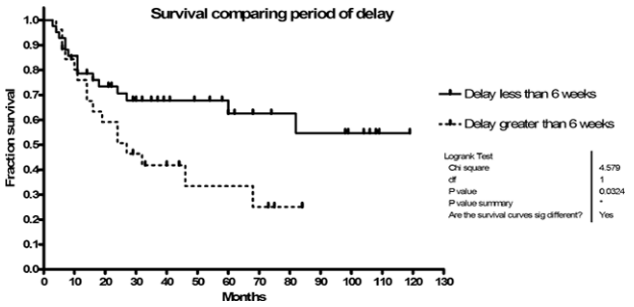

Fig 1. Kaplan-Meier survival graph of delay of less or greater than six weeks

1086 PUBLICATION

Role of radiotherapy in the treatment of cervical lymph node metastases from unknown primary site: results of a retrospective analysis of 113 patients

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Background: The management of patients with cervical lymph node metastases (CLNM) from unknown primary tumours is a major challenge. This study presents data collected in Radiotherapy Departments at the Hospital "Maggiore della Carità" Novara and the European Institute of Oncology, Milan, Italy.
Materials and methods: From 1980 to 2004, 116 patients (96 males and 20 females) with CLNM from an unknown primary site were treated with radiotherapy (RT). The histological subtypes included 91 squamous cell carcinoma, 12 undifferentiated carcinoma, 7 adenocarcinoma, and 5 other histologies. Nodal stage included 24 N1, 6 N2 and 23 N3. The treatment policy was to treat all suitable candidates with surgery followed by RT and possibly chemotherapy. Seventy-three patients were irradiated to both sides of the neck including of the mucosa of nasopharynx, larynx, hypopharynx and larynx; 29/116 were treated only on the ipsilateral or bilateral neck without extensive mucosal irradiation. Conventional fractionation was used in 107/116 patients (median dose 54 Gy, range: 30–70 Gy) and hyperfractionation in 8 (1.2 Gy bid to a total dose of 64–74 Gy).
Results: The 5-year actuarial overall survival was 40.7% and the actuarial disease free survival was 27%. The emergence of the occult primary was observed in 23 patients (20%); 19/23 of the emerging primaries were within the head and neck region: larynx (7 cases), oropharynx (5 case), oral cavity (3 cases) and others (4 cases). At univariate analysis, with log rank test, favourable prognostic factors were: the initial nodal stage (N1-N2a) vs the advanced nodal stage (N2b,c-N3); the use of 3D-conformal RT technique vs 2D technique; the absence of lower neck lymph node metastasis at diagnosis; the neck dissection vs no dissection and the radiotherapy on bilateral neck and mucosa vs irradiation limited to ipsilateral neck. On multivariate regression analysis, the initial nodal stage (N1-N2a vs N2b,c-N3) resulted as a favourable prognostic factor and, but only for the disease free survival data, also the use of 3D-conformal RT technique vs 2D technique.
Conclusions: This study confirmed that patients with CLNM from occult head and neck cancer had similar prognosis to other head and neck malignancies. Extensive irradiation to both sides of the neck and to the pharyngeal mucosa resulted in significantly less loco-regional failures and better survival.

1087 PUBLICATION

A phase I-II trial of gefitinib (IRESSA) and radiotherapy in patients with locally advanced inoperable squamous cell carcinoma of the head and neck (SCCHN)

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Background: Gefitinib, an orally active epidermal growth factor receptor (EGFR) tyrosine kinase inhibitor, induces growth arrest in SCCHN cell lines mainly by blocking cells in G1 and preventing them from entering the cell cycle. Clinical studies have demonstrated the activity of gefitinib monotherapy in SCCHN. Preclinical studies have shown that the combination of RT and drugs interfering with the EGF pathway may result in radiosensitization in squamous cell carcinomas that over express EGFR.
Methods: Pts with histologically confirmed, newly diagnosed, locally advanced inoperable SCCHN, never pretreated with surgery, chemotherapy or RT were enrolled into a phase I-II trial of gefitinib and RT. Two doses of gefitinib were tested (250 and 500 mg/day) in the dose-escalation phase and continued for up to 12 months; RT was administered concomitantly according to standard procedures (minimum of 52.0 grays; boost to the primary tumor site up to at least 64.0 grays). The recommended dose of gefitinib for phase II was determined by the dose-limiting toxicities (DLTs) observed during its combined administration with RT and for 2 weeks thereafter (phase I). Activity was evaluated 4 weeks after the end of the combined treatment and every 8 weeks thereafter, according to RECIST criteria.
Results: 12 pts (9 M, 3 F, median age 58) have been evaluated thus far. The most common primary tumor site was the hypopharynx (5 cases); TNM stage was IV A (10 pts) and IV B (2 pts); tumor grades were 1 (2 pts), 2 (6 pts) and 3 (4 pts). All pts completed the combined treatment according to the protocol. Total radiation dose was 60–74 grays. Overall best response was complete response in 3 pts, partial response in 5 pts, and unconfirmed partial response in 1 pt; 3 pts were not evaluable. Gefitinib-related grade 3 toxicities were mucositis (n = 1), liver toxicity (n = 1). RT-related grade 3 toxicities were stomatitis/mucositis (n = 5), general health deterioration (n = 1). Three pts died during treatment with gefitinib alone (not considered treatment related). DLT occurred in 3 pts treated with gefitinib 500 mg (grade 3 stomatitis, 3 pts [RT-related]; grade 3 ALT increased, 1 pt [gefitinib-related]), and therefore 250 mg was selected as the recommended gefitinib dose for phase II.
Conclusion: Accrual is continuing in the phase II trial. More mature data will be presented.
IRESSA is a trademark of the AstraZeneca group of companies

