response in these poor prognosis patients and may facilitate definitive local surgery or radiotherapy. Further follow up will be performed for survival rates.

1082 PUBLICATION

Postoperative radiotherapy after the partial laryngectomy in supraglottic cancer: an analysis of 79 patients

A. Yildirim, D.C. Oksuz, O. Yetmen, O. Uzel, S. Turkan. *Istanbul University Cerrahpasa Medical Faculty, Radiation Oncology, Istanbul, Turkey*

Background: To evaluate treatment results and complication rates of postoperative radiotherapy after the partial laryngectomy for squamous cell carcinoma of supraglottic larynx.
Materials and Methods: Between January 1980 and July 2003, 79 patients with squamous cell carcinoma of supraglottic larynx who were treated with radiotherapy after the partial laryngectomy were evaluated. There were 77 (97.5%) male and 2 (2.5%) female with median age of 55 years (37–75 years). According to the 1998 TNM staging system of AJCC, the disease was T1 in 7 (8.9%), T2 in 35 (44.3%), T3 in 15 (19%), T4 in 20 (25.3%), Tx 2 (2.5%), N0 in 58 (74.7%), N1 in 10 (12.7%) and N2 in 11 (12.7%) patients. Bilateral neck dissection was performed in 13 (16.5%) and unilateral neck dissection in 18 (22.8%) patients. 48 (60.8%) patients did not undergo a neck dissection. The surgical margins were positive in 24 patients and close in 8 patients. The treatment field was confined only the larynx in 4 patients, neck lymphatics and the larynx in another patients. The median radiation dose was 50 Gy (48–70 Gy). Survival rates were calculated using the Kaplan–Meier method. Univariate analysis was performed using log-rank test. The median follow up time was 62 months for the surviving patients (17–260 months).
Results: 53 patients (67.1%) were still alive at last follow-up. 16 (20.3%) died of larynx cancer and 10 (12.7%) died of reasons not related to larynx cancer. Locoregional recurrence rate was 13.9%. The 5-year locoregional progression free rate, disease-free survival and overall survival rates were 84%, 77%, 72% respectively. On univariate analysis, histologically positive neck disease and grade II edema decrease the regional and local control respectively (79% $p = 0.01$ and 64% $p = 0.0001$). 67 (84.8%) patients had larynx edema and 18 (22.8%) had neck fibrosis. Tracheostomy could not be closed in 3 cases due to edema. Severe complication led to total laryngectomy in 1 patient. Cerebrovascular disease was seen in one patient.
Conclusion: Postoperative radiotherapy can safely be performed after the partial laryngectomy. Recurrence of tumor should be suspected in patients with continuous severe edema. The determination of radiotherapy treatment volumes according to high risk recurrence areas might reduce complication rates.

1083 PUBLICATION

Cryosurgery of larynx cancer T3N0M0 as a part of combined treatment

N. Toporova, V. Lyubaev, I. Pustynsky, T. Tabolinovskaya, A. Paches, S. Subramanian, N. Malyshev. *Russian Cancer Research Center, clinic of Head and Neck Tumors, Moscow, Russian Federation*

Aim: To determine ability of using cryogenic method for treating larynx cancer T3N0M0 as an organ-preserving method.
Materials and methods: 36 patients with primary larynx cancer T3N0M0, who had a radiation therapy (40 Gy) in first phase of combined treatment, with poor effect – reduction of tumor dimensions less than 50%. All patients had squamous cell carcinoma confirmed by cytological and histological examination. Low efficacy of radiation therapy was an indication to cryogenic treatment as an organ-preserving method. The zone of cryodestruction involved healthy tissue also. Cryosurgery was performed after making a laryngofissure with temporary tracheostomia. It was performed in minimum 3 cycles of freezing/warming. The laryngofissure was closed after cryodestruction.
Results: The follow-up ranged from 3 to 7 years. Recurrent disease was detected in 2 cases, these patients underwent laryngectomy. Metastases were revealed in 5 patients during follow-up and they had functional neck dissection of II-VI levels. Overall 3-years survival – 88.8% (32 patients), overall 5-years survival – 80.5% (29 patients). Satisfactory voice function was preserved in 32 (88.8%) patients. 29 (80.5%) patients continued to work at their previously jobs.
Conclusion: Cryogenic treatment of larynx cancer is an effective method for treatment of patients with locally-advanced larynx cancer T3N0M0, with poor effect after 40 Gy radiation therapy. The obtained data show that cryogenic treatment is a perspective method on the final phase of combined therapy of larynx cancer, that allow us to improve complete response and to save larynx and its function.

