Extragonadal germ cell tumour

Rajeev Rahi · Manoj Biswas · Rahul Khanna · A. K. Khanna

Received: 9 April 2006 / Accepted: 9 February 2009
© Association of Surgeons of India 2010

Abstract We report a rare case of extragonadal germ cell tumour in a 55-year-old man. He presented with a painless mass in right inguinal region, a few days after hernioplasty for right direct inguinal hernia, which caused diagnostic difficulties and treatment problems.

Keywords Extragonadal · Germ cell tumour · Seminoma

Introduction

Primary extragonadal germ cell tumours are rare tumours representing only 2–5% of adult germ cell malignancies. They are distinct from testicular cancer in biological behaviour, natural history and optimal management, which continue to be defined. This rarity is why our case of extragonadal seminoma in right inguinal region, a few days after hernioplasty, is unique which caused diagnostic difficulties and treatment problems.

Case report

A 55-year-old man was operated for right-sided direct inguinal hernia and right hydrocele in December, 2004. He had an uneventful postoperative course. Within a month, patient returned back with a 6×5 cm nontender swelling in right inguinal region. Keeping the possibility of organised haematoma at the site of previous operation, ultrasonogram was done which revealed $4.0 \times 3.4 \times 2.8$ cm rounded heterogeneously hypoechoic swelling in right inguinal region. The right testis was normal in size and echo texture while the spermatic cord was thickened. The left testis, epididymis and abdomen showed no abnormality on ultrasonography.

Therefore, provisional diagnosis of haematoma with right-sided epididymitis was made. On exploration a 6×4 cm mass was found in right inguinal region which was adhered to spermatic cord. This mass was excised after dissecting it from spermatic cord [Fig. 1]. It was right inguinal canal seminoma on histopathological examination. Patient received 3 cycles of cisplatin-based chemotherapy (BEP regimen) followed by right-sided high orchidectomy. Histopathological examination showed right testis to be normal. At present patient is on 3 monthly follow-up protocol.

R. Rahi · M. Biswas · R. Khanna · A. K. Khanna
Department of General Surgery,
Institute of Medical Sciences,
Banaras Hindu University,
Varanasi - 221 005, India

A. K. Khanna (✉)
E-mail: akhannabhu@gmail.com

Fig. 1 Seminoma in inguinal region following hernioplasty

Discussion

Extragonadal germ cell tumours are rare representing only 2–5% of adult germ cell malignancies and are biologically distinct from testicular cancer. Their natural history and optimal management continue to be defined [1]. The primary sites are retroperitoneum, mediastinum and pineal gland in decreasing order of frequency [2]. Among extragonadal germ cell tumours, seminomas have excellent outcome whereas outcome of NSGCT depends on site of presentation and histology. Retroperitoneal NSGCT behaves like testicular neoplasms whereas poorly differentiated carcinomas and mediastinal primaries are associated with worst prognosis [2]. When germ cell tumour is found in the region other than gonads, either primary extragonadal germ cell tumour or occult testicular tumour or burned out phenomenon of testicular primary is considered. To differentiate between them, it is imperative to make careful histological

exploration of the testis [3, 4]. Treatment options for extragonadal germ cell tumour following excision are chemotherapy or radiotherapy or combined approach. Radiotherapy seems to be associated with a significant higher rate of disease recurrence, although most patients will be salvaged by subsequent chemotherapy [5]. A sequential GCT of testis may develop later on after stopping chemotherapy [6] and risk of second nongermlinal malignancies in patients with extragonadal germ cell tumour appears to be comparable to patients with primary testicular carcinomas. So careful follow up becomes necessary [7].

References

1. Goss PE, Schwertfeger L, Blackstein, et al. (1994) Extragonadal germ cell tumors. A 14-year Toronto experience. *Cancer* 73(7):1971–1979
2. Aparicio J, Montaler J, Munarriz EB, et al. (1995) Prognostic factors and long term follow up. *Eur Urol* 28(1):19–24
3. Matsuse K, Maruo K, Ras, et al. (1985) A case of occult testicular tumor. *Hinyokika Kiyo* 31(3):521–526
4. Borrego Hernando J, Guinda Sevillano C, Laguna Pes MP, et al. (1998) Retroperitoneal germinal tumor: extragonadal or burned out phenomenon of testicular primary? Presentation of a clinical case. *Actas Urol Esp* 22(2):170–174
5. Bokemeyer C, Droz JP, Horwich A, et al. (2001) Extragonadal seminoma: an international multicenter analysis of prognostic factors and long term treatment outcome. *Cancer* 91(7):1394–1401
6. Pennacchio JL, Pugatch R, Doos WG, et al. (1981) Sequential germ cell tumor without prior involvement of the testes. *J Urol* 126(6):838–841
7. Hartmann JT, Nichols CR, Droz JP, et al. (2000) The relative risk of second nongermlinal malignancies in patients with extragonadal germ cell tumors. *Cancer* 88(11):2629–2635