Canadians' (over)active contributions to overactive bladder research

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Referral for overactive bladder (OAB) forms a significant portion of overall referrals received by pediatric urologists. Clinically, OAB is often complicated by bladder and bowel dysfunction (BBD) and managing BBD is challenging for healthcare providers for multiple reasons.

First, behavioral modification is the recommended primary approach to managing OAB and BBD. Adherence to this recommendation can be difficult to achieve, especially in children with other behavioral or neuropsychiatric comorbidities (e.g., attention deficit and hyperactivity disorder [ADHD] and autism spectrum disorder).¹ Unfortunately, BBD is frequently seen along with these comorbidities, and Dr. Lapointe and colleagues' study, presented in this issue of *CUAJ*, was not an exception; >20% of their cohort was formally diagnosed with ADHD.² It is important to remember that medication is an adjunct to sustained behavioral modification and not an alternative. Thus, it is possible treatment effect was underestimated, as a large proportion of the study population had baseline behavioral conditions.

Second, OAB is often part of the BBD spectrum and the first-line pharmacological therapy (i.e., anticholinergics) can worsen bowel dysfunction. Anticholinergics can be excluded from management plans if the bowel status is not optimal. Therefore, given this intertwined relationship between bladder and bowel, safety profile is even more critical in the pediatric population than in adults, and alternative options with improved side effect profile will be beneficial. In the paper by Lapointe et al, study investigators demonstrated acceptable tolerability of propiverine as their primary objective and this has been supported by other studies in literature.³

The authors highlight another challenging facet when managing OAB. Currently, there are only two medications approved for children with OAB — oxybutynin and propiverine, with the latter only approved in the past five years. Furthermore, the recent European Association of Urology-European Society of Pediatric Urology guidelines also recognize a low level of evidence for pediatric OAB management.⁴ This is an area requiring improvement, and Dr. Bolduc, the senior author of this month's *CUAJ* paper, is one of the main contributors in exploring other agents and their therapeutic efficacy and safety.⁵

Dr. Bolduc and his collaborators should be commended for their persistent efforts, as their contributions to the field span over a decade. This current study unveils exciting future endeavors. With their prospective database, it would be possible to do additional analyses, including looking at other agents and variables of interests. Although it was not used in the current study, analyzing patient-reported outcomes measured through validated instruments, such as Vancouver Symptom Score and Patient Perception of Bladder condition, would better our understanding of propiverine in clinical practice. Dr. Bolduc and colleagues have used validated instruments in their previous work.⁵ Lastly, this study provides promise for future studies to investigate the effect of propiverine in other conditions, such as children with neurogenic bladder.⁶

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References

- Dos Santos J, Lopes R, Koyle M. Bladder and bowel dysfunction in children: An update on the diagnosis and treatment of a common, but underdiagnosed pediatric problem. *Can Urol Assoc J* 2017;11:S64-72. https://doi.org/10.5489/cuaj.4411
- Lapointe E, Singbo N, Naud E, et al. First North American experience of propiverine use in children with overactive bladder. Can Urol Assoc J 2022;16(10):358-63. http://dx.doi.org/10.5489/cuaj.7811
- Common Drug Review Clinical Review Report for Mictoryl. (2017, May). Canadian Agency for Drugs and Technologies in Health. CDR Clinical Review Report for Mictoryl (nih.gov)
- Tekgul S, Stein R, Bogaert G, et al. EAU-ESPU guidelines recommendations for daytime lower urinary tract conditions in children. *Eur J Pediatr* 2020;179:1069-77. https://doi.org/10.1007/s00431-020-03681-w
- Blais A, Nadeau G, Moore K, et al. Prospective pilot study of mirabegron in pediatric patients with overactive bladder. *Eur Urol* 2016;70:9-13. https://doi.org/10.1016/j.eururo.2016.02.007
- Madersbacher H, Murtz G, Alloussi S, et al. Propiverine vs oxybutynin for treating neurogenic detrusor overactivity in children and adolescents: Results of a multicenter observational cohort study. BJU Int 2008;103:776-81. https://doi.org/10.1111/j.1464-410X.2008.08093.x

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