Synchronous bilateral testicular seminoma in an adult patient with bilateral cryptorchidism: A case report and literature review

Seminoma testicular bilateral sincrónico en un paciente adulto con criptorquidia bilateral: reporte de un caso y revisión de la literatura

To the Editor,

Testicular cancer is the most common malignancy in males aged 15-35 years of age[1], but it is also one of the malignancies with the highest cure rate and for which a larger therapeutic arsenal is available. Germ cell tumors represent 95% of these testicular tumors[2], are bilateral in 1-4% of cases and occur synchronously in less than 25%[3]. Therefore, the latter are very rare entities, which is the reason why we report the following case.

A 44-year-old male patient with a history of Down's syndrome and untreated bilateral cryptorchidism, seen for a condition starting three days before consisting of an asymptomatic enlargement in the left inguinal region, which was noted by his relatives.

Physical examination showed an enlargement in the left inguinal region, painful to touch, of stony hard consistency, freely mobile, euthermic, with a hypotrophic and empty scrotum.

Inguinoscrotal ultrasound revealed a heterogeneous mass with multiple punctiform calcifications in the left inguinal region, resulting in a left testicle volume of 99 cc (Fig. 1), and an absent right testicle.

Computed tomography (CT) of the abdomen found no retroperitoneal adenopathies, but revealed a mass on the right side of the pelvic cavity displacing the bladder to the left, measuring 10 x 15 cm mass and with a central cystic component, in addition to a mass in the left inguinal region, with a longest diameter of 10 cm and a solid component (Fig. 2).

The chest CT scan showed no abnormalities.

Levels of lactic dehydrogenase (LDH) were 601, alpha fetoprotein was 5.08, and beta-human chorionic gonadotropin was 11.8.

Surgical treatment was instituted, submitting the patient to left radical orchidectomy and exploratory laparotomy to search for and remove the right testicle. We found a classic testicular seminoma invading the rete testis in the right testicle and infiltrating the tunica albuginea in the left testicle, with angiolymphatic invasion. Clinical stage of the right testicle was T1 N0 M0 S2 and clinical stage of the left was T2 N0 M0 S2.

Among the neoplasms affecting young men, testicular cancer is the most common malignant solid tumor; despite this it continues to be a potentially curable malignant disease. There are two forms of presentation in cases with bilateral involvement: synchronous (simultaneous involvement of both testes at the time of diagnosis) and metachronous (there is a time period between presentation of the first tumor and occurrence of the second). Both forms of presentation differ in their incidence and the predominant histological variety.

The occurrence of a primary bilateral testicular tumor is rare; its prevalence ranges from 2.5% to 5%, most tumors being metachonous[2]. About 10% of reported cases are

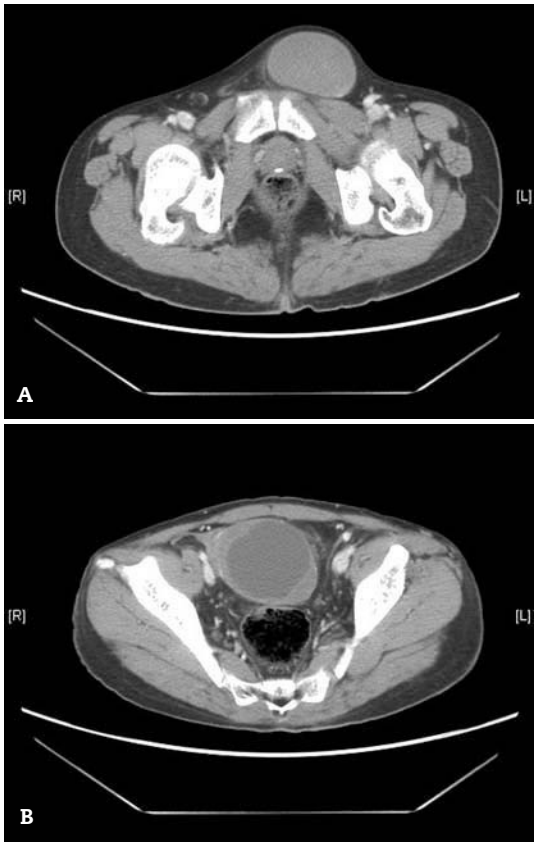

Figure 1 – A: Computed tomography image showing the presence of mass in the left groin, compatible with a testis at that level. B: Note the presence of mass at the level of the pelvic cavity.

synchronous, and these are of the same histological type, 80% being seminomas, as in our case. The remaining 20% have been identified as mixed teratomas, yolk sac tumors and embryonal carcinomas (pure or combined)[3-5].

Prognosis of these tumors is not worse than for unilateral tumors; in both it depends on clinical stage at the time of diagnosis[3,6].

Two studies analyzing 7 and 6 clinical cases found that synchronous bilateral tumors may present in high stages, but due to the small number of patients included in this study, the results cannot be completely conclusive[3,4,7].

