Endoscopic evaluation of the local complications after radiotherapy and radiochemotherapy for nasal cavity, nasopharynx and soft palate neoplasms

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ABSTRACT

Outcome objectives: To determine complications of the radiotherapy or radiochemotherapy in patients with nasal cavity, pharynx and soft palate neoplasms in endoscopic examination.

Methods: Group of 119 patients (19-87 years old) were evaluated endoscopically between 2000 and 2012. Follow up was from 30 days up to 12 years.

Results: Following complications were diagnosed: 47 skin and mucosal reactions, 23 permanent nasal cavity obturations, 11 hearing impairments, 6 ear leakages, 2 tinnitus, 2 vision impairments, 2 trismuses, 2 obturations of nasolacrimal canal, 2 Eustachian tube obturations, 2 palatal movement impairments 1 case of mandible bone exposition. There were also 3 cases of tissue necrosis and one case of bleeding.

Conclusions: The regular endoscopic examinations allows to control negative aspects associated with radiotherapy or radiochemotherapy. Complications and recurrence can be diagnosed easily by non-invasive, method. Endoscopic evaluation provide quick and precise assessment of treatment results.

INTRODUCTION

Nasopharynx carcinoma is a frequent neoplasm in Southeast Asia. In Europe neoplasms of such localization are rare. Their prevalence is approximately 1.1/100 000 and are more common among men. There are about 4760 new cases a year in Europe and the increase of the incidence in two separated age groups (15-25 years old and 50-70 years old) is observed. There were 181 new cases of nasopharynx carcinoma in Poland in 2010. 62 among women and 119 among men. Majority of patients were aged 50-65 years old.

The golden standard in nasopharynx diagnostic process is an endoscopic biopsy, which allows the histopathological assessment of the neoplasms according to the WHO classification. The treatment of choice for stage I carcinoma is a solitary radiotherapy. Higher stages require simultaneous radio-chemotherapy. The treatment should include radiotherapy of bilateral Ib-V cervical lymphnodes groups and post pharyngeal lymphnodes. The one-year survival and five-year survival rates are as follows 72% and 50% in adults. Among adolescence and young adults the five-year survival is 72% and in elderly 36% only. The aim of the presentation is an assessment of local nasal cavity and nasopharynx complications after the treatment with solitary radiotherapy or simultaneous radiochemotherapy.

METHODS AND MATERIALS

Between 2000 and 2012, 184 patients after treatment for nasal cavity, pharynx or soft palate neoplasm were evaluated endoscopically in the Head and Neck Cancer Department of the Memorial Cancer Center in Warsaw. Out of 184 patients, 65 patients with previous surgical intervention were excluded from the study. From group of 119 patients (19-87 years old) 115 patients were treated for cancer, 1 for sarcoma and 3 for melanoma. Nasopharynx was a primary localization in 74 cases, nasal cavity in 9 cases, soft palate in 4 cases. In 32 cases there were metastases to the regional lymph nodes without the primary focus. 31 patients were treated by radiotherapy, and 88 by radiochemotherapy. Most of the patients was treatment by IMRT and the summary dose was between 6000 cGy-7000cGy.

All patients were evaluated endoscopically. Schedule of control endoscopic examination was: in first year every month; in second year every two months; in third year every 3-4 months; in fourth and fifth year every half year; after five year 1 time in year.

RESULTS

Following complications were diagnosed: 47 skin and mucosal reactions, 23 permanent nasal cavity obturations, 11 hearing impairments, 6 ear leakages, 2 tinnitus, 2 vision impairments, 2 trismuses, 2 obturations of nasolacrimal canal, 2 Eustachian tube obturations, 2 palatal movement impairments 1 case of mandible bone exposition. There were also 3 cases of tissue necrosis and one case of bleeding. There were 13 cancer recurrences treated by 3 salvage surgeries, 1 brachytherapy, 3 palliative chemotherapies.

DISCUSSION

Local complications after radiotherapy treatment of maxillo-ethmoidal complex, nose and nasopharynx can be divided into three categories:

1) serious life threatening complications, (hemorrhages, tissue necrosis);
2) temporary complications, without future live quality impact (weak mucosal radiation reaction);
3) persistent complications, lowering quality of life (nasal obstruction, hearing impairment etc.);

In regard of our own material we could state a hypothesis that the prominent feature of the last group is late treatment, one should remember that the procedure would be performed in the irradiated tissue time presentation and a possibility of self-treatment. In case of the complications, which the only solution is a surgical, and an intervention performed too early could cause further local morbidity.

On the other hand too late intervention is time consuming, requires many surgical procedures and there is a possibility of never achieving a positive outcomes.

Bearing these facts in mind, very important aspect of patients follow up is a regular endoscopic assessment of irradiated tissues. Such examinations let a surgeon asses a dynamics of a healing process and notice possible complications quickly and efficiently.

CONCLUSIONS

The regular endoscopic examinations allows to control negative aspects associated with radiotherapy or radiochemotherapy. Complications and recurrence can be diagnosed easily by non-invasive, method. Endoscopic evaluation provide quick and precise assessment of treatment results.

REFERENCES
