Inflammation and Infection

Gastrocystoplasty and Hematuria-dysuria Syndrome. What Role Plays Helicobacter Pylori? Case Report and Literature Review

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**A B S T R A C T

49 years male, who comes to the urology department, complaining of 8 months of lower abdominal pain, burning and oppressive type, of variable intensity reaching 9/10, which is occasionally exacerbated by urination, associated with intermittent gross hematuria, dysuria, refers no fever at any time. Patient with past medical history of bladder and right kidney Tuberculosis (TBC) 25 years ago, treated with a simple right nephrectomy and bladder augmentation with antrum segment of stomach, for low bladder capacity. Never showed any symptom during those 25 years lapsing time.

**Introduction

The use of gastric segment for bladder reconstruction, was first described by Sinaiko in dogs and later described in humans by Leong, however, this was actually widely accepted for clinical use, after the work presented by Adams in pediatric population.1

Initially, its main indication is limited to patients with renal failure, metabolic acidosis, or short bowel syndrome. But eventually the process was gaining ground and started using in neurogenic cases for urinary diversion and/or neobladder for bladder cancer, bladder augmentation and management of low capacity bladders secondary to various diseases such as tuberculosis, reconstruction of the urinary tract and bladder extrofias, posterior urethral valves, epispadias among others.2

**Case presentation

49 years male, who comes to the urology department, complaining of 8 months of lower abdominal pain, burning and oppressive type, of variable intensity reaching 9/10, which is occasionally exacerbated by urination, associated with intermittent gross hematuria, dysuria, refers no fever at any time.

Patient with past medical history of bladder and right kidney Tuberculosis (TBC) 25 years ago, treated with a simple right nephrectomy and bladder augmentation with antrum segment of stomach, for low bladder capacity. Never showed any symptom during those 25 years lapsing time.

Hematuria work up is started with renal and urinary tract ultrasound which suggests vegetative lesions vs. intravesical polyps, cystoscopy is performed finding pseudo-diverticulum in right side lateral wall behind left upper neck, and a whitish lesion which is biopsed; no evident tumor lesions. Biopsy showed antrum tissue with mild chronic atrophic gastritis activity, positive for Helicobacter pylori and negative for metaplasia or dysplasia (Fig. 1). Patient was treated for Helicobacter Pilory with three medications scheme (Clarithromycin 500 mg/TID, Amoxicillin 1 g/BID, and Omeprazole 40 mg/OD for 10 days) and symptoms were resolved.

**Discussion

The use of gastric tissue in the reconstruction of the lower urinary tract has been controversial since its first description in 1950 and its amendment in 1970; gastric tissue is mainly used as an alternative to intestinalcystoplasty (colocystoplasty or...
The etiology of the hematuria-dysuria syndrome is not completely known. The decrease in the pH of the urine was not a significant association, although other authors have reported a difference between bladder mucosa and urinary pH. However, patients with irritative urinary symptoms have well responded to histamine receptors 2 blockers, leaving aciduria as the possible etiology of the syndrome.3

Some authors have attributed gastrin high levels as a cause of dysuria hematuria syndrome, although others found no direct relationship between gastrin levels and irritative symptoms.3

Another possible factor involved in the etiology has been the Helicobacter pylori, which when treated symptoms are resolved. Castellan, in 29 patients, showed that the empirical use of high doses antimuscarinics for symptoms of hematuria dysuria syndrome, had no urodynamic or clinical benefit.6

Conclusions

The most common complication in gastrocystoplasty is hematuria-dysuria syndrome, symptoms are usually intermittent, self-limiting and improve with time. Most patients are controlled with intermittent use of H2 blockers.

The etiology is believed to be the production of hydrochloric acid by the gastric segment and reduced by the damping effect of urine. However, the symptoms have been seen even with urine acidity in the normal range. An alternative explanation is by Helicobacter pylori, which when treated symptoms are resolved.

Conflicts of interest

The authors declare they have no conflicts of interest.

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