

# Study on the efficacy of the combined regimen of nifedipine and oryzanol in the clinical treatment of children with functional abdominal pain

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**【Abstract】 : Objective** To study the efficacy of nifedipine and oryzanol in the treatment of functional abdominal pain in children and to explore its clinical applicability. **Methods** A total of 78 children with functional abdominal pain treated in our hospital from October 2013 to September 2014 were selected as the research subjects and randomly divided into the experimental group (n=35) and the control group (n=43). The children in the experimental group were treated with nifedipine combined with oryzanol tablets, while those in the control group were treated with oryzanol tablets. The incidence rate and degree of abdominal pain and other clinical symptoms were observed and recorded to compare the treatment efficiency. **Results** The effective rate was 91.3% in the experimental group and 53.4% in the control group. The clinical efficacy of the experimental group was significantly better than that of the control group. The differences were statistically significant. (P<0.05). **Conclusion** Nifedipine combined with oryzanol tablets has a more significant therapeutic effect on children with functional abdominal pain, which has a synergism and strengthening effect, and is worthy of clinical application.

**【Keywords】** : nifedipine; oryzanol tablets; functional abdominal pain in children

**【Chinese Library Classification Number】** : R256.33

**【Document Identification Code】** : B

The main clinical manifestations of functional abdominal pain in children are abdominal pain, vomiting, nausea, anorexia and abdominal distension<sup>[1]</sup>. The effect of routine treatment is poor, which makes parents and children nervous and anxious, and affects the normal quality of life and learning<sup>[2]</sup>. This paper studied the effect of nifedipine combined with oryzanol tablets in the treatment of children with functional abdominal pain. The report is as follows.

## 1 Information and methodology

### 1.1 General information

A total of 78 children with functional abdominal pain admitted to our hospital from October 2013 to September 2014 were randomly divided into experimental group (n = 35) and control group (n = 43). All children met the following requirements: (1) Abdominal pain occurs once a week and lasts for at least two months; (2) Pain has no specificity and intermittent attacks; (3) mostly umbilical pain, or occur below the sternum, pubic above the place; (4) children with abdominal pain intermittent will be normal<sup>[3]</sup>. In the experimental group, there were 16 males and 19 females, ranging in age from 3 to 12 years, with an average age of (6.2 ± 1.2) years. The course of disease ranged from 0.51 to 3.41 years, with a mean course of (1.41 ± 0.40) years. In the control group, there were 17 males and 26 females, ranging in age from 3 to 1.3 years old, with an average age of (6.4 ± 1.3) years old. The course of disease was 0.52 ~ 3.40 years, and the mean course of disease was (1.39 ± 0.41) years. The two groups were comparable in gender, age, course of disease and other general data, and the difference was not statistically significant. (P>0.05).

### 1.2 Method

The children in the experimental group were treated with oryzanol tablet 10 ~ 20mg/kg, 3 times a day, and Nifedipine 0.3 ~ 0.5mg/kg, 3 times a day. The children in control group were treated with oryzanol tablet 10 ~ 20mg/kg, 3 times a day. The incidence and degree of abdominal pain and other clinical symptoms were observed and recorded in 2 groups. The effective rate was compared after 2 weeks of treatment.

### 1.3 Efficacy criteria

Cure: Abdominal pain disappeared without recurrence within 1 month. Significant effect: the degree of abdominal pain was significantly reduced, the duration of abdominal pain was significantly shortened, and there was no recurrence within 1 month. Effectiveness: Abdominal pain is reduced in severity and duration, with no recurrence within 3 months. No effect: abdominal pain and other symptoms are basically not improved<sup>[4]</sup>. Effective = cure + significant effect + effective.

### 1.4 Statistical methods

The SPSS 18.0 statistical software was used to analyze the data. Counting data were compared using X<sup>2</sup> test. P<0.05 was statistically significant.

## 2 Results

The effective rate of the experimental group was 91.3%, which was significantly higher than 53.4% of the control group, and the difference was statistically significant. (P<0.05)

Comparison of efficacy between the two groups (case)

Group	Number of cases	cure	Effect	Effective	Invalid	Efficiency (%)
Control group	43	10	6	7	20	53.4
Experimental Group	35	16	10	6	3	91.3*

Note: compared with control group\* P<0.05

### 3 Discussion

Functional abdominal pain is caused by a combination of emotional, sensory, cognitive and other factors, often related to psychological factors, visceral sensory hypersensitivity, autonomic nervous dysfunction, gastrointestinal dynamic dysfunction and other factors<sup>[5]</sup>. The pain during the attack is usually spasmodic and colic pain, and the duration is generally no more than 1 ~ 3h. The pain can be relieved by itself. Some patients will have other autonomic or functional symptoms such as palpitation, sweating, nausea, vomiting, etc. The effect of conventional treatment is not significant, which seriously affects the normal quality of life of children. It is of great clinical significance to explore an effective method for the treatment of functional abdominal pain in children.

Oryzanol tablets is an anti-anxiety drug, which has the effect of relieving or correcting endocrine disorder, regulating the function of vegetative nerve, and improving psychoneurosis symptoms<sup>[6]</sup>. Nifedipine is a kind of calcium ion channel blocking agent, which can selectively block the slow channel of calcium ions, thus reducing the intracellular calcium ions to flow in, making the smooth muscle cells of the gastrointestinal tract excitatory contraction coupling and inhibited, thus making the smooth muscle of the gastrointestinal tract diastolic. At the same time, when the sympathetic nerve produces sympathetic impulse, calcium ions enter the sympathetic nerve endings is the necessary condition for the release of norepinephrine. Therefore, nifedipine also has the function of reducing the sympathetic impulse produced by the sympathetic nerve and releasing norepinephrine, and has the effect of anti-sympathetic nerve, thereby inhibiting the contraction of the smooth muscle cells of the gastrointestinal tract and making them diastolic, thus relieving the spasm of the smooth muscle of the gastrointestinal tract and reducing the degree, time and occurrence rate of abdominal pain. In this study, the clinical efficacy of the experimental group was significantly better than that of the control group, indicating that nifedipine combined with oryzanol tablets had a synergistic effect and was more effective in the treatment of functional abdominal pain in children than that of oryzanol alone. It can effectively regulate and improve the symptoms of gastrointestinal autonomic nervous dysfunction, relieve spasm of gastrointestinal smooth muscle, reduce the degree and incidence of functional abdominal pain in children, and improve the effective rate of clinical treatment.

To sum up, the combination of nifedipine and oryzanol tablet has a more significant clinical effect in the treatment of children with functional abdominal pain, and has a synergistic effect, which is worthy of promotion and application.

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