EDITORIAL

Drotaverine for Recurrent Abdominal Pain in Children

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In 1958, Apley described a condition of recurrent paroxysmal abdominal pain characterized by episodes of abdominal pain in children 4 to 16 years of age, lasting more than 3 months and affecting normal activity [1]. The Pediatric Rome II classification has been proposed to subcategorize chronic abdominal pain based on clinical presentations namely those with isolated paroxysmal pain, pain with dyspepsia, pain with altered bowel pattern or abdominal migraine [2,3]. Though it successfully attempts to segregate cases of chronic or recurrent pains into etiological groups, the functional abdominal pain (pain in absence of any attributable structural, infectious or biochemical cause) remains the most common cause in each category. In a prospective series of 107 children who met Apley's criteria for recurrent abdominal pain, Walker, *et al.* [4] were able to group only 73% according to the Rome II criteria. The fact that 27% of the patients could not be classified implies that Rome II classifications may not be completely helpful to clinicians in guiding therapy that might be most effective for the presenting symptoms. It needs to be emphasized that many cases of recurrent abdominal pain remain undiagnosed or get labeled as functional because of either reluctance on the part of the pediatrician to investigate further for uncommon specific causes – like abdominal migraine, acute intermittent porphyria, lead toxicity, inflammatory bowel disease – or to refer to a gastroenterologist.

In view of the heterogeneity of recurrent abdominal pain and the lack of consensus on pathogenesis, it is not surprising that we lack evidence-based interventions [5]. A systematic review of pharmacological therapies for recurrent abdominal pain in children demonstrated some utility of interventions like peppermint oil, famotidine and pizotifen [6], but the small sample size limits acceptability of these results [7]. The different modes of action of these interventions reflect the multiple causation of recurrent abdominal pain and strengthen the case for targeted approaches to management.

Drotavarine, a phosphodiesterase–IV inhibitor non-cholinergic antispasmodic drug, has been used in adults with irritable bowel syndrome and found to be safe and effective in amelioration of symptoms, including pain, frequency of loose stools and constipation [8,9]. In first of its kind pediatric study published in this issue of *Indian Pediatrics*, Narang, *et al.* [10] have by means of a well-planned and a well-executed double-blind randomized placebo-controlled trial on a sufficiently large sample, tried to evaluate efficacy of drotavarine in cases of recurrent abdominal pain. They have not only been able to demonstrate statistically significant reduction in frequency of episodes of abdominal pain but also reduction in school absenteeism and improved parental satisfaction. However, though it reveals safety and efficacy of the drug during four weeks of use, it gives no clue if the symptomatic relief is simply because of continued antispasmodic administration or actual modification of the disease process. Whether symptoms would recur in the treatment group upon cessation of therapy is also not elucidated. Certainly, long-term follow-up of treatment responders is imperative to find the answer. Another important aspect of the study results is that no statistically significant difference was observed in the requirement of additional doses of antispasmodic drugs in treatment and placebo groups. This limits the prospect of relying on drotaverine as a sole therapeutic agent and questions its utility in routine use. The authors have used a standard dose of 20 mg per dose in children aged 4 to 6 years and 40 mg per dose in children above 6 years, irrespective of weight or surface area. While such dose recommendation may be acceptable for use on as-and-when-required basis, the optimal dose needs to be worked out on the basis of weight, if the drug is intended to be used for as long period as four weeks. Children, unlike adults, have been shown to outgrow from functional pain. It is also well documented that pain often subsides after 2 to 6 weeks of diagnosis, perhaps implying that if a positive diagnosis of functional pain is provided, parents and children accept non organic nature of the disease [11]. Therefore, the reduction of symptoms by any particular medicine may not directly indicate efficacy of the agent. Many cases of abdominal pain are thought to be due to minor or self-limiting illnesses and providing symptomatic relief for some duration (optimal period may vary in different conditions and remains yet to be defined) may be

all that is required [12]. Drotaverine may be a safe and somewhat effective agent for particularly this type of patients, but it may be little too early to recommend its routine use in children with recurrent abdominal pain. As of now, the principal use of drotaverine in recurrent abdominal pain seems to be in carefully selected cases with aim to alleviate symptoms and reduce school absenteeism, till a definitive etiology is worked out or specific management plan is instituted.

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