Surgical treatment (bilateral orchidectomy) continues to be definitive procedure for adequate histopathological diagnosis and local treatment of this disorder[6]. Unfortunately, this therapeutic approach generates significant endocrine and psychological disorders, so it is usually mentioned that there is a therapeutic alternative consisting of conservative orchidectomy, performed more frequently in central and northern Europe. This technique is recommended particularly in tumors measuring 2.5 or less cm, and satisfactory results have been reported with regard to cure and quality of life[8-11].

We know that a key part of management in these patients is chemotherapy, and that with the introduction of cisplatin in this battery of drugs, the survival rate of patients with testicular cancer may be over 90%, though it increases the risk of suffering a second testicular neoplasm metachronously[2,3,12].

Bilateral involvement does not necessarily imply a poorer prognosis as compared to cases of unilateral involvement, since a cure rate of more than 90% has been reported[1].

Bilateral testicular cancer continues to be an uncommon form of presentation in this condition, with an incidence of approximately 1.5% of cases, while the synchronous form is even rarer (less than 20% of bilateral cases). The association between cryptorchidism and bilateral testicular tumor is still controversial, as some series show a greater frequency, while in others the frequency is similar to that of cases of unilateral tumor. Treatment in bilateral cases generally does not significantly differ from unilateral ones, and in selected cases testis-preserving surgery may even be attempted.

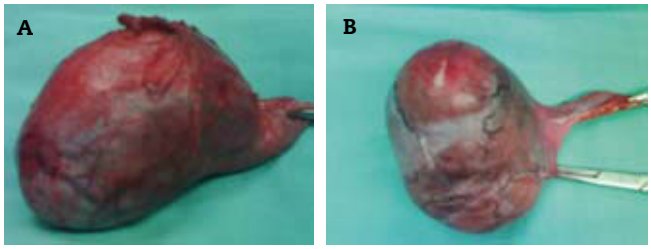

Figure 2 – Surgical specimen of left testicle (A) and right testicle (B).

REFERENCES

1. Martínez MR, Hernández GF, Rodolfo JD, Lozano JF, Sánchez GA. Seminoma testicular bilateral sincrónico en un paciente adulto con criptorquidia bilateral. Rev Mex Urol. 2003;63(4):157-61.
2. Diz Rodríguez R, Virseda Chamorro M, Arce Gil I, Saenz Benito D, Alpuente Román C, Paños Lozano P. Tumores bilaterales de testículo. Actas Urol Esp. 2007;31(3):250-2.
3. Soto delgado M, Pedrero Márquez G, Ramírez Chamorro F, Rodríguez-Rubio Cortadellas F, Sánchez Bernal C, González Moreno D. Neoplasia testicular bilateral sincrónica. Presentación de un nuevo caso clínico. Arch Esp Urol. 2007;31(1):58-60.
4. Bulent A, Taner DR, Tolga T, Sertac Y, Celik T, Ferruh Z, et al. Bilateral testicular germ cell tumors in Turkey: Increase in incidence in last decade and evaluation of risk factor in 30 patiens. J Urol. 2007;178:129-33.
5. Coli A, Bigotti G, Dell'Isola C, Castri F, Rulli F, Massi G. Synchronous bilateral testicular germ cell tumors with different histology. Case report and review of the literature. Urol Int. 2003;71(4):412-7.
6. Coogan CL, Foster RS, Simmons GR, Tognoni PG, Roth BJ, Donohue JP. Bilateral testicular testicular tumors and management and outcomes in 21 patients. Cancer. 1998;83(3):547-52.
7. Cañis Sánchez A, Conde Santos G, Alonso García N, León Morales E, Arango Toro O, Gelabert Mas A. Actitud diagnóstica y terapéutica en el tumor germinal bilateral. Presentación de un caso y revisión de la literatura. Actas Urol Esp. 2003;27(2):147-51.
8. Schmitz A. Bilateral and synchronic seminomatous testicular neoplasia. Int Baz J Urol. 2003;29(4):330-1.
9. Mearini E, Bracarda S, Crino L, Zicchi A, Porena M. Conservative surgery and quality of life in a young patient with synchronous bilateral embryonal carcinoma. Eur Urol. 1996;29(1):119-21.
10. Theodore CH, Terrier-Lacombe MJ, Laplanche A, Benoit G, Fizazi K, Stamerra O, et al. Bilateral germ –cell tumors: 22 years of experience at the Institut Gustave Roussy. Br J Cancer. 2004;90(1):55-9.

A. García Morúa, J. D. Gutiérrez García, E. Ortiz Lara Gerardo, R. Martínez Montelongo and S. Gómez Guerra Lauro*
Hospital Universitario Dr. José E González, Monterrey, NL, Mexico

**Author for correspondence.*
E-mail: agmorua@hotmail.com;
Alejandro.garcia@urologiahu.org.mx (A. García Morúa).