

ORIGINAL ARTICLE

Recurrent Abdominal Pain in Children.

by

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Abstract

A total of 48 children aged between 3 - 12½ years, who had complained of at least three episodes of abdominal pain in a period of longer than 3 months, underwent investigations.

Routine studies included: blood exam, stool and urine analysis and G.I. X-ray series. EEG, IVP and gall bladder study were occasionally performed.

Of the 48 patients studied, 25 (52.1%) were of unknown cause, 11 (22.9%) had emotional disorders, 6 (12.5%) had allergic disorders, 3 (6.3%) had ulcers, 2 (4.2%) had epilepsy and (2.1%) had narrowing of the duodenum.

Treatment consisted mostly of psychological approach supported by symptomatic therapy (antacid + fentonium bromide = ulcesium). The results of treatment were in general satisfactory.

Upper G.I. studies appeared still to be of value in children with R.A.P. Besides for detecting organic causes, it is also of importance as part of the psychological approach to convince both the parents and the child that no real organic disease actually existed.

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Introduction

Any physician involved in the routine care of children must soon become impressed by the number of children who have recurrent abdominal pain as a major symptom.

A child is said to have the syndrome of recurrent abdominal pain if at least three attacks of pain, severe enough to affect activity, have recurred during a period longer than 3 months (Apley 1975, Roy et al., 1975).

In the course of the nineteenth century it had become an almost unchallenged axiom that the study of disease could be approached from two completely different points of view: the organic approach, or the psychological attitude

Modern psychosomatics has demonstrated that this distinction is not in harmony with the observed facts: emotional processes can produce and influence organic illness, organic disturbances can produce mental disease. However, the differentiation between primarily organic and non-organic disorder remains one of the basic trends of medical practice. No clinician can afford to overlook the diagnosis of organic lesions, which are often and quickly curable. (Apley 1975).

It is therefore that for the purpose of discussion, possible cause of R.A.P. are grouped under the headings of obstruction, reflex stimulation and miscellaneous.

Much difficulties are found in finding the underlying cause of R.A.P. Clinical features may vary from

one patient to the other and occasionally from one episode to the next even in the same child. Like other medical problems, that of R.A.P. has many facets, and in a large number of investigations attention has been focused on one to the virtual exclusion of the remainder.

To the knowledge of the authors, R.A.P. has never been fully discussed in the Radiological point of view.

Material and methods.

A complete study was able to be carried out on a total of 48 children, aged between 3 - 12½ years with an average of 5.9 years who suffered from Recurrent Abdominal Pain (R.A.P.)

They had complained of at least three episodes of abdominal pain in a period of longer than 3 months.

Routine studies included: complete blood examination, stool examination for ova and parasite, stool testing for sugar and fat malabsorption, urine analysis and G.I. X-ray studies.

Electroencephalogram, intravenous pyelogram and gallbladder study were occasionally performed.

The diagnosis of food allergy was based on food elimination and challenge study. The diagnosis of emotional disturbances was aided by the identification of definite psychologic or emotional abnormalities and confirmed by a psychiatrist.

Family history in the form of interview was taken to provide solid information pertaining to the origin of the pain.

Sort of treatments depend on the underlying cause of the disease. Psychological approach (reassurance and explanation) and symptomatic treatment (antacid + fentonium bramide*) were

the most often given therapy. Dietetical manipulations were described for patients with definite allergy. Epileptic diagnosed children were sent to a psychiatrist for further treatment.

Result.

