INCIDENCE OF TUMOR CELLS PRESENCE ON HISTOPATHOLOGICAL SPECIMENTS MARGINS IN RELATION TO WIDENESS OF INTRAORAL CARCINOMAS EXCISION

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Correct surgical therapy considers radical excision of tumor formation, what can be certificated by absence of tumor cells on histopathological specimen margins.

The aim of this investigation is to estimate incidence of presence of tumor cells on histopathological specimen margins in cases of intraoral carcinomas, surgically excised in macroscopically normal tissue with different wideness of normal tissue zone and relation to postoperative survival of this patients with intraoral carcinomas.

Fifty seven patients with intraoral carcinomas were divided in three groups according to wideness of zone of excision in macroscopically normal tissue. Lowest percent of presence of tumor cells on margins of histopathological specimens were ingroup of patients with zone of excision behind zone of indurations of soft tissue, but patients from this group had shortest postoperative survival period. Presence of tumor cells on margins of histopathological specimens of excided intraoral carcinomas was found in high number of 81,07%.

It can be said that presence of tumor cells on margins of histopathological specimens of excided intraoral carcinomas was found in extremely high number of 81,07%, but direct statistical significant relation in-between wideness of surgical excision and postoperative survival period was not found what show that another factors connected with postoperative survival of this patients must be examine. *Acta Medica Medianae 2003; 42 (3): 23-25.*

Key words: carcinomas, intraoral, histopathological, margins

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Introduction

Beside relatively low incidence from 5% to 8% of all malignant tumors in population of Western Europe and North America (1), intensive biological development and low five year survival rate of 28% for mail and 48% for female patients (2), consider intraoral carcinomas us object of numerous investigations. Regardless to difference in incidence forced by geographical position, where incidence in South East Asia is much higher then in countries of North America and West Europe, two opinions are dominant in literature: that malignant tumors with intraoral localization have fast development and that basically etiological factor with great influence on their incidence are tobacco consummation (3, 4), were low survival degree is explained by fast clinical development.

Located intraoraly, mainly on places with intensive saliva flow (3), these carcinomas piesents problems because of close relations vilh iunctionally important anatomical structures of this region. Surgical therapy of these carcinomas in much difficult because of limited access to this region and their hidden position in mouth, what results in big number of patients who came when illness is fully developed (3).

In therapy of intraoral carcinomas surgical and radiological access, or their combination are dominant therapeutically procedures. Pericot et al. 2000, came to conclusion that combination of surgical and radiotherapeuthical access present most optimal therapeutically model in treating intraoral carcinomas (5).

Correct surgical therapy considers radical excision of tumor formation, what can be certificated by absence of tumor cells on histopathological specimen margins. Applying of this principal intraoraly have us consequence excision of functionally important structures what result with great effect on patients postoperative quality of life. However, only radically performed surgical intervention present correctly performed surgical intervention, what smaller number of tumor relapses ia patients proved with no evidence of tumor cells on histopathological specimens margins (3).

Aim

The aim of this investigation is to estimate incidence of presence of tumor cells on histopathological

specimen margins in cases of intraoral carcinomas, surgically excised in macroscopically normal tissue with different wideness of normal tissue zone and relation to postoperative survival of these patients wiht intraoral carcinomas.

Methods and patients

Fifty seven patients with intraoral carcinomas, surgically treated on Department for Maxillofacial Surgery on Dentistry Clinic in Nis were examinate. All 57 patients were divided in three groups. In patients from first group tumor was excised with safe margin of 0,5 cm in macroscopically healthy tissue. In patients from second group, excision was performed on 1 cm safe margin in macroscopically healthy tissue. In third group of patients with intraoral carcinomas, excision was performed in macroscopically healthy tissue forded then zone of indurations. On Institute for pathology of Clinical Center in Nis, presence of tumor cells on margins of histopathological specimens of intraoral carcinomas is determinate. Number of correctly performed surgical interventions were compared in different group of patients, us well us postoperative survival period. In all patients postoperative radiological therapy was performed.

Results

In first group of patients, were excision was performed on 0,5 cm in macrospically healthy tissue in 100% of examinated histopathological specimens, tumor cells of intraoral carcinomas has been found on specimen margins.

In second group of patients whose intraoral carcinomas were excised on 1 cm from macroscopically tumor margins, presence of tumor cells on pathological speciments margins were found in 78,9%.

In third group of patients, were like criteria for wideness of excision was used zone of induration around intraoral carcinomas, presence of tumor cells on pathohistological specimen's margins were found in 63,1%.

From 57 examinate patients, cells of intraoral carcinomas were found on pathohistological speciments margins in 46 cases what present 81,70%. Only 19,29% tumors were radically excised.

Postoperative survival of patients was examinated by Kaplan - Mayer analysis and differences between groups by Cox-Mandel analysis.

Statistically significant difference between group of patients in postoperative survival period, were found only between patients of first group and patients of third group (chart 1).

Longest postoperative survival period was found in patients from first examinate group, then in patients from second examinate group and shortest postoperative survival period was found in patients from third examinate group.

Between patients from first and second examinate group, us between patients from second and third group statistically significant difference in postoperative survival were not found.

