1215 PUBLICATION

Is routine chest X-ray (CXR) a useful part of follow up in all adult patients with soft tissue sarcoma?

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Background: Soft tissue sarcomas in adults are relatively rare. After treatment of localised disease the common site of relapse is either locally or in the lungs. Routine surveillance of the lungs is justified because surgical intervention may be curative. In Edinburgh patients are routinely followed up on a six monthly basis with CXR to screen for lung metastases. The radiation exposure over a standard 10 year follow up is not insignificant, and it is unclear if all patients, irrespective of the initial grade of their primary tumour, require this.
Aims: To determine the pick up rate of lung metastases by routine CXR over a 10 year period in patients diagnosed with soft tissue sarcoma, and to review the primary histology.
Methods: Adult patients diagnosed with a localised primary soft tissue sarcoma and all those on routine follow up between 1994 – 2004 were identified on the departmental data base and the notes of those with lung metastases reviewed. Data was collected on their initial histology, and date and method of diagnosis of lung metastases.
Results: 179 patients were under follow up during this 10 year period. 24 (13.4%) developed lung metastases, and 22 sets of notes were found. 6 (27%) had metastases diagnosed by routine CXR, 9 (41%) had metastases diagnosed by non routine CXR and 7 (32%) had metastases diagnosed by CT as staging for local recurrence or as investigation for a general decline in health. On review of histology none were grade 1, 4 (18%) were grade 2 and 18 (82%) were grade 3. 155 patients therefore received 6 monthly CXR for 10 years without developing lung metastases, and hence possibly unnecessarily. Total patient years at risk were 512.24, equating to 1 patient developing lung metastases for every 21 years of follow up.
Conclusion: Lung metastases occur in a minority of patients (13.4%) and most (82%) occurred in patients with grade 3 tumours. No patients with grade 1 tumours developed lung metastases. 73% of lung metastases were diagnosed by investigations prompted by symptoms or as part of staging for recurrence elsewhere. Thus routine CXR may be appropriate on grade 3 tumours, but not on lower grade tumours.

1216 PUBLICATION

Intron A: Health Management Program (HMP) in high-risk malignant melanoma showed the positive impact of hydration

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Background: Skin cancer affects more then 75,000 Canadians each year. Malignant melanoma is rare but accounts for >75% of all skin cancer deaths and the incidence is increasing at an annual rate of 2%. Intron A is the only adjuvant therapy that has increased survival in high-risk melanoma patients. However side effects may lead to early discontinuation of therapy or sub-optimal drug exposure.
Methods: Patients were educated on the benefit of therapy and were given comprehensive patient education materials. Oncology nurses provided support to help patients better manage and control adverse events.
Results: A total of 251 patients were scheduled to receive 20 MIU/m^2 5 days a week for 4 weeks followed by 10 MIU/m^2 3 times a week for 48 weeks. Twenty-nine percent of patients progressed before completion of therapy. Of the remaining patients, 52% completed a full year of therapy, with 93% of those patients being compliant more than 80% of the time. The majority of discontinuations occurred during the induction phase (57%) vs during the maintenance phase (43%). Males were more likely to be compliant than females ($p < 0.05$), especially during the first few months of the maintenance phase. The two most common reasons for discontinuation were adverse events (58%), and disease progression (29%). Patients with fluid intake >1.5 liter/day were more likely to complete therapy (64%) compared to those drinking a smaller volume (32%, $p < 0.0001$). The impact of hydration could be seen both during the induction and maintenance phase.
Conclusion: A significant proportion of melanoma patients who receive high dose Intron A therapy discontinue early due to adverse events. The importance of fluid intake was clearly established by the Intron Health Management Program, since it was the most favorable predictor for completion of therapy.

1217 PUBLICATION

Treatment for isolated local recurrence of soft tissue sarcoma arising in a previously irradiated field

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Purpose: To evaluate outcome and treatment toxicity in patients undergoing wide local excision (WLE) with or without brachytherapy (BRT) for soft tissue sarcoma (STS) recurrence arising within a previously irradiated field.
Methods: A retrospective review was performed of 59 patients who were treated for isolated local recurrence of STS. All patients underwent prior resection and external beam radiation (median dose 51 Gy, range 40–69 Gy). For recurrent disease, 22 patients were treated with WLE alone and 37 with WLE and an after-loaded BRT single plane implant. Iridium 192 wires were loaded 3 to 12 days postoperatively. The prescribed BRT dose was 45 or 50 Gy. Anatomic locations included extremities (N = 37), trunk (N = 16), and head and neck (N = 6). The most common histology was malignant fibrous histiocytoma (MFH) (N = 33).
Results: With a median follow-up time of 45 months, the 4-year disease specific survival rate was 80%. The 4-year actuarial local control (LC) rate and distant metastasis free survival (DMFS) rate were 48% and 75%, respectively. Multivariate analysis revealed that positive surgical resection margins ($p = .013$) and non-extremity tumors ($p = .005$) were associated with lower rates of LC. No factors predicted for rate of DMFS. The actuarial late complication rate was 52% at 4 years, and of 32 patients with late complications, 15 required surgical intervention (2 amputations). Among 37 patients with extremity tumors, 23 maintained normal daily function, 9 had limited disability, 4 had disabilities requiring medical treatment, and 1 had disability requiring surgery. The 4-year amputation free survival rate for these patients was 74%. Although patients treated with BRT were more likely to have MFH ($p = .02$) and high grade tumors ($p = .03$), there were no significant differences in outcome or complication rates between patients receiving and not receiving BRT.
Conclusion: WLE, with or without BRT, for recurrent, previously irradiated STS may prevent or delay amputation in most patients with extremity recurrences. In this series, however, treatment was associated with significant late wound complications and a less than satisfactory rate of LC. Despite 68% of patients having high-grade tumors, only 25% developed distant disease at 4 years, suggesting that the predominant pattern of failure is local. Limb and function-sparing treatment is therefore worthwhile, but techniques for avoiding serious wound complications and improving LC must be pursued.

1218 PUBLICATION

Classical Kaposi's Sarcoma: efficacy of single high dose radiotherapy

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Purpose: To evaluate the efficacy of single fraction of high dose radiotherapy in patients with classical Kaposi's sarcoma (CKS).
Methods and materials: Between June 1994 and February 2005, 46 patients with cutaneous CKS were treated based on a prospective study in Hacettepe University, Department of Radiation Oncology. Thirteen (28%) patients had received chemotherapy before radiotherapy and referred due to recurrent or progressive disease. Twenty-four (52%) patients who had disseminated disease were given chemotherapy following radiotherapy. All the lesions were treated locally with 2–3 cm safety margin with 4–6 MeV electron beams. The radiotherapy was in the form of single fraction of 8 Gy in the first 4 years. After finding out the high efficacy of 8 Gy in 1998, the dose was reduced to 6 Gy in order to find the lowest effective dose.
Results: Median follow-up time is 48 months (1–128 months). The male-to-female ratio was 3.6:1. The median age of onset among CKS patients was 61 years (range, 18–87). Of 46 patients, 8 (17%) had an underlying immunocompromised state and 1 (2%) had a previous diagnosis of Hodgkin's disease. The majority of patients responded to radiation therapy. Of 207 fields treated, 51 and 152 fields were treated with 8 Gy and 6 Gy, respectively. The overall objective response rates (complete and partial) were 69%, 88%, 84% and 89% at 1, 3, 6 and 12 months, respectively.