Abstract

We report a 38 year old male with metastatic seminoma in an inguinal lymph node and regression of the primary testis tumour with a past history of orchiopexy – an extremely rare occurrence.

Introduction

Regression of primary seminoma of the testis is a rare but documented occurrence. Similarly inguinal node metastatic testicular cancer in patients with previous orchidopexy is also rare but is well known to occur. The combination of these two scenarios however is extremely rare.

Case Report

A 38 year old male presented with a 3 week history of left sided groin swelling. He had a left orchidopexy via scrotal incision at age 12 for left undescended testis. Physical exam prior to groin dissection noted the left inguinal swelling and a relatively small left testicle. He underwent removal of the inguinal mass. Histopathological investigation revealed a lymph node containing tumour suggestive of metastatic seminoma. A testicular ultrasound noted a normal right testis, and a significantly smaller left testicle containing a 6mm suspicious lesion. Computed Tomography (CT) of Thorax, Abdomen and Pelvis, Tumour Markers; HCG, aFP, LDH, were all normal.

Figure 1: Lymphatic drainage of testes and scrotum.

Following multidisciplinary team discussion, left radical orchidectomy was performed via left inguinal approach. Histology of the left testicle reported a fibrous nodule corresponding with the ultrasound findings, with no malignancy and regression of the primary tumour. The consensus after multidisciplinary team meeting with an external (international) opinion was to treat with 3x cycles of BEP chemotherapy. The documented recurrence rate following radiotherapy for Stage IIb seminoma is higher than the recurrence rate when treated with chemotherapy.

Discussion

Seminoma in an inguinal lymph node following orchidopexy and regression of the primary testis lesion, is an exceptionally rare occurrence. Spontaneous regression of testicular tumours is estimated to be less than 1%; the majority of these instances are in cases of non-seminomatous germ cell tumours, with regression of seminomatous tumours being much rarer. The exact mechanism by which this regression takes place is unknown, but hypotheses include amongst others: apoptosis, elimination of carcinogens and hormonal mediation. We classified this man's disease as T0N1M0, rather than T0N0M1. The former was accepted as correct owing to the documented evidence of aberrant scrotal lymphatic drainage following scrotal surgery. In the developing embryo the testes originate from the genital ridge located near the second lumbar vertebra. They descend into the scrotum via the inguinal canal accompanied by their blood supply and lymphatics. As a result the primary lymphatic drainage from the testis is to the retroperitoneal lymph nodes.

The lymphatic vessels first drain into the collecting trunks at the hilum of the testicle and these trunks accompany the testicular artery, vein and spermatic cord to the internal ring and then continue proximally to the retroperitoneal lymph nodes. On the left the lymphatics drain primarily into the pre-aortic and para-aortic lymph nodes around the left renal hilum and thence to the inter aorta-caval nodes. The lymph continues from the retroperitoneal nodes into the cisterna chyli, thoracic duct, posterior mediastinum and the left supraclavicular fossa. The thoracic duct drains into the left subclavian vein.

Aberrant lymphatic drainage of the testes may occur following regional surgery, for example following orchidopexy testicular lymphatic vessels anastomose with the regional lymph vessels resulting in drainage into the ipsilateral inguinal and iliac lymph nodes. It is also possible for the testicular trunks to abandon the spermatic vessels at the internal inguinal ring and pass posteriorly and superiorly into the external iliac lymph nodes with an orderly and predictable pattern of spread. Loco-regional lymphatics are the first site of spread from the testes.
In conclusion, it is imperative to remember that the risk of testis cancer in a previously undescended testis does persist despite orchiopexy in childhood. Testis cancer awareness and self examination therefore remains important in this group. Moreover as in this case the testis after prior orchiopexy was reduced in size. Tumour development in atrophic testis can also be somewhat confusing in clinical presentation.

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References