CASE REPORT

A surprising content of congenital hernia: complete splenogonadal fusion band

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SUMMARY

Splenogonadal fusion is a rare congenital anomaly. We present the case of a 6-year-old boy who presented with a left inguinoscrotal swelling. With a clinical diagnosis of left congenital inguinal hernia the patient was taken up for explorative laparotomy where a transperitoneal band was noted adherent to the left testis. Biopsy revealed normal splenic tissue. Postoperatively the boy was imaged and a diagnosis of splenogonadal fusion was made. This article illustrates the imaging features of this rare anomaly.

BACKGROUND

Splenogonadal fusion is a rare congenital anomaly usually presenting as an inguinal hernia or testicular mass. Less than 175 cases have been reported until now. The diagnosis is usually made on the operating table. A prior knowledge of this condition with adequate imaging and awareness avoids orchidectomy.

CASE PRESENTATION

A 6-year-old boy presented with inguinoscrotal swelling since 18 months of age. Swelling was painless and did not change in size on straining or lying down. With a clinical diagnosis of left congenital inguinal hernia he underwent an elective inguinal exploration where an elongated, purplish-red, fleshy band of tissue was found inside the sac, extending from the upper pole of testis transperitoneally towards the spleen.

A biopsy was taken from this tissue and sent for histopathological analysis.

INVESTIGATIONS

Biochemical and haematological investigations were normal. The biopsy taken during the surgical exploration revealed normal splenic tissue on histopathology.

Ultrasound performed in the postoperative period showed a band of splenic tissue extending

Figure 1 Ultrasound—tubular splenic parenchyma (arrows) is seen extending from the inferior margin of the spleen towards the left iliac fossa (A). At the left iliac fossa it (arrows) is seen continuing towards the left inguinoscrotal region (B and C). The protuberant splenic parenchyma is seen to derive blood supply from the splenic vessels (D).

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Figure 2 MRI—axial T2 high-resolution sequences at the level of (A) hepatic hilum—spleen (*) seen normal in location and intensity; (B) iliac crest—round solid lesion (*) isointense with splenic parenchyma seen in the left iliac fossa; (C) suprainguinal region—tubular lesion (*) isointense to spleen is seen projecting towards left inguinal region.

from the left hypochondrium towards the left inguinal region (figure 1A–C). On colour Doppler, splenic vessels were seen extending into this band (figure 1D).

MRI T2-weighted fat suppressed axial (figure 2A–C) and sagittal (figure 3A–C) sections showed tissue extending from the spleen to the upper pole of testis bearing signal intensity to that of the splenic tissue.

DIFFERENTIAL DIAGNOSIS

Inguinoscrotal swellings extend from the scrotum to the inguinal region and include:

- ▶ Inguinal hernias
- ▶ Congenital hydroceles
- ▶ Varicoceles
- ▶ Cord swelling

TREATMENT

The connecting band was sectioned and orchidopexy of the left testicle was performed.

OUTCOME AND FOLLOW-UP

Postoperative period was uneventful and the boy was discharged after 72 h.

DISCUSSION

For the first time in 1883 this condition was accounted by a German pathologist Eugen Bostroem.¹

Classically, splenogonadal fusion is classified into a continuous type which depicts a connection between the spleen and the gonad as well as a discontinuous type which may demonstrate an ectopic focus of splenic tissue attached to the gonad.

Developmentally, there is an association between the splenic and gonadal tissue.² The developing gonadal and splenic anlage lie in close proximity during the first trimester during which fusion occurs between the dorsal mesogastrium and the left posterior peritoneum.

When the gonadal anlage migrates to the pelvis, carrying with it a band of splenic or fibrous tissue it contributes to the continuous type. The discontinuous type occurs when the gonad migrates with some splenic tissue attached to it; however, a normal single spleen is noted in the left hypochondrium.³

Figure 3 MRI—sagittal T2 high-resolution sequence shows a roughly tubular lesion (*) isointense to the spleen which is seen descending from the inferior margin of the spleen towards the left iliac fossa (A–C). Thin vertical flow voids (arrow) are seen within the lesion (A).

Clinically, it is challenging to diagnose SGF as it closely mimics inguinoscrotal swelling. Sometimes the continuous type may resemble an undescended testis while the discontinuous types are known to resemble testicular malignancy.⁴

Though most commonly associated with cryptorchidism associations with other malformations like cleft palate, micrognathia, cardiac anomalies, spinal anomalies are not uncommon.⁵

The 99mTc sulfur colloid scan may depict track of activity extending from the spleen to the left scrotum.⁶

Learning points

- ▶ Splenogonadal fusion is a rare congenital malformation and may be associated with other malformations like cleft palate, micrognathia, cardiac anomalies, spinal anomalies, etc.
- ▶ Consideration of this differential preoperatively may avoid more invasive surgery and aid in the conservation of the testis.
- ▶ Imaging in suspected cases may aid in the possible detection and confirmation of such rare anomalies.

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