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Title: THE NATURAL HISTORY OF INTERSTITIAL CYSTITIS IN 44 FEMALES TREATED WITH INTRA-VESICAL DIMETHYL SULPHOXIDE.

Aims of study:

Interstitial cystitis is a chronic condition characterised by frequency, urgency and often pelvic pain. The pathogenesis of this condition is poorly understood and a large number of treatment options are currently available with variable response rates. The aim of this study was 1) to determine the initial response rate to intra-vesical combination therapy with Dimethyl Sulphoxide (DMSO), heparin and hydrocortisone and 2) to evaluate the type and response to subsequent interstitial cystitis therapies and 3) the current symptom status.

Methods:

Eighty-one women with recognised Interstitial Cystitis underwent combined intravesical therapy with 50ml in 50% DMSO, 5000iu Heparin and 100mg Hydrocortisone over a seven year period between July 1993 and March 2000. The treatment cycle at our unit involves twice weekly bladder instillation for four weeks followed by once weekly treatment for four weeks. This regime varies however, between institutions with a range of 4-12 treatments. For this reason all women who had completed ≥ 4 treatments were included in this study. Each woman was asked to score (0-100%) their initial response following completion of a combined DMSO therapy cycle. Subsequent therapies and response to individual treatments were also recorded. In addition, a validated four-question symptom index (0 to 20) and 4 question problem index (0 to 16) was completed to assess current symptoms.

Results:

81 women underwent combined DMSO treatment over the study period. Of these 76(94%) completed ≥ 4 initial combined DMSO treatments. Only 44(58%) of this latter group were available for interview. The mean follow-up time was 38 months (Range 9-77 months). The mean number of combined DMSO treatments in this group was 10(Range 4-12). The mean response at three-months following the first combined DMSO treatment cycle was 54%(range 0-100%); 17(39%) women were cured (VAS $>80\%$), while 11(25%) experienced a $\geq 50\%$ reduction in symptoms. Of the remaining 16(36%) women 9 reported $\leq 50\%$ reduction in IC symptoms and 7 reported no change or an increase in symptom severity. 24(55%) women have subsequently undergone alternative therapy (Range 1-5 treatments). Of the 17(39%) reporting a $\geq 80\%$ response to the first combined DMSO treatment cycle the current mean symptom score is 9.0(Range 0-20) and mean problem score of 5.7(Range 0-16). 8 women have required further treatment for recrudescence of their IC symptoms at a median interval of 2 years (IQ range 1-2 years); 5 had a second combined DMSO cycle (mean response 22%, range 0-60%) and 7 women had alternative therapy. The response to further treatment was poor and seven of these women have persistent significant IC symptoms. Of the 27(61%) women who experienced $\leq 50\%$ initial reduction in IC symptoms

following combined DMSO therapy, 25(57%) are currently symptomatic with a mean symptom score of 9.5(Range 0-20) and mean problem score of 7.4(Range 0-16). 9(20%) of these women underwent a second DMSO treatment cycle with a mean response of 35%(Range 20-60%) and 17(39%) women have had alternative therapy

Conclusion:

The mean initial response rate to combined DMSO therapy in this study was 54%, which is lower than that previously reported. Only 17(36%) were cured (VAS >80%) following their first combined DMSO treatment cycle. More than 50% of women seek alternative therapy. The chronic relapsing nature of this condition however, is evident in the fact that at follow-up current symptom and problem scores were high irrespective of their initial response to combined DMSO therapy. Multiple successive therapies do not appear to have any advantage and most women continue to have significant long-term symptoms.