

## UNUSUAL CAUSE OF INCARCERATED HERNIAS WITH RADIOLOGICAL DIAGNOSIS\*

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Two cases of abdominal hernia are presented, one umbilical, the other inguinal. Both cases were irreducible because of incarceration due to sand. The diagnosis was made radiologically and the findings were confirmed at surgery.

### CASE REPORTS

#### *Case 1*

A Coloured female child aged 15 months had had an umbilical hernia since birth. It had always been easily reducible until the present admission, when it presented as

a hard umbilical swelling. There had been no bowel action for the previous 24 hours. X-ray showed sand in the umbilical hernia and an early small-bowel obstruction (Fig. 1).

At operation the hernia was reduced and it was found that the bowel was viable. The sac was excised and a Mayo repair was performed.

#### *Case 2*

A Coloured male child, aged 19 months, presented with a 4-day history of right scrotal swelling, with vomiting and

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Fig. 1. There is sand in the umbilical hernia, and also in the stomach and small bowel, with some distension of the small-bowel loops due to early obstruction.

constipation for 24 hours. There was fluid in the right scrotum and a rock-hard swelling at the level of the superficial inguinal ring. In the differential diagnosis tuberculosis was considered, but the X-rays showed a right inguinal hernia containing sand (Figs. 2 and 3). The hernia was easily reduced at surgery and a herniotomy was performed.



Fig. 2. Right inguinal hernia containing sand, which is also present in the rectum and descending colon.



Fig. 3. Sand shown in the incarcerated right inguinal hernia.

#### DISCUSSION

Pica may be described as a perversion of appetite, with the persistent and purposeful ingestion of substances of no apparent nutritional value. The repeated and prolonged nature of the condition differentiates it from the occasional swallowing of inedible material by small children in early life.

Cooper<sup>1</sup> has shown an association between pica and malnutrition, anaemia, mental deficiency and infestation with intestinal parasites. Lankowsky<sup>2</sup> has also shown in his cases that the ingestion of sand was associated with an iron-deficiency anaemia, and could be cured by correcting the anaemia. Both our cases showed low haemoglobin levels; the first case had a haemoglobin of 7 G/100 ml. and needed pre-operative transfusion, the second had a haemoglobin of 10 G/100 ml.

Children with pica ingest a wide variety of substances, most of them being inert and not causing a disturbance of health. Radiologically these substances may be evident in the gut if they are radio-opaque. Potential dangers are lead poisoning due to ingestion of paint; intestinal obstruction or perforation caused by the ingestion of gravel, stone or sand; and the complications of worm infestation which is frequently found in children with pica.

#### SUMMARY

Two cases of strangulated hernia due to ingestion of sand, which were diagnosed radiologically, are presented. The ingestion of sand is associated with an iron-deficiency anaemia.

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#### REFERENCES

1. Cooper, M. (1957): *Pica*. Springfield, Ill.: Charles C. Thomas.
2. Lankowsky, P. (1959): M.D. thesis, University of Cape Town.