1088 PUBLICATION

A community hospital multidisciplinary thyroid committee: establishment and early results

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Introduction: Thyroid patients need multiple types of investigation, treatment and follow up, including medical therapy, surgery and radioiodine. Physicians who treat these patients at St. Mary's Hospital, a 300 bed community hospital, felt that a regular multispecialty case review would allow coherent decision-making. Developments in the literature and conferences are also discussed, so as to offer evidence-based integrated care in a resource-efficient manner.
Methods: Original team members were from Endocrinology, Surgical Oncology, Pathology and Medical Oncology within St. Mary's, later joined by a Nuclear Medicine physician from l'Université de Montréal and an Endocrine Surgeon from the McGill University Health Center. Each patient was presented including history, risk factors, imaging and bloodwork. The pathologist reviewed available cytology and histology. There was discussion about how to proceed. A single recording secretary (the author) dictated a summary of each case, documenting recommendations of the committee, including points of controversy. The presenting physician met with the patient to review the recommendations. Patients could be presented more than once.
Results: From January 03 to April 05, 143 patients were discussed, 16 males, 127 females; the average age was 47 range 18–94. There were 71 malignancies; 61 pure papillary carcinomas, 5 follicular carcinomas, 3 malignancy not clearly classifiable. 2 patients had simultaneous follicular and papillary cancers. 42 patients had nuclear medicine involvement

recommended, either scans to seek metastases or iodine-131 for ablation. There was one death, 12 years after diagnosis with metastatic disease. 5 patients chose not to be followed by any of our physicians and sought follow up elsewhere.
Conclusion: This approach has allowed for more efficient pre and post-operative management, especially in the advance planning of radioiodine ablation. During the first half of this new program the average delay between deciding to offer radioiodine ablation and the actual treatment date was 3.5 months. During the second half this was reduced to 1.2 months, despite using no new resources. Patients have expressed a high degree of satisfaction with this team and its' recommendations, especially that controversies were explained to them. The resulting database is now being used to develop an outline of management based on our own outcomes and available recommendations in the literature.

1089 PUBLICATION

Unknown primary with metastatic neck node: A tertiary health institution experience

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Background: Unknown primary with secondary neck node (UPSN) accounts of 2–4% of all head and neck cancers. We conducted a retrospective analysis for our patients with UPSN. We also analysed the possible prognostic variables.
Material and methods: Between January 1997 and January 2003, a retrospective study of 135 cases of UPSN were done. The inclusion criteria were presence of metastatic neck node and primary not detected in the clinical examination or the investigative work up. The patients planned for radical RT (29 patients) were treated with a dose of 70 Gray/35fractions/7 weeks. Patients planned for pre op RT (5 patients) received a RT dose of 50 Gray/25fractions/5 weeks followed by modified radical neck dissection. For palliative RT, patients were given either 20 Gray/5fractions/1week or 8Gray as a single fraction (74 patients). 27 patients were advised symptomatic care only in view of gross disease. The following variables were tested for impact on locoregional disease free survival: Duration of complaints, histology, nodal size, sex, predisposing risk factor, duration of complaints, neck node side, level of the neck node involved and the number of neck nodes
Results: Ony 25.3% of the patients were suitable for any kind of radical treatment. The mean duration of initial symptoms was 6.23 months (1–48 months). The median follow up was 3 months (1–52 months). Nodal size was the only significant variable ($p = 0.001$). The overall local control rate in our study was 20% (27/135). The overall survival was 23.7% (32/135 patients).
Conclusion: Nodal size is a significant variable in the overall prognosis of UPSN. The overall prognosis of such patients in our analysis was poor due to the locally advanced disease in majority of patients at presentation.