1084 PUBLICATION

Assessing the feasibility of a randomized study of smoking cessation following active intervention in patients with squamous carcinoma of the Head and Neck: Results of a pilot study

S. El-Sayed[1], J. Epstein[2]. [1]*University of Ottawa, Radiation Oncology, Ottawa, Canada;* [2]*Chicago Cancer Centre, Oral Medicine, Chicago, US*

Introduction: Smoking is a major risk factor in the aetiology of squamous cell carcinoma of the head and neck (SCCHN) region. It also leads to many co-morbid conditions which are a common cause of death in patients who survive head and neck cancer. In addition, it compromises the tolerance to treatment of SCCHN. It is thought that those who continue to smoke have an increased risk of second primary or recurrent cancer. Many patients continue to smoke following their diagnosis. It is not clear whether active intervention could lead to better prognosis. A prospective randomized trial can possibly answer that question.
Aim: We set out to conduct out a population based pilot study in 2 Canadian centers with the aim of obtaining data on the number of patients who continue to smoke following diagnosis of SCCHN as well as interaction with other factors. The purpose of this study was to assess the feasibility of a phase III smoking intervention study in patients following treatment of SCCHN.
Materials and Methods: All newly diagnosed patients with head and neck cancer for a period of six months were asked to consent to the pilot study. There has been no refusal. A study questionnaire was completed with the aid of a trial nurse. No serum cotinin levels were done based on our previous experience which showed a good correlation between serum analysis and patient information.
Results: Demographics were typical for SCCHN patients the majority being males (75%), Caucasian (86%), Having high school or less education (80%), average age 64 years, 25% were employed and the majority also consumed alchohol.
Many significant differences were seen between the 3 groups of patients who are smokers, non smokers and the patients who are quitters. 32% of patients indicated that they continue to smoke at the time of diagosis.
Summary and Conclusions: Based on the results of that population based study, a prospective Randomized study was not planned. Taking into consideration the small percentage who continue to smoke following diagnosis and the likely small benefit of smoking intervention in these patients such a trial would require a large sample size of 1200–1500 patients with long-term follow-up.

1085 PUBLICATION

Delay in referral of oropharyngeal squamous cell carcinoma to secondary care is associated with more advanced stage at presentation and poorer survival

M. Pitchers[1], C. Martin[2]. [1]*University of East Anglia, School of Biological Sciences, Norwich, United Kingdom;* [2]*Norfolk and Norwich University Hospital NHS Trust, Department of Oncology, Norwich, United Kingdom*

Squamous carcinoma of the oropharynx presents with symptoms common to many benign diseases, and this can cause delay in referral. We investigate delay in referral, and the effect of that delay, from symptom onset to the decision to refer from primary care, using a retrospective case notes based study of patients presenting at our institution with oropharyngeal squamous carcinoma over the last 10 years. Of 69 patients suitable for evaluation, 54 were male, 15 female (M: F 3.6:1). Stage grouping was II, III, IVA and IVB 9%, 24%, 52% and 15% respectively. Frequencies of presenting symptoms were: neck mass 49.3%, sore throat 33.3%, other 17.4%.
Using correlation analysis and ordinal regression, we examined the relationship between increased referral delay, clinical stage at presentation and survival.
Increasing delay in referral from primary to secondary care was positively correlated with more advanced disease stage at presentation ($r_s = +0.346$, $p = 0.004$). This was confirmed with ordinal regression modeling (delay estimate=0.045, $p = 0.042$). For every one-week increase in delay in referral, presenting stage increases by 0.045 of "a stage". Patients with delay of less than 6 weeks had significantly improved survival compared to those with a delay of greater than 6 weeks ($p = 0.032$) as illustrated in Fig 1.
Our results indicate that a prolonged delay before referral to secondary care is positively correlated with an advance in clinical stage at presentation to secondary care, also that the delay in referral can affect survival. Also, although sore throat is a symptom which is not referred to in the UK Dept. of Health urgent referral guidelines for Head and Neck cancer, since one third of patients presented with this symptom, we recommend that it should be so included.

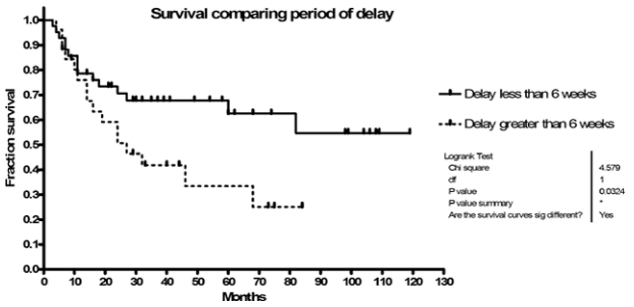

Fig 1. Kaplan-Meier survival graph of delay of less or greater than six weeks

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

D. Beldi'[1], B. Jereczek-Fossa[2], A. D'onofrio[3], R. Orecchia[2,3,4,5], M. Krengli[1,2,3,4]. [1]*Maggiore Della Carita' Hospital, Radiation Oncology, Novara, Italy;* [2]*European Institute of Oncology, Radiation Oncology, Milan, Italy;* [3]*European Institute of Oncology, Epidemiology And Biostatistics, Milan, Italy;* [4]*University of Piemonte Orientale A. Avogadro, Novara, Italy;* [5]*University of Milan, Milan, Italy*

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)

F. Caponigro[1], G. Franchin[2], V. Ravo[3], G. Silvestro[3], B. Morrica[3], C. Romano[4], E. Minatel[2], S. Pepe[4]. [1]*Istituto Nazionale Tumori Fondazione 'G Pascale', Department of Medical Oncology, Napoli, Italy;* [2]*Centro di Riferimento Oncologico, Department of Radiation Oncology, Aviano, Italy;* [3]*Istituto Nazionale Tumori Fondazione 'G Pascale', Department of Radiation Therapy, Napoli, Italy;* [4]*'Federico II' University of Naples School of Medicine, Division of Medical Oncology, Department of Molecular and Clinical Endocrinology, Napoli, Italy*

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

D. Anderson. *McGill University, Surgical Oncology St. Mary's Hospital, Montreal, Quebec, Canada*

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