

15. Seminoma

Background

Stage I seminoma has between a 15–20% risk of relapse; surveillance without treatment is one option. Relapses principally occur in the para-aortic nodes and the risk can be quantified using factors related to the primary tumour.¹ A tumour >4 centimetres (cm) in size is the most important of these; rete testis involvement may also be a predictor.² Adjuvant treatment rather than surveillance may be offered in such cases.

A single dose of carboplatin has been shown to achieve results equal to radiotherapy in terms of overall tumour control and early survival in the TE19 randomised trial.³ In the UK this approach has now become the standard (Level 1b).⁴

If radiotherapy is considered in this setting then a dose of 20 Gray (Gy) in ten daily fractions treating the para-aortic node chain only has been shown to be as effective as 30 Gy or larger fields (Level 1b).^{4,5}

Radiotherapy may also be considered for selected patients with stage IIA and IIB seminoma where there are metastatic para-aortic nodes up to 5 cm.⁶ A dose of 30 Gy in 15 daily fractions to the para-aortic nodal chain and ipsilateral iliac nodes is recommended. A boost of 5 Gy to enlarged lymph nodes may be considered (Level 2b).^{4,7,8} An alternative approach uses a single dose of carboplatin with radiation fields reduced to the involved para-aortic region only (Level 1b).^{4,9}

Radiotherapy carries an excess risk of death as a result of radiation-induced cardiac disease or second cancer.⁵ Thirty-year follow-up shows that the relative risk of second malignancy is 1.4; this translates into an increase in the risk of cancer from 15% for the normal population to 25% for the seminoma cohort at 30 years (Level 2b).^{4,10}

Recommendations

Single agent carboplatin will be the usual adjuvant treatment for high-risk stage I disease seminoma (Grade B)

Stage I seminoma for which adjuvant para-aortic radiotherapy is indicated:

20 Gy in 10 fractions over 2 weeks (Grade A)

Stage IIA or IIB seminoma: para-aortic and ipsilateral iliac radiotherapy (dog leg) or para-aortic radiotherapy alone after carboplatin:

30 Gy in 15 fractions over 3 weeks (Grade B)

The types of evidence and the grading of recommendations used within this review are based on those proposed by the Oxford Centre for Evidence-based Medicine.⁴

References

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