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. A tumour >4 centimetres (cm) in size is the most important of these; rete testis involvement may also be a predictor. 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. In the UK this approach has now become the standard (Level 1b).

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).

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. 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). An alternative approach uses a single dose of carboplatin with radiation fields reduced to the involved para-aortic region only (Level 1b).

Radiotherapy carries an excess risk of death as a result of radiation-induced cardiac disease or second cancer. 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).

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.
References


