Strangulated umbilical hernia in a child

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Summary

We describe a case of strangulated umbilical hernia in a girl aged 5 years. She presented with an acute inflammatory lesion at the umbilicus which was initially thought to be due to cellulitis with possible abscess formation. Exploration revealed an umbilical hernia containing necrotic greater omentum.

KEY WORDS: umbilical hernia, strangulated.

Introduction

Umbilical hernias are common in infants and, in the majority, spontaneous closure occurs by the age of 4 or 5 years. The incidence of umbilical hernia in Caucasian infants is about 5-10%, and is up to 10 times higher in negro infants (Shaw, 1979). In low birth-weight infants, the incidence may be as high as 80% (Nohr, Rosenfield and Oh, 1977), but spontaneous closure occurs by the end of the first year. Incarceration is rare in childhood, occurring in one per 1500 cases (Mestel and Burns, 1963), and strangulation is even less frequent. However, with the advent of improved neonatal care, complications may become more frequent in the future. Although most authors have seen occasional examples of strangulation, only 7 cases have been reported. These were collected and reviewed by Need (1972). We add a further case report to the literature.

Case report

A girl aged 5 years was admitted with a 4-day history of mild central abdominal pain and nausea. Clinical examination revealed an obese, mentally retarded child. There was an area of erythema around the umbilicus 10 cm in diameter with marked cellulitis at the centre. There was no history of an umbilical hernia having been seen previously. Initially she was treated with oral ampicillin and cloxacillin for 24 hr but without improvement.

Exploration was therefore undertaken and a strangulated umbilical hernia was found containing gangrenous omentum. The strangulated omentum was excised and the hernia repaired. Postoperatively, she made an uneventful recovery.

Discussion

Blumberg (1980) suggested there are 2 separate types of hernia at the umbilicus, the most common being weakness of the fascia transversalis giving rise to a direct hernia. The second comprises an oblique channel extending between the condensation of supraumbilical and infraumbilical fascias and lying between the medial margins of the rectus muscles. He suggested that the latter type is an acquired lesion and unlikely to resolve spontaneously, but did not support his description by any dissection studies. However, there is no way in which the two types described by Blumberg can be distinguished clinically. He therefore recommended that all cases be observed to 3 years of age and then the persistent cases be operated upon. However, other studies have shown that even those persisting to the age of 5 years have a 50% chance of resolution by the age of 11 years (Hall, Roberts and Charney, 1981).

Probably the commonest symptom from an umbilical hernia, though not well described, is pain from entrapment of a small piece of greater omentum when the defect has almost closed. The hernia is small and usually easily reduced, presenting in this way between the ages of 5 and 15 years, and requires surgery.

True umbilical hernias need to be distinguished from paraumbilical hernias which are much less common in children. The latter can be identified because the margin of the defect is elliptical in the transverse plane. Paraumbilical hernias are unlikely to resolve spontaneously.

Because complications of umbilical hernias are so infrequent, we would agree with not operating in most cases, observing them to the age of about 10 years. However, social pressure, particularly when

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the child goes to school, may demand earlier intervention.

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