Hypertrophy of the appendices epiploicae and lipomatous polyposis of the colon

VALENTINE A. J. SWAIN, WINIFRED F. YOUNG, AND ELIZABETH M. PRINGLE

From the Queen Elizabeth Hospital for Children, London

CASE REPORT

J.W. (male) was born one month post mature of an otherwise normal pregnancy weighing 2.7 kg. After breast feeding for three months he gained only 0.9 kg and after changing to a full-cream, dried-milk mixture he continued to gain weight very slowly. At 5 months he started to vomit and a hiatus hernia being suspected he was given thickened feeds and placed in a 'hiatus' chair. Although he still looked wasted his weight had reached 7.8 kg (above the 10th percentile). Subsequently, he again put on weight slowly, in spite of his mother's statement that he had an enormous appetite which could never be satisfied, in comparison with the five older children in the family.

At 2 years 3 months he was admitted to hospital for failure to thrive, presenting as a pale, red-haired cheerful boy with marked wasting but weighing 10.5 kg (above the third percentile). He was unable to walk, and spoke very little, and had abdominal distension which had been increasing for the previous nine months. He had had bouts of diarrhoea for three months and his stools were still dark and loose. There had been no alimentary disturbance affecting any of the rest of the family.

Investigations showed that fat was 42% of the dried faeces. However, one month later the daily excretion of fat was estimated to be only 2.6 g. Urinary xylose excretion was normal. High amounts of trypsin were present in the stools excluding pancreatic insufficiency. Except for a haemoglobin level of 9.8 g per 100 ml all other investigations, including serum electrophoresis and urine chromatography, gave normal results.

He was given a gluten-free diet and although he gained weight at first, this gain was not sustained, and his nutrition was still very poor at 4 years. His mother agreed that there had been lapses in the diet. It was therefore decided to examine the jejunal mucosa for the changes typical of gluten enteropathy and he was transferred to the Queen Elizabeth Hospital for a biopsy to be obtained. Figure 1 shows that J.W. was wasted and had abdominal distension at this time. However, his weight and height were both approximately the same percentile. Two lipomata were noted, one about 5 cm in diameter in the right axilla, and another about 7.5 cm × 5 cm in the right lumbar region. Microscopical examination of the jejunal mucosa and its disaccharidase levels were normal. In view of the recent consumption of gluten, gluten enteropathy was thus excluded.

Abdominal palpation was still negative but a straight radiograph of the abdomen showed a diffuse opacity in the anterior abdominal cavity displacing the bowel shadows. As the child contracted infective hepatitis an operation was not performed until two months later (19 October 1964) following a severe attack of abdominal colic lasting one hour. At laparotomy, along the whole length of the colon the appendices epiploicae were grossly enlarged enveloping most of its surface, and those attached to the loop of pelvic colon presented as a bulky mass which was lightly adherent to the lateral abdominal wall. The rest of the contents of the abdomen appeared normal; the small intestine was of normal calibre and appearance (Fig. 2). The fat of the omentum and that of the mesentery of the bowel was normally distributed. One of the appendices epiploicae (3 × 1 × 1 cm) was removed.

FIG. 1. J.W., aged 4 years 1 month.
for microscopy and was found to be normal. Following
the operation he had no further attacks of abdominal
colic.
A barium meal showed no sign of intrinsic small bowel
disease, but the small intestine was seen to be misplaced
upwards and to the right, presumably by the masses of
fatty appendices epiploicae of the pelvic colon; however, a
barium enema showed that the mucosa of the large bowel
was polypoid throughout especially in the pelvic colon
(Fig. 3). Sigmoidoscopy revealed a uniform 'polyposis'
above the anorectal line and the mucosal surface was
smooth without signs of ulceration. It was demonstrated
microscopically that the polypi resulted from depositions
of fatty tissue in the mucosa and submucosa.
For two months while in hospital after the laparotomy
he was given selected easily assimilable foods to provide
high calories and protein but a restricted fat intake,
together with iron and vitamin supplements. At home he
remained well, active, and cheerful with a good appetite,
but only gained weight slowly. However, his mother had
partially altered his food back to the more bulky family
meals, but had continued to give the supplements.
At 6 years 4 months he was still very thin and both
lipomata had regressed. His abdomen was less distended,
and his stools were said to be normal, but his weight and
height remained on the third percentile. On an approxi-
mately normal fat intake, only 1.7 g fat and 14.1 g dry
weight were excreted in the faeces daily, and there seemed
no good reason for advising a stricter diet. Aged 8 years
he was fit and doing well at school. He was not anaemic
and his weight was on the third percentile while his
height had nearly reached the 10th percentile, and his
skeletal age was not significantly retarded (7 years).

