Background

Polyorchidism or supernumerary testis means more than two testes. It is very rare and to the best of our knowledge, there have been only about 200 cases reported. In this case report we want to present radiological features and assessment of a patient with four testicles.

Case Report

A 40-year-old man admitted to the urology out-patient department with a complaint of a mass in the left scrotum. There was no remarkable urological history except for the mass. The patient was married and had two children, thus there was no infertility condition. The urological physical examination was unremarkable, except for the mass. After physical examination the patient was referred to the radiology clinic. Testis ultrasonography (USG), color doppler ultrasonography (CDUSG) and pelvic magnetic resonance imaging (MRI) were performed.

USG revealed two mass lesions in the left scrotum. One of them was in the back of the penis on the left side (Lesion 2). The parenchymal echogenicity of those lesions was similar to that of normal testis parenchyma (Figure 1), except for scattered macro- and microlithiasis foci. Both lesions were well circumscribed. The size of lesion 1 was 35×24×14 mm, and lesion 2 was 22×10×10 mm. The lesions did not show any significant or pathological vascularity in CDUSG (Figure 2). The vascularity of the lesions was similar to the normal testis parenchyma. The MRI might not provide us with additional information to USG or CDUSG, thus it is not necessary to perform it if there is no suspicion of malignancy.

Discussion

Polyorchidism was first described by Blasisus in 1670 in an autopsy material where it was found incidentally. The first histological description was made by Ahlfeld in 1880,
and the first clinical case was reported on by Lane in 1895 [1–5]. The etiology of polyorchidism is not clear but could be related with embryological period [2,6].

Extra testicles can be seen in different regions. The most common region is the scrotum. The extra testis is usually seen on the left side. Three testes (triorchidism) is the most common form. A total of 6 cases with 4 testes have been reported so far [7], and our case is the seventh one.

USG and CDUSG constitute a quick, noninvasive and cheap method to evaluate the mass pathologies. USG is easily available and well tolerated by the patients, unlike MRI. In our case report, the USG and CDUSG features of both lesions were similar to those of normal testicular parenchyma. After USG and CDUSG, our diagnosis was polyorchidism. To support the diagnosis, we performed MRI after USG. The MRI images of the lesions were similar with those of normal testis parenchyma in all sequences. Actually, USD and CDUSG were enough to make the final diagnosis. There is much controversy about the necessity of MRI in polyorchidism. Some papers report that MRI is not required in the absence of suspicion [7], while other authors suggest to perform MRI in all polyorchidism cases [1,8]. In the meta analysis of Bergholz USG was the most common radiological modality and only a few of polyorchidism lesions underwent MRI. In those lesions, MRI did not give any additional information to USG [7].

Conclusions
If the vascularity and echogenicity of the scrotal mass is similar to the normal testis parenchyma, multitestis should be considered. MRI might not present additional information to USG and CDUSG, thus it is not necessary to perform it if there is no suspicion of malignancy.

Conflict of interest
There is no conflict of interest and funding concerning this paper.

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