Isolated Testicular Metastases from Renal Cell Carcinoma

R. Indudhara a
S.K. Sharma a
A. Rajwanshi b
A. Amarjeet Shonki a

Departments of aUrology and bCytology, Postgraduate Institute of Medical Education and Research, Chandigarh, India

Key Words
Testis
Metastases
Renal cell carcinoma

Abstract
Testicular metastasis from renal cell carcinoma is very rare. Herein we report a case of left-side renal cell carcinoma initially diagnosed to be clinically stage II, which developed left-side testicular metastases 2 months following radical nephrectomy. High inguinal orchiectomy was carried out. The patient was asymptomatic 2 months later. Although renal vein involvement in renal cell carcinoma is common and its extension into inferior vena cava well documented, tumour invasion of spermatic veins is rare.

Case Report
A.S., a 67-year-old male patient, presented with painful enlargement of the left testis of 6 days’ duration. Two months earlier he had undergone left radical nephrectomy for stage II renal cell carcinoma (fig. 1). At that time, there was no evidence of lymph node or renal vein involvement. He had no varicocele. Since nephrectomy specimen revealed breach in Gerota’s fascia at one place, he was given external radiation of 3,500 rad in 3 weeks to the renal fossa immediately following nephrectomy. On examination, the left testis was enlarged to twice the size of its counterpart, and was tender. The spermatic cord was indurated throughout its extent. No lump was felt in the abdomen. The nephrectomy scar had...
healed well. The chest X-ray was normal. A course of antibiotics and anti-inflammatory agents did not improve his condition. Fine needle aspiration cytology from the left testis revealed metastatic deposits consistent with renal cell carcinoma (fig. 2). A left high inguinal orchiectomy was performed. The entire testis and the cord up to the internal inguinal ring was replaced by tumour tissue. Histopathology revealed classical features of renal cell carcinoma replacing the normal testis. In view of distant metastases, the patient was started on injection Proluton weekly. Eight weeks later, he was asymptomatic, with no evidence of local or systemic recurrence.

Discussion

Approximately one third of patients with renal cell carcinoma have haematogenous metastases at the time of diagnosis [5]. The common sites for metastases in decreasing order of frequency include the lungs (50%), bones (30%; which are osteolytic), liver (30%), brain and thyroid (25%). Local invasion into adrenals, spleen, diaphragm is present in about 30–40% of cases [5]. Lymphatic extension to regional lymph nodes is yet another mode of spread.

Testicular Metastases

Infrequent sites of metastases from renal cell carcinoma include testes and vagina [7]. Renal cell carcinoma may involve the testis via the spermatic vessels [6]. Rarely, dropped metastases from a diffuse intra-abdominal malignancy can involve the cord and testes via a patent processus vaginalis. Retrograde extension through the vas deferens is yet another route. Vaginal metastasis from renal cell carcinoma is likely to result from retrograde extension from ovarian veins, pampiniform plexus and uterovaginal venous plexus [7].

Patients who develop metastases following radical nephrectomy for renal cell carcinoma may have survivals superior to those who present with metastases. This difference is more pronounced if the interval between nephrectomy and the appearance of metastases exceeds 2 years [8]. With late metastases, the 5-years survival rate of 45% is similar to that of patients with
non-meta-static carcinoma [9]. In the present case, the metastatic disease was noted 2 months after nephrectomy, and the patient was apparently well 2 months later. A long-term follow-up would be necessary to know the behaviour of the disease in cases of early metastases.

It is concluded that despite the venous link between the left testis and the left kidney, testicular metastasis from renal cell carcinoma is very infrequent. However, we feel that an early ligation of the gonadal veins at the time of radical nephrectomy before manipulation of the kidney may minimise or exclude a possible chance of retrograde dissemination of the disease to the testis.

References


