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INTERSTIM NEUROMODULATION THERAPY FOR INTERSTITIAL CYSTITIS

Hypothesis / aims of study
Interstitial cystitis, thought to be a multi-factorial chronic disease, is characterized by a symptom complex of pain, urgency, frequency, often associated with debilitating pelvic, perineal or lower abdominal pain. Its aetiology is thought to be multifactorial, presumably due to a deficient or dysfunctional glycosaminoglycan (GAG) layer," toxic" urine, auto-immunity and mast cell-mediated inflammation. This chronic disease, is often characterized by frequency, urgency, nocturia, dysuria and often debilitating pelvic, perineal or lower abdominal pain. Oral pharmacotherapy like antihistaminic, antidepressants, cholinolytics, heparinoids, are often ineffective, associated with side-effects. Intravesical means such as cystoscopic hydro-distention, intravesical instillation therapies, provide temporary relief to the patient. Unfortunately these patients continue to suffer from the disease despite trying all the standard therapies.Interstitial cystitis (IC) often times requires a multimodality approach for ultimate success. In our refractory patient population with overactive bladder (OAB) with pain, we consider sacral neuromodulation therapy (SNT) an option for patients with dominant OAB symptoms who have failed all other more conservative management schemes.
The aim of this study was to retrospectively evaluate the outcome of SNT therapy in a cohort of patients treated with IC at our institution.

Study design, materials and methods
Between April 2002 to July 2004, 27 patients who met the NIDDK criteria for IC were treated with SNT. Operative charts and medical records were reviewed for demographic characteristics, success rates, failure rates, revision rates, and number of programming visits. The status of the patient in relation to the presence of the Interstim and its utility and perceived help at last follow up was also extracted.
Several questionnaires were sent out to these patients, the purpose of which was to assess the efficacy of the treatment, the satisfaction rating from the patients, and a comparative analysis of this mode of treatment with the others therapies on hand. The patients replied back with their responses and we implemented the findings of the responses into this study.

Results
All forms of conservative therapies had failed in all these patients; including hydro distention with anaesthesia, behavioural therapy and oral and intravesical pharmacotherapy All patients underwent Stage I Interstim using the tined lead approach. 22 patients (81.5%) progressed to stage II based on > 50% improvement in overall clinical outcomes of urgency, frequency or pain. With a mean follow-up of 10 months (range 1-22 months), 5 devices have been explanted (3 for failure to maintain efficacy and 2 for infection). Among those patients who still have the device, 13 express continued benefit and 4 express loss of efficacy. On a per protocol basis the clinical success rate was 13/25 (52%), excluding the above 2 patients explanted for infection.

Interpretation of results
This study shows us that, though SNT has a good success rate initially, with regards to Stage 2 progression, the overall success rate declines over a period of time.
Despite, the encouraging high success of progression to stage two in this patient population, the long term follow up revealed a significant decrease in clinical success reaching an overall of 52%. The exact reason for this decline in long term success is unclear. This is an important finding for proper counselling of IC patients undergoing this form of therapy.

Concluding message

Despite, the encouraging high success of progression to stage two (81%) in this patient population, the long term follow up revealed a significant decrease in clinical success reaching an overall of 52%. The exact reason for this decline in long term success is unclear. This is an important finding for proper counselling of IC patients undergoing this form of therapy.