

ENDOSCOPIC ABLATION OF HUNNER'S LESIONS IN INTERSTITIAL CYSTITIS PATIENTS

Hypothesis / aims of study

Interstitial cystitis (IC) is a painful bladder syndrome characterized by the symptom complex of urinary frequency/urgency, and pain in the absence of identifiable pathology, with typical cystoscopic and histological features (1). One of these features is an erythematous lesion, now referred to as a Hunner's lesion. These are not common, but prior studies have shown that endoscopic ablation of these lesions can result in symptomatic improvement (2,3). Herein we report our experience with endoscopic ablation of Hunner's lesions.

Study design, materials and methods

A retrospective chart review was performed on 14 patients, all female (mean age 63.6 years, range 28-85), treated in our clinic with cystoscopically identified bladder lesions, presumed to be Hunner's lesions, between 2003 and 2007. All had presented with the previous diagnosis of IC (made elsewhere) and had failed multiple standard therapies for IC prior to referral. We performed flexible cystoscopy under local anesthesia to identify the presence of Hunner's lesions. We considered any erythematous lesion as a potential Hunner's lesion if touching the lesion with the cystoscope reproduced the patient's symptoms (pain, urgency) and touching benign appearing areas of urothelium did not. At a later date under a general anesthetic the lesions were cystoscopically biopsied and ablated. Ablation was either by fulguration with a Bugbee electrode (12 patients) or formal resection with a loop cautery (2 patients). Hydrodistension was not performed. Patients were seen at 1 month post-op and then every 6 months, or if symptoms recurred. The primary outcome measures assessed were pre-operative and post-operative (assessed 1 month post-op) analog pain score, overall subjective improvement in symptoms (based on patient grading their percent level of improvement), change in urinary frequency on 48 hour bladder diary, and bladder biopsy pathology reports.

Results

12/14 (86%) patients experienced a substantial improvement in symptoms following ablation. Two patients (14%) experienced no change in their symptoms. The average subjectively reported improvement in symptoms for the 14 patients was 76%. All of the 12 patients who reported improvement had at least a 50% reduction in bladder pain and 7 reported complete resolution. The average linear pain scores decreased from 8.1 pre-operatively to 1.7 postoperatively ($p=0.0002$). Nine (64%) patients also reported subjective improvement with regard to urinary frequency and urgency. Three of 12 responders reported little or no improvement in frequency/urgency despite a dramatic decrease or complete resolution of bladder pain. The number of voids per day decreased from 23.5 pre-operatively to 13.5 after treatment ($p=0.014$). When only examining the 12 responders, the number of voids/24 hours decreased from 21.7 before treatment to 9.7 after treatment ($p=0.029$). Eight patients had a durable response and have not had a recurrence in their symptoms over an average follow-up of 27.8 months (range 8-55). Four patients had return of their symptoms after a mean response of 12 months (range 7-23). In each of these four patients, symptomatic recurrence prompted repeat cystoscopy which identified a recurrent lesion(s), typically in the region of a prior lesion. Re-treatment of the lesion(s) resulted in complete symptom resolution. One patient had a second recurrence 22 months after her first recurrence. Repeat treatment of the recurrent lesion with transurethral resection (TUR) resulted in complete symptom resolution. The average duration of response to a single treatment was 22.3 months. No complications resulted from endoscopic ablation.

The pathologic diagnosis was consistent with partial or complete epithelial denudation in 12/14 (86%) specimens and chronic inflammation (predominantly lymphocytic and plasma cell infiltrates) in 13 of the 14 (93%) specimens, including all 12 who had symptomatic improvement. Only 3 patients were noted to have mast cells in their pathologic specimen. One patient who did not benefit from endoscopic lesion ablation had a pathologic diagnosis of venous angioma with no evidence of inflammation.

Interpretation of results

Our results confirm those of Peeker et al (2) and Rofeim et al (3) that endoscopic ablation of Hunner's lesions can result in significant improvement in the symptoms of IC. It appears that the pain component responds best and that this treatment is not curative because lesions can recur. However, retreatment appears to be beneficial. We found that office cystoscopy was helpful in identifying Hunner's lesions because one can assess whether or not any bladder erythema is symptomatic. We found that in general, the lesions themselves appeared to be the cause of the symptoms because touching normal appearing urothelium did not reproduce patients' symptoms whereas touching the lesions did. Pathologically the lesions are predominantly inflammatory with surface denudation. The one patient with a venous angioma who did not benefit from endoscopic lesion ablation was included in the analysis because clinically it was thought that this lesion was symptomatic (based on the office cystoscopy). However, pathologically, this was not a true case of a Hunner's lesion.

Concluding message

Hunner's lesions can be identified at office cystoscopy by their erythematous appearance and reproduction of the patient's symptoms upon touching the lesion with the cystoscope and failure of this effect upon touching normal appearing urothelium. Endoscopic ablation of these lesions results in symptomatic improvement in the majority of patients, who have often failed prior therapies. Symptomatic recurrence can occur but often responds to repeat ablation.

References

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