

## Case Report      **Mixed Germ Cell Tumor of the Testis with Post-Chemotherapy Perineal Tumor Recurrence**

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### ABSTRACT

We present an 18-year-old man who was treated with four courses of BEP (bleomycin, etoposide and cisplatinum) chemotherapy after left orchiectomy for mixed seminomatous and non-seminomatous germ cell tumor of the testis. He presented four months post-chemotherapy with a left scrotal mass which was excised and histologically diagnosed as granulation tissue. A month later he presented with a perineal and left pararectal mass fungating through the skin, which was treated by excision of the mass. Histopathological examination showed mature teratoma with endodermal components but no malignant elements. At 24 months follow-up the patient was disease-free. It remains speculative whether the scrotal and perineal tumors represent local recurrence or true metastases of post-chemotherapy teratoma.

**Key Words:** testicular tumor, perineal metastasis, surgical removal

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## INTRODUCTION

Currently, germ cell testicular tumors show excellent cure rates. The main factors contributing to this are accurate staging at the time of diagnosis, adequate early treatment based on combination chemotherapy with or without radiotherapy and surgery, and very strict follow-up and salvage therapies<sup>1</sup>.

## CASE REPORT

An 18-year-old man was admitted to our clinic with a bulky perineal mass. His past medical history revealed that he had not had a prior orchiopexy or inguinal hernia repair as a child, but that 11 months prior to this admission he had undergone radical orchiectomy through a left inguinal

incision for a mixed germ cell testicular tumor consisting of seminoma, embryonal carcinoma, immature teratoma and yolk sac elements with paratesticular, vascular and lymphatic invasion (pathological stage pT3). Histopathologically, the surgical margins were negative. Pre-orchiectomy ultrasound did not reveal any scrotal invasion. At the time of the radical orchiectomy the serum tumor markers were not elevated (alfa-feto protein (AFP) 28 ng/ml; beta-human chorionic gonadotropin (b-HCG) 8 U/ml; lactate dehydrogenase (LDH)112 U/l) and there was no evidence of metastases on imaging studies (chest X-ray, abdominal CT). Four courses of BEP chemotherapy (bleomycin 30 mg/m<sup>2</sup>, etoposide 120 mg/m<sup>2</sup>,



Fig. 1: Tumor ulcerating through the skin in the perineal area.

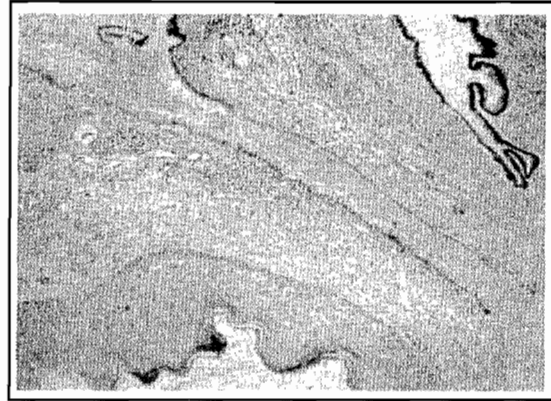


Fig. 2: Histological view of the perineal tumor showing mature teratoma (HE stain x 40)

cisplatinium 100 mg/m<sup>2</sup>) were given, starting three weeks after surgery, and administered at 22-day intervals.

Four months after completion of the chemotherapy a mass developed in the left scrotum with normal levels of serum tumor markers. The tumor was removed at an outside institution, and the pathology was reported as foreign body type granulation tissue without any malignancy.

The patient presented to our hospital one month later with a mass in the perineum extending towards the left scrotum and normal serum tumor markers. On examination there was a painless purple-brown mass 7 x 4 x 6 cm in diameter in the perineum extending to the uninvolved right scrotum, and fungating through the overlying skin (Fig.1). CT scan as well as MR imaging of the pelvis revealed a well-circumscribed mass extending into the left pararectal area. Abdominal and thoracic CT scans did not show any metastases, and the serum tumor markers (AFP, HCG, LDH) were not elevated.

The patient was taken to surgery and the perineal mass was removed together with adjacent perineal skin, subcutaneous tissue and pararectal fatty tissue, followed by primary closure of the perineum. Histopathological examination showed mature teratoma with endodermal components, but without any malignant elements (Fig.2). The patient

was free of metastases and local recurrence with excellent cosmetic results at 24 months following the second excision of the perineal mass.

## DISCUSSION

Testicular tumors comprise up to 5% of all urologic malignancies, and 95% of testis tumors are germ cell in origin. These tumors tend to metastasize mostly to the retroperitoneal and mediastinal lymph nodes. Risk factors for metastases are the presence of vascular or lymphatic invasion and yolk sac or embryonal components<sup>1,2</sup>. Metastatic disease is treated with chemotherapy, and residual retroperitoneal masses are removed surgically, preferably when tumor markers have returned to normal levels. Pathologically, about 20% of post-chemotherapy residual masses harbor viable tumor, the rest containing either fibrosis or teratoma, in 40% of cases each. The risk of teratoma in residual masses increases up to 82% in the presence of teratomatous elements in the primary tumor. It is recommended that all residual teratomatous masses should be surgically removed, despite their low malignant potential, because problems may arise from mechanical compression of surrounding structures due to chemotherapy resistant growth of such masses<sup>1,2</sup>. It is also recommended that other metastatic foci outside the retroperitoneum should be surgically removed if possible, i.e. when they are restricted in number and

location, and tumor markers have returned to normal levels<sup>3</sup>.

In our patient, the occurrence of a mass in the ipsilateral hemiscrotum four months after the completion of four courses of BEP chemotherapy, which was histologically diagnosed as foreign body granulation tissue, may represent a histological misdiagnosis of teratoma. The alternative explanation is that the granulation tissue was due to intrascrotal hemorrhage, cauterisation, placement of sutures or some other cause of a foreign body type reaction.

The occurrence of a tumor in the perineum and left pararectal area, fungating through the skin one month after excision of the scrotal mass, may be due to incomplete excision of the scrotal mass. Alternatively, it would have had to be a very rapid growth of mature teratoma, which is unusual. It remains speculative whether the left scrotal tumor and the subsequent perineal tumor were true hematogenous or lymphatic metastases, or simply

local recurrence due to undetected positive surgical margins at the primary orchidectomy or at the subsequent excision of the scrotal mass.

To our knowledge, this is the first case report in the English literature of perineal teratoma from a mixed germ cell testicular tumor, which was surgically removed and pathologically proven to be a teratoma without any malignant elements, with metastasis-free survival at 24 months after excision of the perineal mass.

## REFERENCES

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1. Bosl GJ, Motzer RJ. Testicular germ-cell cancer. *N.Engl.J.Med.* 1997; Jul 24;337(4):242-53.
2. Debono DJ, Heilman DK, Einhorn LH, Donohue JP. Decision analysis for avoiding postchemotherapy surgery in patients with disseminated nonseminomatous germ cell tumors. *J.Clin.Oncol.* 1997; Apr;15(4):1455-64.
3. Hendry WF, Norman AR, Dearnaley DP, Fisher C, Nicholls J, Huddart RA, et al. Metastatic nonseminomatous germ cell tumors of the testis: Results of elective and salvage surgery for patients with residual retroperitoneal masses. *Cancer.* 2002; Mar 15;94(6):1668-76.