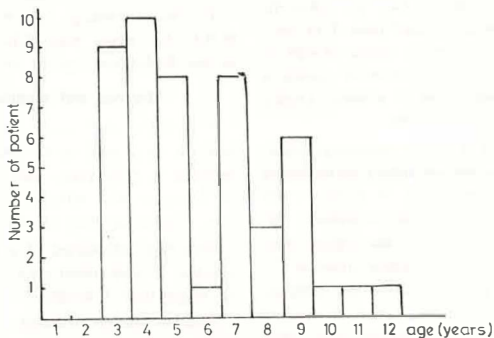


FIG. 1: Age distribution

TABLE 1: General classification of possible cause.

| | Number of patients | Age (Years) | |
|--------------------------|--------------------|---------------|----------|
| | | mean | sange |
| Unknown. | 25 (52.1%) | 5.9 | 3 — 12.5 |
| Obstruction. | | | |
| — narrowing of duodenum. | 1 (2.1%) | 5 | — |
| Reflex stimulation. | | | |
| — ulcer. | 3 (6.3%) | 5.3 | 3 — 8.5 |
| — epilepsy. | 2 (4.2%) | 3.5 | — |
| — emotional disorders. | 11 (22.9%) | 6.6 | 3 — 9.4 |
| allergy. | 6 (12.5%) | 5.5 | 3 — 8 |
| Total : 48 (100%) | | | |

* Ulcesium (Zombon)

TABLE 2: *Radiological features in 48 patients.*

| | |
|-------------------------------------|----|
| No abnormalities. | 29 |
| Spasm of the pylorus. | 5 |
| Gastritis. | 3 |
| Ulcer. | 3 |
| Gastroduodenitis. | 2 |
| Duodenitis. | 1 |
| Jejunitis. | 1 |
| Cascade stomach. | 1 |
| Cascade stomach + gastritis. | 1 |
| Narrowing of the duodenum. | 1 |
| Filling defect in the ileal region. | 1 |

TABLE 3: *Result of Barium meal studies clinically determined causes.*

| | Cause unknown | Emotional disturb | Allergy | Epilepsy |
|-----------------------|---------------|-------------------|---------|----------|
| No abnormalities. | 15 | 8 | 4 | 2 |
| Gastritis. | 2 | 1 | — | — |
| Gastroduodenitis. | 2 | — | — | — |
| Duodenitis. | — | 1 | — | — |
| Jejunitis. | — | — | 1 | — |
| Pylorus spasm. | 4 | — | 1 | — |
| Cascade stomach. | 1 | — | — | — |
| Cascade + gastritis. | 1 | — | — | — |
| Filling defect ileum. | — | 1 | — | — |

Most of the cause of R.A.P. were of unknown origin (52.1 emotional disorders (22.9%). Allergic disorders and ulcer constituted resp 12.5% and 6.3% of the patients studied.

Treatment consisted mostly of psychological approach, supported by symptomatic therapy (antacid + fentonium bromide = ulcesium). In the R.A.P. of the

unknown cause group, the average duration of illness after treatment was 4.7 months (range : 1 month - 3 years).

In the group of emotional disturbed patients, the average duration of illness varied between 1-5 months with mean of 2.2 months.

In patients with allergy, ulcer and epilepsy, clinical recovery occurred resp.

after 1 month - 5 years (mean : 4 - 3 months), 1 - 3 months (mean : 2 months) and 3 months — 1 year (mean : 7, 5 months).

Discussion

Recurrent Abdominal Pain is a common complaint in England, as elsewhere. It was found that one in nine schoolage children has this disorder (Apley, 1975).

The large number of cases further compounds the already difficult problem of diagnosis and treatment of any individual case of recurrent abdominal pain. Frequently, coping with of emotional origin is not an easy task for most physicians trained in diagnosis and treatment of organic disease. Except for its occurrence in the rare child in whom there is an underlying organic cause, R.A.P. usually signifies a disorder of the whole child probably the family as well (Roy et al., 1975).

In the present study, we are impressed by the findings that the cause of R.A.P. were mostly unrecognized or of emotional disturbances making a total of 75% of the patients studied.

Whether both unrecognized and emotional disturbed cases represented the same disease entity remained to be elucidated.

