Leiomyosarcoma of the spermatic cord

A. R. DE BOLLA*  
F.R.C.S.  

D. G. ARKELL  
M.Sc., F.R.C.S.  

Department of Urology, Dudley Road, Hospital, Birmingham B18 7QH

Summary

Leiomyosarcoma of the spermatic cord is extremely rare. We report a case associated with recurrent papillary bladder tumours and benign hyperplasia of the prostate. The use of adjuvant chemotherapy is described for the first time in the management of this condition.

KEY WORDS: leiomyosarcoma, spermatic cord, chemotherapy.

Introduction

Neoplasms affecting the spermatic cord are rare (Zuckner and Aronberg, 1951; Bissada, Finkbeiner and Redman, 1976) and 70% show benign characteristics. The most commonly reported malignant tumour is the rhabdomyosarcoma, fibrosarcomas and leiomyosarcomas occurring less often. We believe there have been 32 cases of leiomyosarcoma of the spermatic cord reported since its first description by Patel in 1907.

Case report

A 63-year-old man presented in 1975 with painless haematuria. This was found to be due to a superficial papillary bladder tumour near the left ureteric orifice and was treated by cystodiathermy. Regular follow-up cystoscopies revealed recurrent bladder tumours in March 1979 and these were similarly treated.

In August 1979, he complained of a firm, painless mobile mass in the left inguinal region, which had been present for 6 weeks and was slowly enlarging. At operation, a 3 x 3 cm size cystic mass was found within the spermatic cord, 3 cm distal to the deep inguinal ring. Biopsy and frozen section examination demonstrated a spindle-celled sarcoma and left radical orchidectomy was performed. Subsequent histological examination showed a markedly vascular tumour with areas of haemorrhage and the features of a leiomyosarcoma. The tumour was composed of spindle cells with large binucleate and multinucleate cells scattered within and cleft-like spaces with a flattened endothelial cell lining (Fig. 1).

Routine haematology and biochemistry tests were normal. Chest X-ray, isotope liver and bone scans showed no metastases and an intravenous urogram revealed only a trabeculated bladder and a bladder diverticulum.

Three weeks postoperatively, a course of adjuvant chemotherapy was commenced. Vincristine, 2 mg, was given intravenously, followed 6 hr later by adriamycin, 50 mg, and methotrexate, 100 mg. Leucovorin, 27 mg, was given intramuscularly after 24 hr. Treatment was continued as an in-patient at monthly intervals for one year, 2-monthly intervals for 6 months, and then on 2 further occasions, each 3 months apart. The treatment was well tolerated, there being no evidence of recurrence or dissemination of the tumour 32 months postoperatively. Severe prostatic symptoms developed 12 months postoperatively and a transurethral resection was performed, histology demonstrating benign hyperplasia with no evidence of malignancy. No further recurrence of the bladder tumours has occurred.

Discussion

Since the first reported case of leiomyosarcoma of the spermatic cord, further cases have been described (Jenkins and Subbuswamy, 1972; Deluise, Draper and Gray, 1976; Banik and Guha, 1979; Buckley and Tolley, 1981). Kyle (1966) reviewed the subject some years ago. These tumours usually occur in men over the age of 50 years, but details available from 32 previously reported cases show a wide range of age at presentation (15–78 years). They are more often situated near the testis than in the inguinal region. It is probable that the association of the tumour with prostatic hyperplasia (Zuckner and Aronberg, 1951; Bevan, 1954) is accounted for by age alone, but we have found no previous reference to associated bladder tumours.

There has been debate as to the origin of this
tumour. It has been suggested that it derives from the walls of blood vessels, the vas deferens, smooth muscle cells of the cremaster and undifferentiated mesenchymal cells. Some reports have pointed to the development of sarcomatous change within a benign leiomyoma (Jenkins and Subbuswamy, 1972; Bevan, 1954). Macroscopically, the tumours appear encapsulated, firm and nodular with cystic and necrotic areas (Jenkins and Subbuswamy, 1972; Buckley and Tolley, 1981; Kyle, 1966). Microscopically, they consist of interlacing strands of spindle shaped cells with marked variation in nuclear size and chromatic distribution, and large numbers of mitotic figures.

The spread of leiomyosarcoma of the spermatic cord is believed to be primarily by the haematogenous route (Banik and Guha, 1979; Strong, 1942). Due to their rarity, full evaluation of different forms of therapy is lacking, but the cornerstone of treatment is radical orchidectomy with ligation of the spermatic cord at the deep inguinal ring. The role of surgery and radiotherapy to the retroperitoneal lymph nodes is undecided, though some authors (Banik and Guha, 1979; Weitzner, 1973) feel it to be unwarranted.

As with many other soft tissue sarcomas, the prognosis for patients with leiomyosarcoma of the spermatic cord is poor. Kyle (1966) suggested a probable 5 year survival rate of 10–15%. Of the 22 cases in his series, nearly half died in less than 2 years. We were able to find only one case report in which specific antimitotic chemotherapy was given for the treatment of lung metastases from this tumour (Jenkins and Subbuswamy, 1972). We are unaware of adjuvant chemotherapy previously being used in this condition in the absence of detectable metastases. In view of the poor outlook for patients with this tumour, a well tolerated course of chemotherapy, such as was given in this case, would seem to be well justified.

Acknowledgments

We wish to thank Dr W. Shortland-Webb for his help with the histological reports, and Miss G. Fradgley for typing the manuscripts.

References


(Accepted 18 November 1982)
Leiomyosarcoma of the spermatic cord.

A. R. de Bolla and D. G. Arkell

doi: 10.1136/pgmj.59.693.470

Updated information and services can be found at:

http://pmj.bmj.com/content/59/693/470

**Email alerting service**

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

**Notes**

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/