

Testicular Tumor Associated With A History Of Contralateral Undescended Testis: A Case Report

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One of the established risk factors of testicular tumor is undescending testis affected by environmental and genetic factors. We report a case of testicular tumor associated with a history of contralateral undescended testis in a patient of Taleghani hospital in the year 2003.

A 38-year-old man visited the hospital complaining of painless swelling of the left scrotal contents. Right orchiectomy had been performed following the diagnosis of undescending testis, eight years earlier. He had a firm mass with 10cm×6 cm in the left scrotum and lab tests revealed high alpha-fetoprotein. Left radical inguinal orchiectomy was performed and the pathological diagnosis of the tumor was germ cell tumor, Teratocarcinoma. Previous pathologic report of undescending testis was atrophic testis. In conclusion, considering the higher risk of development of testicular cancer in both gonads in patients with undescending testis, long term follow up is recommended.

Key Words: Undescending testis, Testicular tumor, Cryptorchidism

Introduction

Cryptorchidism is the most common congenital anomalies of the genitourinary tract in males.¹ Incidence of testicular cancer in cryp-

torchid patients is estimated to be 3 to 5 times higher than in the general population.²

Testicular tumors account for 2% of cancers in the male. Testicular cancer is seen infrequently in blacks, between the ages of 15-35. Cryptorchidism and Klinefelter's syndrome are predisposing factors, with most patients usually having a painless mass in their testis.^{3, 4}

Environmental and genetic factors are effective in development of this tumor. Testicular tumor associated with the contralateral undescended testis is rare.⁵⁻⁸

We present a patient with malignant tumor of the left testis, eight years after right orchiectomy due to cryptorchidism.

Case presentation:

A 38-year-old male with chief complaint of enlarging painless mass in his left testis referred to us. Two months before admission he developed painful bilateral gynecomastia and three weeks before hospitalization, he noticed an enlarging painless mass in his left testis. He had a 14 year-old daughter; eight years ago, he underwent right orchiectomy due to cryptorchidism in our hospital. The pathologic report at that time was atrophic testis without malignancy. Recently he had developed mild hypertension, controlled with atenolol.

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An examination revealed signs to be stable. General examination of heart, respiratory system and abdomen was normal. A firm mass with 10cm×6 cm was found in the left scrotum. Transillumination was negative. There was no mass in the right scrotum, and no inguinal lymphadenopathy was seen.

In paraclinic evaluations the patient had high alpha-fetoprotein [231.8 ng/mL (Normal range = 0-15 ng/mL)]. Other results were: Beta human chorionic gonadotropin (betaHCG) 4 mIU/mL (0-10), Carcinoembryonic antigen (CEA) 2.6 ng/mL (0-10), prostate specific antigen (PSA) 0.7ng/mL (0-4), Testosterone 2.8 ng/mL (2.5-12), Estradiol 24 pg/mL (0-55). Other test including hemoglobin, calcium, phosphorus, alkaline phosphatase, sedimentation rate, liver and thyroidal function tests were normal. In semen analysis azoospermia was present. Chest x-ray and abdominal sonography were normal.

He underwent left inguinal radical orchiectomy and herniorrhaphy. A metal clip was placed in the end of the remaining cord. In the postoperative CT scan, multiple paraortic lymph nodes were noted. Diagnosis following orchiectomy was: germ cell tumor, teratocarcinoma, without cord invasion. The patient was referred for chemotherapy.

Discussion

Testicular tumor is one of the potentially lethal but curable cancers in young men. On the basis of association between testicular

cancer and cryptorchidism and infertility, some authors believe in the testicular digenesis syndrome, in which azoospermia or oligospermia is present and patients are predisposed to developing testicular cancer. These authors believe this syndrome results from environmental causes than rather than from genetic mutations.^{9,10}

According to other references, an underlying pathologic process is believed to affect both testis in patients with unilateral cryptorchidism; hence the normal testis is at a higher risk for developmental digenesis and cancer, particularly seminoma.¹¹

Others advise long term follow up for contralateral testis after orchiectomy due to germ cell tumor.¹²

In our patient who had unilateral cryptorchidism, the contralateral testis had not caused any problem, since he had a daughter, but much later, contralateral testis had encountered malignant degeneration.

This case demonstrates that cryptorchidism is not the only cause of testicular tumor and other factors especially genetic factors may have some role in development of testicular tumor.

Conclusion

Because of probable higher risk of developing testicular cancer in both gonads in patients with undescending testis,^{12,13} long term follow up is recommended.

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