

## Spleno-Gonadal Fusion Mimics Testicular Neoplasm on Ultrasound

Anuradha Chandramohan\*, Anish Krishna and Ramani Kumar

Department of Radiology, Christian Medical College, Vellore, Tamil Nadu, India

\*Corresponding author: Anuradha Chandramohan, Department of Radiology, Christian Medical College, Vellore, Tamil Nadu, India, Tel: 91416 2283012; E-mail: anuradhachandramohan@gmail.com

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### Abstract

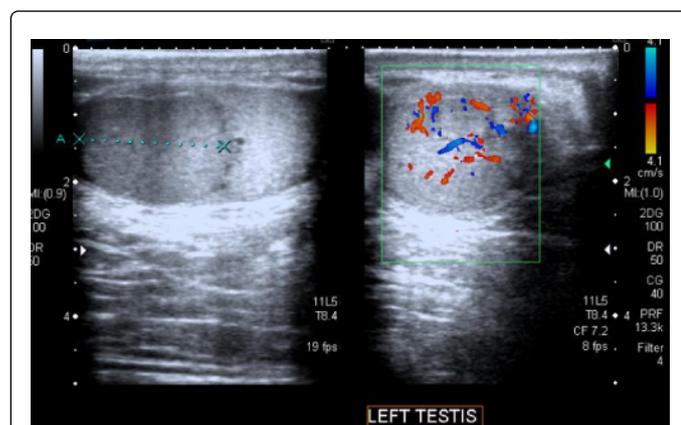
We report case of intra testicular spleno-gonadal fusion which was detected on routine ultrasound of the scrotum performed for the work up of infertility. We discuss features which should alert urologists to consider a benign entity such as spleno-gonadal fusion.

**Keywords:** Spleno-gonadal fusion; Ultrasound; Testis

### Report

A 33-year-old male patient had an ultrasound of the scrotum while being evaluated for primary infertility. He was a known hypertensive, diabetic and dyslipidaemia. He had no history of undescended testis or trauma. There was no history of loss of appetite or weight loss. Ultrasound revealed a single well-defined homogeneous hypo echoic lesion in the upper pole of left testes. There were no cystic changes or calcification within the lesion. Lesion made acute angle of contact with rest of the testis and there was mild internal vascularity (Figure 1). A right testis was normal. In addition there was small hydrocele in both sides. Ultrasound showed no varicocele on either side. Tumour markers such as beta-HCG (beta-human chorionic gonadotropin) and AFP (alpha feto protein) were negative. LDH (lactate dehydrogenase) levels were normal [1].

Since ultrasound findings were suggestive of testicular neoplasm, patient underwent left sided high inguinal orchiectomy. Intra-operatively, a bluish colored firm mass was noted in the superior pole of left testes. Epididymis and the cord structures were normal.

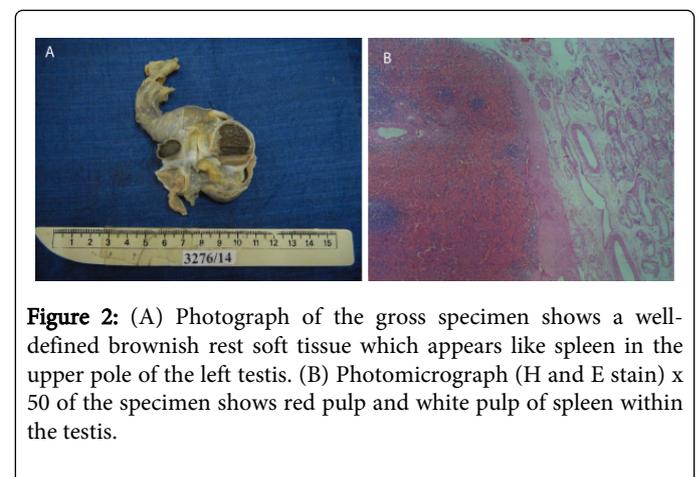


**Figure 1:** Ultrasound of the scrotum showing a well-defined, oval, homogeneous, mildly hypoechoic and vascular focal lesion in the left testis.

Histopathological examination revealed accessory splenic tissue in the left testis (Figure 2) and features were in keeping with spleno-gonadal fusion (SGF).

The close proximity between the splenic primordium and the structures derived from the mesonephric ridge during early (5th to 8th week) gestation before the descent of the gonads may facilitate fusion between these structures. The splenic rests migrate along with the descending gonad. More than 95% of SGF are left sided and majority occurs in males. Patients with SGF most commonly present in childhood and adolescence with inguinal hernia or cryptorchidism [2].

SGF are of two types – the continuous and the discontinuous types. While there is a cord like structure bridging intra-abdominal spleen and the gonadal structure in a continuous type, there is no such connection in discontinuous type. There is an ectopic splenic tissue which is either intra-testicular or paratesticular in the later type. While the continuous type is associated many other anomalies like limb hypoplasia, micrognathia, cardiac defects, palatal defects, cryptorchidism, inguinal hernia and anal defects, there are no such associations in the discontinuous type. Primary infertility is rare in these patients and occurs when there is associated undescended testis. Our patient had discontinuous type of SGF and splenic tissue was intra-testicular. He had normal right testis and the exact cause for infertility could not be found in our patient [3].



**Figure 2:** (A) Photograph of the gross specimen shows a well-defined brownish rest soft tissue which appears like spleen in the upper pole of the left testis. (B) Photomicrograph (H and E stain) x 50 of the specimen shows red pulp and white pulp of spleen within the testis.

It is difficult to preoperatively arrive at a diagnosis of SGF. However, we present this case to emphasize the fact that in patients with incidentally detected, well defined and homogeneous focal lesions in the testis on ultrasound, radiologist should alert the possible benign nature of the lesion. This may help the urologist choose a testis-sparing surgical approach, even if definite diagnosis of SGF may not be possible. Alternatively, the treating urologist may send the specimen for frozen sections before proceeding to orchiectomy in such cases [4].

## References

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