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PAPER

Cardiovagal autonomic functions in children with abdominal pain predominant functional gastrointestinal disorders

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Background:

About 12% of Sri Lankan children suffer from abdominal pain predominant functional gastrointestinal disorders (AP-FGD). Autonomic dysfunction is believed to be involved in the development of symptoms in patients with AP-FGD. The objective of this study is to assess the cardiovagal autonomic functions among children with AP-FGD.

Methods:

Twenty five children with AP-FGD age 5 – 12 years (mean age 8 years, SD 2.27 years) were part of the study. There were 12 girls and 13 boys. Autonomic dysfunction related symptoms were recorded using an interviewer-administered, validated questionnaire. Eleven autonomic parameters were obtained while subjecting children to four non invasive, bedside, autonomic function tests; assessment of blood pressure response to standing, heart rate response to standing, heart rate response to deep breathing and heart rate response to Valsalva manoeuver. Results were compared with age, sex, and matched with twenty one healthy children's autonomic values [mean 8.9 years, SD 1.8 years].

Results:

Autonomic dysfunction related symptoms were found among 4 children with AP-FGD (16%). Resting heart rate (86b/min vs. 91b/min in controls), supine systolic blood pressure (111mmHg vs 97mmHg), supine diastolic blood pressure (70mmHg vs 61mmHg) were significantly higher in children with AP-FGD compared with controls ($P < 0.05$).

Conclusion:

The children with AP-FGD may have autonomic abnormalities restricted to sympathetic division of the autonomic system.