

approach to patient and relatives is of importance to allow adequate coping with the disease.

19 INVITED Is there a rationale for pre or postoperative radiotherapy or chemotherapy?

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Retroperitoneal sarcomas (RPS) still represent a therapeutic challenge. Whereas most specialists agree that the surgery is the primary treatment of choice many RPS are difficult to resect and carry a high level of local relapse and a poor prognosis even following a complete resection. In an attempt to improve the outcome various adjuvant therapies have been administered. Although their usefulness has been demonstrated, at present there is no clear prospective data indicating that these adjuvant treatments will improve survival. Radiotherapy (RT) is the most cited adjuvant treatment that may impact on local control. However, due to the proximity of critical normal tissues the delivery of therapeutic doses of external beam RT is problematic and could result in unacceptable toxicity. Data indicate that low dose RT is of little benefit and that increasing the dose delays but does not prevent local recurrence in the majority of patients. This therapeutic dilemma is unfortunate and thus better strategies are needed, i.e. intensity-modulated RT, intraoperative placement of tissue expanders to displace the small bowel out of the RT field, intraoperative RT therapy and brachytherapy. Most have applied the RT postoperatively but recently a number of studies have indicated that preoperative RT could be a preferable method of delivering adjuvant external beam RT as it may be better tolerated, permits the RT to be directed more precisely to the tissues at risk and may reduce the risk of tumour implantation at resection. Hopefully the newer diagnostic tools like PET/CT or MR may help giving a more accurate determination of the RT treatment volume and thus allow higher doses and decrease toxicity. Systemic chemotherapy could be an alternative treatment option but its use is controversial and most RPS have shown poor response to the present chemotherapeutic drugs. Despite few data neoadjuvant chemotherapy has been proposed as an adjunct to surgery and RT to improve resectability and to reduce the risk of relapse. With the present knowledge RPS should undergo a complete resection if possible and in individual cases pre or postoperative radiotherapy and/or chemotherapy could be added especially in grade 3 or 4 tumours with microscopically involved resection margins. Obviously there is a critical need for future large multicenter trials of RPS evaluating the optimal use of the various treatment options either alone or in combination and to allow such studies to be performed RPS should be referred to multidisciplinary sarcoma centres.

20 INVITED Contribution of pathology to decision-making in retroperitoneal sarcoma

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The retroperitoneum is the second most common site of origin of sarcomas; 15% of all primary sarcomas are retroperitoneal. In adults sarcomas in the retroperitoneum are less common than (Non-) Hodgkin Lymphoma, parenchymatous epithelial tumours (renal, adrenal, pancreas) and metastatic disease from a known or unknown primary elsewhere. In the first two decades, nephroblastoma (Wilm's tumour) and neuroblastoma are the more common retroperitoneal tumours. In contrast to the extensive predominance of benign soft tissue lesions elsewhere, in the retroperitoneum mesenchymal lesions are more likely to be malignant. The most prevalent mesenchymal tumours in the retroperitoneum are of lipomatous, myogenic and neural origin. Liposarcomas are the most common sarcomas in the retroperitoneum, especially well differentiated liposarcoma and dedifferentiated liposarcoma. Well differentiated liposarcoma is most common and is regarded a low grade sarcoma that does not metastasize. The recurrence rate is however high due to problematic surgery, bearing the risk (10–20%) of dedifferentiation. Dedifferentiated liposarcoma has the capacity to metastasize, irrespective of the extent of dedifferentiation. Leiomyosarcoma is the second most common sarcoma at this site while its benign counterpart, leiomyoma, is almost non-existing at this site. Retroperitoneal leiomyosarcoma bears a very poor prognosis. Of the neurogenic tumours benign schwannoma is most common. Malignant peripheral nerve sheath tumour is mostly associated with a preexisting neurofibroma, and half of the patients suffer from neurofibromatosis type I. It is a high grade tumour with a very poor prognosis. In addition, non-neoplastic masses such as retroperitoneal fibrosis may occasionally pose a problem in their distinction from sarcoma. Gastro-intestinal stromal cell tumours (GIST) occasionally involve the retroperitoneum either by direct extension from the intra-abdominal gastro-intestinal tract, or origin

in the retroperitoneal part of the duodenum. It is important to recognize GIST since targeted adjuvant treatment due to KIT overexpression is available. High grade pleomorphic sarcoma NOS (previously grouped under "Malignant Fibrous Histiocytoma"), lacking any differentiation, constitutes an additional small subset (~7%) of retroperitoneal sarcomas. Histopathological classification of retroperitoneal mesenchymal tumours can be difficult but is aided by immunohistochemistry and molecular diagnostics.

Special session (Mon, 24 Sep, 13:30–14:30) The management of neck nodes

21 INVITED Sentinel node biopsy: a diagnostic or therapeutic procedure?

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The presence of cervical node metastasis remains the most significant prognostic indicator in tumours of the upper aero digestive tract. Despite advances in imaging techniques of CT, MRI, PET and ultrasound, the detection of early metastasis and particularly micrometastasis remains a problem and the management of the N0 neck remains controversial.

The principle of sentinel node biopsy is that tumour migrates in an orderly fashion to a first echelon or sentinel node and that the pathological status of this node reflects the status of the whole nodal basin. Sentinel node biopsy (SNB) is now used routinely in malignant melanoma and breast cancer and has proved to be an excellent staging technique.

The first successful SNB in head and neck cancer was performed in 1996 by Alex and Cragg on a patient with supraglottic carcinoma. The Canniesburn Plastic Surgery Unit developed a method for widespread use in head and neck cancer. Based on the technique used in malignant melanoma. This comprised the triple diagnostic technique of preoperative lymphoscintigraphy, intraoperative blue dye injection, and intraoperative gamma probe localisation. Together with other medical centres, mainly in Europe, identification of sentinel nodes was in the region of 90 to 97%. Subsequent research showed the importance of additional pathological examination of the sentinel node in the form of step serial sectioning and immunohistochemistry.

Between 1998 and 2002 patients were recruited into this European multi centre study evaluating the reliability of sentinel node biopsy as a staging tool in patients with clinical T1 or T2 N0 head and neck squamous cell carcinoma. The patients underwent either sentinel node biopsy assisted elective neck dissection or sentinel node biopsy alone with all sentinel node positive patients subsequently undergoing a therapeutic neck dissection. 134 patients met the inclusion criteria for the study and 79 underwent sentinel node biopsy alone while 55 patients underwent sentinel node biopsy and immediate elective neck dissection. The sentinel node was successfully harvested in 125 of the 134 patients, giving an overall identification rate of 93%. Floor of mouth had the lowest identification rate and proved the most problematic. 42 of the 125 clinically node negative patients were upstaged (34%). 32 of these cases were upstaged by routine H&E staining while a further 10 patients required additional pathology in the form of step serial sectioning and immunohistochemistry.

The mean follow up is now 5.5 years. Five patients have subsequently developed disease in the neck and four of these false negative SNB results were in patients with floor of mouth tumours. The overall sensitivity of SNB as a technique for identifying metastasis was 91%

Conclusion: Sentinel node biopsy can be successfully applied to early T1/T2 tumours of the oral cavity and oropharynx and used as a staging tool. Problems remain when applying this technique to tumours in the floor of the mouth. SNB is minimally invasive, cost effective and has a low associated morbidity. It may also identify abnormal drainage patterns allowing the treatment plan to be altered accordingly. Initial results of the long term follow up study demonstrate that this type of nodal biopsy is not harmful to the patient and that neck recurrence is very similar to more extensive selective neck dissection procedures.