

5565

POSTER

# Membrane type 1 matrix metalloproteinase (MT1-MMP) immunoexpression in squamous cell carcinoma of the larynx – correlation with morphological tumor features

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**Background:** Matrix metalloproteinases (MMPs) are capable of degrading components of the extracellular matrix. MMPs have been implicated as playing an important role in cancer invasion and metastases. MMPs have been identified in a various malignancies including head and neck squamous cell carcinomas. The aim of this study was to investigate MT1-MMP expression in squamous cell carcinoma of the larynx to relate expression to morphological features of the tumor and lymph nodes and 3- and 5-year survival.

**Material and Methods:** We investigated immunoexpression of MT1-MMP in 22 patients with laryngeal cancer surgical treated in ENT Department Medical University of Łódź between 1998 and 1999. The expression was evaluated immunohistochemically using monoclonal antibodies anti-MT1-MMP.

**Results:** Positive MT1-MMP expression in 68.2% cases was observed. Immunoexpression of MT1-MMP in advanced laryngeal carcinoma as indicator for 3-year survival was noted. In addition, levels of staining correlated with number of mitoses in tumor front and plasmocytolymphatic infiltration in its environment.

**Conclusion:** The expression of MT1-MMP in tumor front appears to play an important role in determining prognosis in patients with carcinoma of the larynx.

5566

POSTER

# Neoadjuvant chemotherapy and radiotherapy compared with radiotherapy alone in early stage nasopharyngeal carcinoma

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**Background:** To analyze the impact of neoadjuvant chemotherapy on the treatment of early-stage nasopharyngeal carcinoma (NPC) as compared to radiotherapy alone.

**Materials and Methods:** We analyzed retrospectively the outcome of 58 previously untreated and histologically confirmed early-stage NPC patients treated with either radiotherapy (RT) alone or with neoadjuvant chemotherapy followed by radiotherapy (CT/RT) at the Seoul National University Hospital between 1986 and 2003. Neoadjuvant chemotherapy consisted of two to three cycles with 5-fluorouracil and cisplatin. RT was given to the nasopharynx and neck nodes. The median dose to the primary site, involved nodes, and elective nodes was 70.2 Gy, 63 Gy, and 45 Gy, respectively. According to the 1997 AJCC staging system, 6 patients had stage I disease and 24 patients had stage II disease in the RT group. For the CT/RT group, 6 patients had stage I disease and 22 patients had stage II disease. The median follow-up duration for all patients was 103.5 months.

**Results:** The 5-year overall survival rate (OS), disease-free survival rate (DFS), and distant metastasis free survival rate (DMFS) was 86%, 80%, and 93% for the RT group and 82%, 69%, and 85% for the CT/RT group, respectively. There was no statistically significant difference in OS ( $p = 0.514$ ), DFS ( $p = 0.553$ ), and (DMFS) ( $p = 0.463$ ). N stage was the only significant prognostic factor for the disease free survival rates ( $p = 0.033$ ).

**Conclusions:** In our retrospective analysis, the use of neoadjuvant chemotherapy showed no additional benefit to treatment with radiotherapy alone. Treatment options should be examined in a large controlled randomized study.

5567

POSTER

# Parathyroid carcinoma managed successfully with minimally invasive surgery

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Cancer of the parathyroid glands is thought to be rare, accounting for <1% of cases of primary hyperparathyroidism. It is anecdotally stated an endocrine surgeon should encounter one throughout his/her working career. Our unit however has successfully treated three cases in the past few years.

Each patient underwent preoperative localization of the gland using ultrasound or radioisotope scanning. A 5 cm collar incision was made across the midline, and focused unilateral dissection carried out. En bloc resection of the parathyroid as well as the ipsilateral thyroid lobe and lymphadenectomy was performed. The decision to perform en bloc resection was based on atypical intra-operative features such as the size, vascularity, and fixity of the gland. Pre- and post-operative serum calcium ( $\text{Ca}^{++}$ , in mmol/l), and parathyroid hormone (PTH, in pmol/l), was measured in all patients.

All patients made an uneventful recovery and were discharged within 48 hours. The three cases are summarized in the table below. Complete oncological clearance was confirmed histologically in all three patients. All patients are recurrence-free to date.

Case	Patient	Symptoms	Pre-op $\text{Ca}^{++}$ (PTH)	Localisation	Gland	Post-op $\text{Ca}^{++}$ (PTH)
1	51 yr, female	Malaise, renal colic	3.47 (80)	Sestamibi	Right inferior	2.39 (18)
2	55 yr, female	Vomiting, thirst, lethargy, constipation	3.94 (57.4)	Palpable, Ultrasound	Left inferior	2.34 (8)
3	31 yr, female	Renal colic	3.7 (116.6)	Ultrasound, Sestamibi	Left inferior	2.55 (7.2)

Sixty patients have undergone minimally-invasive parathyroidectomy for hyperparathyroidism under our care over the past four years. Three patients (5%) had malignant primary hyperparathyroidism. These three had en bloc resection which is generally accepted as giving the best curative chance. We suggest that surgeons performing parathyroidectomy need to have a high index of suspicion of malignancy where the gland has an unusual appearance, and be willing to revert to en bloc resection.

5568

POSTER

# Adjuvant concurrent chemoradiation after laser surgery for locally advanced head and neck cancer

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**Background:** Postoperative chemoradiation (CRT) has become the standard treatment for locally advanced squamous cell head and neck cancer. The aim of this study was to evaluate the efficacy and toxicity of adjuvant CRT administered with curative intent and functional organ preservation, after laser surgery.

**Patients and Methods:** Between October 2000 to January 2004, 66 eligible patients (pts) with locally advanced head and neck squamous cell cancer (SCCHN) were entered in this study and were treated with concurrent cis platinum CRT after laser surgical resection of the primary tumor and selective neck dissection. There were 64 men and 2 women with a median age of 63 years (range 46–80). Primary sites included were, larynx 40, oropharynx 22 and hypopharynx 4 pts. Disease stages were: Stage III 36 pts and Stage IV 30 pts. All patients received 30 mg/m<sup>2</sup> cisplatin weekly concurrently with external beam 3D conformal radiation treatment, with multileaf linear accelerator. The total radiation dose ranged between 60–66 Gy (2 Gy daily, 5 days/week) depending upon the site, the extent of the disease, the surgical excision and the pathology report. The primary tumor site and the neck lymph nodes were delineated according to the preoperative radiological evaluation. The treatment fields encompassed all structures at risk. The primary endpoint of the study was locoregional control and the secondary endpoints were toxicity assessment, disease free survival and overall survival.

**Results:** The median follow up of the pts was 18 months (range 2–60 months). Pts had a 2 year locoregional control rate of 78% and disease free survival rate of 63%. Functional larynx preservation was possible in 36 pts (90%). All patients were monitored during CRT and toxicities were graded according to RTOG radiation scoring criteria. Grade 2 and 3 acute mucositis was present in 45 pts (68%) and 12 pts (18%) respectively. None of the patients discontinued treatment. Grade 2 xerostomia was present in 38 pts (57%) 2 months after the end of CRT.

**Conclusion:** Adjuvant concurrent chemoradiation after laser surgery for locally advanced SCHNC with weekly schedule of single agent cisplatin is feasible, well tolerated, remains an effective treatment and resulted in