapy with hyaluronic acid - chondroitin sulphate (HA-CS) compared with antibiotic prophylaxis in reducing the rate of recurrent bacterial cystitis and associated symptoms.

Study design, materials and methods
In this retrospective analysis, two different series of patients treated for recurrent bacterial cystitis in our urogynecological referral centre, with two different therapeutic approaches in relation to the period considered. In Group A, we included patients who received traditional therapy for recurrent cystitis based on a long-term antibiotic prophylaxis; the Group B received a new treatment based on intravesical instillations of a sterile solution of high concentration of sodium hyaluronate and sodium chondroitin sulfate in 50 mL water with calcium chloride (IALURIL®, IBSA Farmaceutici, Lodi, Italy). As is our practice for recurrent cystitis, follow-up outpatient visits were performed at 1, 3, 6 and 12 months after the end of treatment; patients underwent outcome assessment addressing UTI status, urinary symptoms and any adverse effects associated to the performed therapy.

Results
Ninety-nine patients in Group A and 112 patients in Group B were recruited for the study. Among them, only 76 (Group A) and 98 (Group B) completed the follow-up at 12 months and were included in the analysis. During the 12 months of follow-up, 109 and 69 episodes of UTI were detected in the A and B group respectively. During follow-up, moderate/severe symptoms of UTI (acute dysuria, frequency, urgency, pelvic pain) were referred in 65.2% of cases and in 39.6% of cases, in group A and B respectively ($p = 0.001$). At the end of the follow-up period (12 months), 16 patients in group A (21.0%) and 36 patients in group B (36.7%) were free from urinary infection episode ($P=0.03$)

Interpretation of results
In our analysis we observed a different ratio of episodes of UTI in the two treatment groups after 12months of follow up. In particular, the percentage of patients who developed 2 or 3 episodes of UTI was mainly found in the group treated with antibiotic therapy. However, the overall percentage of patients with only one episode of UTI was significantly higher in women who received HA-CS intravesical instillations.
With reference to the distribution of UTI episodes during follow-up, it should be emphasized that while in the first month recurrence was lower with antibiotic therapy but after 12 months of treatment the number of recurrences was significantly less frequent in the population treated with HA-CS. Moreover, at 12 months follow-up, 36.7% of patients whore received instillation of HA-CS were free from any UTI episodes. This could be the result of long term repair and consolidation of the urothelial GAG layer. That observation is in agreement with those reported by Damiano et al. [1]. Finally, we found a significant difference between the two treatment groups with regard to the onset of symptoms related to the UTI.

Concluding message
Our data, although preliminary, show the validity of this new therapeutic option, which could be a true alternative to traditional antibiotic prophylaxis in the treatment of recurrent UTI. Further assessment will be necessary with prospective randomized blinded studies on a larger sample population

References
1. 1. Damiano R, Quarto G, Bava I, et al. Prevention of recurrent urinary tract infections by intravesical administration of haluronic acid and chondroitin sulphate: a placebo-controlled randomised trial. Eur Urol 2011; 59: 645-51

Disclosures
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