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COMMENTARY

Commentary on "Cross-over data supporting long-term antibiotic treatment in patients with painful lower urinary tract symptoms, pyuria, and negative urinalysis"

Sanjay Sinha[1]

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Swamy et al. report on the impact of stopping, under regulatory advice, long-term therapeutic antibiotics given to patients with bladder pain syndrome who had pyuria but no proven microbial infection [1]; 90% of patients reported rapid recurrence of symptoms, with 11 hospitalizations.

Patients in this report received antibiotic therapy for over a year. There are concerns regarding treatment of bladder pain syndrome with long-term antimicrobials in therapeutic doses on the basis of pyuria alone. Pyuria is common in the absence of clinical urinary tract infection (UTI) and often accompanies asymptomatic bacteriuria [2–4]. It is a poor marker for infection in patients with chronic lower urinary tract symptoms (LUTS) [5]. Hence, stewardship policies require additional evidence before initiating antibiotics [6]. The odds that patients with chronic pelvic pain might have coincidental pyuria are not insignificant. Additionally, noninfectious inflammatory changes can be identified in bladder histology of many of these patients [7].

Recurrent symptoms were reported by an astonishing 90% (199/221) patients within 5 weeks of treatment withdrawal. Could patients have experienced a nocebo effect on being told by their physician that a useful drug had been stopped for bureaucratic reasons? Similarly, reinstitution of therapy might have had a strong placebo effect. Of note, culture positivity rate remained unchanged.

Eleven patients were admitted with serious health problems (four unrelated to infection). For a cohort with mean age of 56 years (range 19–92), that number might not be extraordinary. However, there could be a more troubling explanation for the readmissions. The use of inappropriate antibiotics has been shown to replace harmless commensal bacteria with more virulent ones, thus increasing the odds of symptomatic infection [8]. Could patients have been rendered vulnerable to infection by what some might call inappropriate long-term antibiotics?

This interesting report exposes critical lacunae in our understanding of pyuria and bladder pain syndrome and should trigger more research. In the interim, one must reflect whether there is enough justification for using such therapy in clinical practice.

✉ Sanjay Sinha
drsanjaysinha@hotmail.com

[1] Department of Urology, Apollo Hospital, Hyderabad 500084, India

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