1090 PUBLICATION

Low energy photon radiation boost combined with surgery and external beam radiotherapy (EBRT) in early oral cancer. Preliminary results on treatment tolerance

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Background: Photon Radiosurgery System (PRS) is an X-ray delivery system designed to provide a high dose of low energy photon radiation. Clinical application of PRS for boost delivery is easy and cheap because background radiation exposure is minimal and no special shielding of the patient, personnel or operating room is required. We report preliminary results on tolerance of intraoperative PRS application combined with EBRT in 7 patients treated for early oral cancer.
Material and Methods: Seven patients with early squamous cell cancer of mobile tongue (4) and floor of the mouth (3) were evaluated for intraoperative PRS application combined with EBRT in Center of Oncology MSC Memorial Institute in Gliwice, Poland between December 2003 and July 2004. During tumor resection microscopic margin of normal tissue were obtained in all patients and target volume (TV), including tumor bed with 0.5 cm margin, was determined. Intraoperative PRS application was performed. The appropriate applicator was manually positioned. Retractors or 1 mm-thick lead shield was used when needed. The diameter of applicator varied from 3 to 4 cm. Mean delivered dose was 6.35 Gy (range 5–7.5 Gy) and was prescribed at 0.5 cm distance from the applicator surface. For each dose adequate time of exposition was calculated. Mean exposition time was 15.5 min (range 12.4–18.5 min). EBRT was started after mean time of 44 days. In all cases 6 MV, 3D conformal irradiation was applied. Clinical Target Volume (CTV) consisted of tumor bed (CTV1) and lymph nodes at risk (CTV2). Radiotherapy was given conventionally up to elective dose level. Median time of EBRT was 32 days (range 6–39 days). Mucosal reaction of TV acc. to EORTC was assessed.
Results: Acute mucosal grade 3 reaction reveled in TV in all patients just after intraoperative PRS application. Significant additional increasing of mucosa reaction in TV has not appeared after EBRT. Lengthening of healing time to over 3 months (median time of 108 days) after EBRT with no consequential late effects has been observed in all patients. There were no local recurrences with local disease free survival median time of 312 days (range 187–365 days).
Conclusions: Intraoperative application of PRS is an easy method of boost delivery in oral cancer treatment. It seems to be well tolerated although extended mucosal recovery time is observed. Further study is needed to confirm these results.

1091 PUBLICATION

Combined Modality for Treatment of Buccal Cancer

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Introduction: To evaluate the combined modalities treatment result of buccal cancer and find the prognostic factors.
Patients and Method: There were 211 buccal cancer patients who received combined modalities treatment in Chang Gung Memorial Hospital – Linkou Medical Center under service of Taipei Chang Gung Oncology Group from January 1994 to December 2003. There were 203 (96.2%) patients were male and the median age was 46 ranging 23 to 79. The majority (84.5%) patients had habit of smoking, 69.1% had betal quad chewing and 58.4% had alcohol drinking. The stage distribution was stage I: 16 (7.6%) patients, II: 28 (13.3%) patients; III: 41 (19.4%) patients and IV: 126 (59.7%) patients. All the patients received radical surgery first then adjuvant radiotherapy was given due to stage III or IV disease or close margin (lt;5 mm) in resection margins. The median radiation dose was 60.8 Gy (ranging form 6 Gy to 72 Gy). The Cisplatin based concomitant chemoradiotherapy was given in neck lymph node with extracapsular spreading (ECS) patients after 1997.
Result: The 5 year disease specific survival (DSS) for stage I patients was 72%, stage II: 74%, stage III: 59% and stage IV: 52.1%. There were no survival difference in different T stage and regional extension factors such soft tissue extension, lymphatics and/or vessel permeation, nerve and/or bone invasion, however, N stage is significant in survival. The 5-year DSS for N0 was 64%, N1: 59% and N2 49% ($p = 0.02$). Patients with ECS had worse survival (64.2% vs. 38.9%; $p = 0.016$). The worst survival was in patients with N2 and ECS disease, the 5-year survival only 38% and other group is around 63% ($p = 0.009$).
Conclusion: Patients with ECS and more than 2 lymph node metastasis are the highest risk for metastasis need more aggressive treatment.

1092 PUBLICATION

Prognostic significance of clinical-pathological features in high-risk head and neck squamous cell carcinoma (HNSCC) patients (pts) treated with postoperative concurrent chemoradiation (CRT)

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Background: Postoperative CRT can improve the disease-free survival (DFS) in high-risk HNSCC pts, but selection criteria need to be better assessed considering the acute and late toxicities and the benefits.
Patients and methods: This is a retrospective study of 32 consecutive pts with HNSCC of oral cavity (14), hypopharynx (9), larynx (8) or oropharynx (1), treated by surgery with curative intent and postoperative CRT (66 Gy, 2 Gy/d, combined with cisplatin 100 mg/m^2 on days 1, 22, 43), accrued between Mar/02-Dec/04. Eligible pts were considered as high-risk when presented: T3/T4 tumors (27), positive/close surgical margins (6), pN+ (26), lymphatic and/or vascular invasion (LVI, 10), perineural involvement (NI, 20), or extracapsular spread of nodal disease (ECS, 3). According to N status, pts were classified as N0 (6), N1 (12), N2 (13) or N3 (1); 18 pts had 2 or more positive nodes. Tumor grade was 1 (8), 2 (20) or 3 (4).