The etiology of the syndrome in the present series was mostly not completely understood. The concept that psychogenic factors are triggering events in the production of the pain is generally accepted. However, it is not clear whether this

response reflects an genetic or an acquired susceptibility, or both in the child.

Though the gastrointestinal tract seems to be the target organ receiving the brunt of emotional input, a generalized disturbance of the autonomic disturbance of the autonomic system may exist (Roy et al., 1975).

Current paediatric published reports have linkened the clinical features of this entity to the functional gastrointestinal disorder of adults called the irritable colon syndrome.

There was a higher incidence of abdominal pain among children of parents who were complaining of abdominal discomfort than among children whose parents were without symptoms (Christensen and Mortensen 1975).

It has been generally held that the prognosis for children with recurrent abdominal pain is good, though this point of view is not supported by the few published follow up studies (Christensen and Mortensen 1975).

Although the best therapy remains to be settled, the conventional reassurance and symptomatic treatment consisting of antacid and fentonium bromide (= ulcassium) seemed to yield satisfactory results, (Wilmana et al., 1977).

Patients with R.A.P. of unknown cause were free of symptoms after an average of 4.7 months treatment (range : 1 month - 3 years), while those of emotional disturbances were free of symptoms on an average of 2.2 month after treatment (range : 1 month - 5 months).

As experienced by Roy et al., 1975, with proper support and treatment, most of the children did quite well, and the frequency of pain episodes diminished.

The results of treatment in the present series did not however absolutely indicate that the children will be subsequently entirely free of symptoms during the rest of their whole life. Thirty six percent were still suffering from abdominal pain 10 years after discharge from the hospital (Christensen and Mortensen 1975).

Longterm follow up is thus necessary before proper conclusion of therapeutic effect could be made.

Nevertheless, in the present study, psychological approach consisting of reassurance and explanation to both parents and child together with symptomatic treatment (antacid + fentonium bromide = ulcosium) appeared to exert satisfactory results within quite a short time. It is hoped that the children will be entirely free of symptoms even long after discontinuing medical treatment.

G.I. X-ray studies are regarded as important for both identifying organic causes and psychological approach to convince both the parents and child that no real organic disease is present.

As many studies have shown, not more than about one patient in 20 with recurrent abdominal pain has a causative organic disorder (Apley, 1962).

This is rather in contrast with the present study, in which as many as 25% of children with R.A.P. had possible organic cause. The difference was however impossible to be elucidated.

Allergy constituted for 12.5% of children with R.A.P. in the present study. Children with gastrointestinal allergy, possibly associated with food sensitivity may suffer from abdominal pains (Apley, 1975). Surprisingly enough that in Apley series (1975) none of his patients showed any evidence of an increased tendency to allergic disorders or to food sensitivity.

We found when in 6.25% of our patients. In Apley Hospital series (100 patients) ulcer was demonstrated radiologically in only one child. They diagnosed duodenal ulcer in six of 95 children with recurrent abdominal pain (6.3%) which is in accordance with our findings (6.25%).

Pptic ulcer is less common in children than in adults even when all children with complaints of recurrent abdominal pain are investigated radiologically (Williams and Ahmed 1977). Williams and Ahmed (1977) considered that most of the ulcers in childhood were primary and most of them were in the duodenum.

Ten out of his 35 patients presented with abdominal pain. Now that endoscopy is being available for precise determination, the prevalence of ulcers in paediatric age group may be increasing. Patients with EEG abnormalities and family history of epilepsy constituted

about 4.2% of our series of patients with R.A.P.

In all children with abnormal EEG, symptoms of R.A.P. ceased or was considerably improved when controlled by drug therapy.

In some respects there is considerable difference of opinion about the signifi-

cance of EEG findings. EEG variations should not be uncritically accepted as indicating a cause of abdominal pain. However, evidence from selected material may suggest that epilepsy does not uncommonly play a part in the pathogenesis of isolated attacks of abdominal pain (Apley, 1975).

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