**Neurogastroenterology/motility posters**

**PTH-035 Assessment of gastric emptying and antral motility in different types of abdominal pain related functional gastrointestinal diseases: a paediatric study**

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**Abstract**

**Introduction** Functional gastrointestinal disorders (FGD) are common among paediatric population. Abdominal pain related FGD are the most common subgroup found, of which irritable bowel syndrome is the most common. The exact mechanism of pain remains unclear in FGD. Visceral hypersensitivity and altered gastrointestinal motility are considered possible causes for abdominal pain and discomfort found in these children.

**Methods** The main aim of this study was to evaluate the gastric emptying and antral motility in children and adolescents with abdominal pain related FGD.

Hundred and fifty-five children referred to the Gastroenterology Research Laboratory who fulfilled Rome III criteria for abdominal pain related FGD (60 (38.5%) males, 4–14 years, mean 8.1 years, SD 2.6 years) and 20 healthy children without gastrointestinal symptoms (8 (40%) males, 4–15 years, mean 8.9 years, SD 2.7 years) were recruited. None had clinical or laboratory evidence of organic diseases. All subjects underwent ultrasonographic assessment of liquid gastric emptying rate (GE) and antral motility, using a previously reported method.

**Results** Gastric motility parameters of children with FGD and controls are presented in the table. GE negatively correlated with the scores obtained for severity of symptoms in functional dyspepsia (FD) (r=−0.67, p<0.001) and functional abdominal pain (FAP) (r=−0.38, p<0.001), but not in irritable bowel syndrome (IBS) (r=−0.16, p=0.29) ([Abstract 035](http://gut.bmj.com/content/59/Suppl_1/A136.3#T1)).

**Gastric motility parameters in children with FGD compared to controls**

| **FGD type** | **Gastric emptying (%) mean (SD)** | **Amplitude (%) mean (SD)** | **Frequency (/3 min) mean (SD)** | **Motility index mean (SD)** |
| --- | --- | --- | --- | --- |
| IBS – Total (n=47) | 41.3 (12.4)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) | 58.6 (15.7)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) | 9.0 (1.1) | 5.3 (1.7)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) |
| IBS-D (n=15) | 41.8 (11.2)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) | 58.6 (9.6)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) | 9.0 (1.0) | 5.3 (1.1)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) |
| IBS-C (n=17) | 45.7 (10.5)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) | 58.7 (19.7)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) | 8.7 (1.0) | 5.1 (1.8)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) |
| IBS-M (n=15) | 39.8 (14.0)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) | 58.6 (16.5)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) | 9.4 (1.4) | 5.6 (2.1)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) |
| FD (n=22) | 44.8 (20.1)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) | 65.1 (21.6)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) | 9.0 (1.2) | 5.8 (1.9)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) |
| AM (n=7) | 42.4 (16.8)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) | 68.1 (18.2)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) | 8.8 (0.9) | 6.1 (1.5)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) |
| FAP (n=79) | 41.4 (18. 4)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) | 58.9 (17.4)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) | 8.5 (1.2)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) | 5.1 (1.8)[\*](http://gut.bmj.com/content/59/Suppl_1/A136.3#fn-1) |
| Controls (n=20) | 66.2 (16.5) | 89 (10.1) | 9.3 (0.8) | 8.3 (1.3) |

* [↵](http://gut.bmj.com/content/59/Suppl_1/A136.3#xref-fn-1-1)**\* p<0.05 compared to controls.**
* **AM, abdominal migraine.**

**Conclusion** GE and antral motility parameters were significantly impaired in children with all types of abdominal pain related FGD. GE negatively correlated with symptoms in FD and FAP. Motility parameters were not significantly different between subtypes of IBS. <http://dx.doi.org/10.1136/gut.2009.209023v>