



Electrogastrogram changes of intermission of the recurrent abdominalpain of 50 children

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Author contributions: All authors contributed equally to the work.

Original title: *China National Journal of New Gastroenterology* (1995-1997) renamed *World Journal of Gastroenterology* (1998-).

Received: December 11, 1995

Revised: January 31, 1996

Accepted: June 25, 1996

Published online: September 15, 1996

Abstract

AIM: At present, the recurrent abnormal pain of children is commonly seen among infants and school-age children, but its cause has not yet been clear. Modern medicine's treatment of such disease by relieving spasm and pain often fails to achieve satisfactory curative effects. In 1994, we reported that, as found by B-ultrasonography, the gastric frequency of 92% of the children suffering from recurrent abdominal pain after drinking water before breakfast was obviously lower than that of the control group. So far, the systematic reports on the electrogastrograph examination of intermission of such disease before meal and after drinking water and having a meal have rarely been seen. The purpose of this paper is to provide a systematic objective index and basis for the clinical diagnosis and preventive treatment so as to better guide the clinical treatment.

METHODS: The instrument used was EGEG-4D4 4-lead wise gastrointestinal electrograph. The method was to draw 3 lines on the upper abdominal region, *i.e.* a cross line through the middle point in the line connecting the umbilicus and the xiphoid process (Line No.1) and 2 oblique lines connecting the umbilicus and the 2 nipples (Line No.2 and No.3) and found the cross point of the 3 lines, the slightly upper part on the left being the gastric body and the part on the right was the marking point on the body surface of gastric antrum projection. The electrogastriophic variations of the gastric antrum and the gastric body of 50 children suffering from recurrent abnormal

pain with B-ultrasonography in the past were compared with 30 cases of healthy children at the equivalent ages as the control group.

RESULTS: The frequency of the gastric antrum of the 50 cases of children suffering from recurrent abdominal pain, as found by electrogastrogram was: 2.64 ± 0.79 times/min before meal, 2.84 ± 0.64 times/min after drinking water, and 2.77 ± 0.57 times/min after meal; For the 30 cases of healthy children of the control group, 3.12 ± 0.28 times/min before meal, 3.14 ± 0.21 times/min after drinking water, and 3.11 ± 0.16 times/min after meal. The *t*-test shows that the difference between the 2 groups was of significant importance ($t > 3$, $P < 0.01$) while there was no significant difference between the 2 groups in the frequency of the gastric body (before meal, after drinking water and after meal); To compare the amplitude of the gastric antrum and the gastric body between the 2 groups, it was found that there was no significant difference before meal ($t < 2$, $P > 0.05$) and after drinking water and meal, the amplitude of the former was larger than that of the latter and there was a significant difference ($t > 3$, $P < 0.01$).

CONCLUSION: The children suffering from recurrent abdominal pain have trouble in the dynamic function of the gastric antrum, especially in the condition of empty abdomen, which counteracts the inadequate display of electrogastric physiological condition and motor function by B-ultrasonography, X-ray and gastroscope, thus providing an objective index of diagnosis, prevention and treatment, changing the old concept of treatment only according to symptoms and proposing the new idea of applying or adding the dynamics stimulating medicine at intermission.

Key words: Electrogastrogram

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Yang SH, He WH, Xie HF. Electrogastrogram changes of intermission of the recurrent abdominalpain of 50 children. *World J Gastroenterol* 1996; 2(Suppl1): 83 Available from: URL: <http://www.wjgnet.com/1007-9327/full/v2/iSuppl1/83.htm> DOI: <http://dx.doi.org/10.3748/wjg.v2.iSuppl1.83>

E- Editor: Liu WX



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