DISCUSSION
In 1957, a similar case to that described here was
reported from the Mayo Clinic (Godenne, Burke,
and Hallenbeck, 1957). Their case of 'epiploic
lipomatosis' was a 3-year-old boy with a protuberant
abdomen which suggested coeliac disease or mesen-
teric cyst. The stools contained excess of fat, and
small amounts of microscopic oil and fatty acid
crystals. A radiograph showed that the small
intestine was situated in the right upper abdominal
quadrant, suggesting displacement by a lesion such
as an internal hernia or intraperitoneal cyst. At
operation huge fatty tags were found on the splenic
flexure and descending colon. Though radiologically
the colon was in normal position the mucosal lining
was not demonstrated. This boy made a good
recovery and at the age of 11 years he was 'com-
pletely normal except for his protuberant abdomen',
he was 'as vigorous and active as anyone else his age,
and doing well at school'. His physiological systems
all seemed to be functioning normally, but he had a
'craving for chocolate and salt' (Lynn, 1964). In
our case (J.W.) enlargement of the appendices
epiploicae involved the whole length of the colon;
also the mucosal lining had an unusual 'polypoid'
appearance radiologically and the discovery of
collections of fat in the mucosa and submucosa
microscopically are two additional findings to those
described in the Mayo Clinic patient.
As regards the terminology of this condition, 'epiploic lipomatosis' is an attractive title but may give the wrong impression that the omentum (epiploon) is involved. It is suggested that a 'hypertrophy of the appendices epiploicae' more accurately describes the massive enlargement of the fatty 'dog ears' which is characteristic of this disease.

As the history suggests that the condition was present at birth and there has been no evidence of subsequent disproportionate growth, it is probable that the intestinal condition represents an adipose hamartoma. This view is supported by the fact that the lipomata of the back and axilla have not shown any sign of progression and may even have regressed. There was no family history of hamartomata.

Without evidence of persisting malabsorption it is difficult to explain the child's poor weight record. The massive hypertrophy of the fatty tags on the surface of the colon can hardly account for any digestive upset except by the mechanical effect of its great bulk. It is more likely that the changes in the mucosa and submucosal lining could play a part. The short-term prognosis appears good, except that the abdomen will remain prominent.

**SUMMARY**

The unique case of a boy with massive hypertrophy of the appendices epiploicae of the whole colon, and underlying the mucosa and submucosa a polypoid appearance due to a collection of fatty tissue, has been described.

He presented with abdominal distension and failure to thrive and variable alimentary symptoms. Coeliac disease was suspected and disproved. The diagnosis was made at operation. The prognosis seems to be favourable. It is suggested that the condition represents an adipose hamartoma.

We are indebted to Dr J. Luder for referring this interesting case and for the early hospital records; to Dr Basil Morson for advice on the histological appearances; to Dr N. E. France and Dr E. Ann Burgess for their help in the pathology and enzyme studies; to Dr C. J. Hodson and Dr Elizabeth M. Haworth for their opinions on the radiological findings; to the N.E. Metropolitan Regional Hospital Board for a grant to E.M.P. to assist with research on malabsorption syndromes.

**REFERENCES**


Hypertrophy of the appendices epiploicae and lipomatous polyposis of the colon.

V A Swain, W F Young and E M Pringle

Gut 1969 10: 587-589
doi: 10.1136/gut.10.7.587

Updated information and services can be found at:
http://gut.bmj.com/content/10/7/587.citation

Email alerting service

These include:
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Topic Collections

Articles on similar topics can be found in the following collections

- Coeliac disease (537)
- Pancreas and biliary tract (1949)
- Colon cancer (1547)
- Diarrhoea (663)

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/