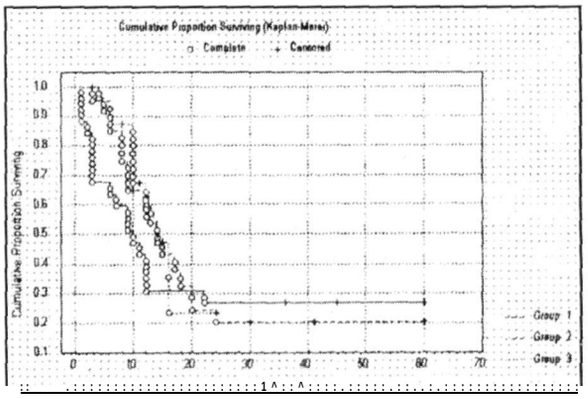

Chart 1. Postoperativ survival of patients with intraoral carcinomas from different groups

Statistically significant difference in postoperative survival period was found between patients from first examinate and third examined group.

Discussion

In performed investigation extremely high percentage of presence of intraoral carcinomas cells was found on pathohistological specimens margins. On 80,71% of pathohistological specimens tumor cells were found on pathohistological specimens margins. Such high percentage can be partially explained by technical problems in immediately postoperative managing of pathohistological specimens, us well us in mistakes in preparing for histopathological examination. However, main reason for such high percentage of presence of intraoral carcinomas cells on pathohistological specimens margins were incorrectly performed surgical intervention. Some authors found high percentage of presence of intraoral carcinomas cells on pathohistological specimen's margins (6) in cases of tumors of face skin were this percentage was high up to 59,21. Schuller et al. (7), found high percentage of tumor cells on histopathological specimens margins of excided tumors of head and neck up to 54% in contrast of results of Ord and Aisner (8), who found low percentage of tumor cells on histopathological specimens margins of excided tumors of head and neck. Some authors like Ord and Spiro (9), found connection between tumor cells presence of histopathological specimens margins and incidence of tumor relapses. This guide to Moh's surgical technical which exciding all present tumor cells, but high technical demands and high price do not make this technique so popular. Davidson (10), said that success of this technique is identical to success of combined surgical and radiotherapy. It is interesting that statistically significant difference persist only between first and third group of patients. Such results show that persist possibility that survival of surgically treated patients with intraoral carcinomamor cells on margins of histopathological specimens. Especially, considering that surgical interventions was performed by couple of surgeons, and local expansion of disease was different in different patients. Ballenger and Snow said that survival of patients with treated tu-

mors of head and neck did not improved in last fifty years and that only changed course of dead. In middle of last century this patients died mostly by local expansion of disease and today main reason is development of distant metastasis. There are opinion that expansion of intraoral carcinomas is discontinuing, were Brenan et al. found 17% patients with tumor cells on margins of histopathological speciments of intraoral carcinomas which are excided widely in macroscopically healty tissue.

Conclusion

It can be said that tumor cells found on margins of histopathological speciments of excided intraoral carcinomas are present in high percentage of 81,07%, what can be connected with often tumor relapses and its aggressive behaving, but direct conection between wideness of excision in macroscopically healty tissue and postoperative survival period was not found, what impliment another factors wich can have importance for postoperative survival in patients with intraoral carcinomas.

References

Chen J, Katz R, Krutchkoff D. Intraoral sqamous cell carcinoma. Cancer 1994; 66: 1288-96.

Ildstad S, Tollerund D, Bigelow M E, Remensnyder J. Squamous cell carcinoma of the head and neck at Massaacteristics in man and women. Surgery 1986; 99 (1):7-13.

Ballenger J, Snow J. Otorhinolaryngology: Williams&Wilkins: Baltimor-Philadelphia-London-Tokyo; 1996.

Barasch A, Morse DE, Krutschov K, Einsberg E. Smoking, gender and age us risk factors for site specific intraoral squamous cell carcinoma. A case series analysis. Cancer 1994; 73(3):509-13.

Pericot P. Survival evaluation of treatment modality in squamous cell carcinoma of the oral cavity and oropha--rynx. J Cranio Maxillofacial Surg 2000; 28:49-55.

Petrović D. Komparativna morfometrijska i klinička analizakarcinomakože lica. Doktorskadisertacija: Niš; 2000.

7. Schuller S. Tissue conserving surgery for prognosis, treatment and function preservation. Laryngoscope 1998; 108:1599-604.
8. Ord RA, Aisner S. Accurancy of frozen section in assessing margins in oral cancer resection. J Oral Maxillofac Surg 1997; 55(7):663-9.
9. Spiro RH, Guillamondegui O Jr, Paulino AF, Huvos AG. Patern of invasion and marginal assessmenty in patients with oral tongue cancer. Head Neck 1999; 21(5): 408-13.
10. Davidson TM. Moh' s for head and neck mucosal cancer; report on 111 patients. Laringoscope 1988; 98:1078-83.
11. Brennan B. Molecular assesment of histopathological staging in squamous cell carcinoma of the head and neck. New Eng J Med 1995; 16:429-35.

UČESTALOST PRISUSTVA TUMORSKIH ĆELIJA NA IVICAMA PREPARATA U ODNOSU NA ŠIRINU EKSCIZIJE INTRAORALNIH KARCINOMA

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Pravilna hirurška terapija podrazumeva radikalno uklanjanje tumorske formacije što se verifikuje odsustvom tumorskih ćelija na ivicama preparata.

Cilj rada je odrediti učestalost pojave tumorskih ćelija na ivicama preparata ekscidiranih intraoralnih karcinoma sa različitom širinom ekscizije u zdravo, te odnos širine ekscizije u zdravo i preživljavanja bolesnika sa intraoralnim karcinomima.

Pedeset sedam bolesnika sa intraoralnim karcinomima ispitivanih u istraživanju podeljeno je u tri grupe u odnosu na širinu zone ekscizije. Najniži procenat prisustva tumorskih ćelija na ivicama patohistoloških preparata bio je u grupi bolesnika sa ekscizijom tumorske promene iza zone induracije mekih tkiva, ali bolesnici ove grupe su živeli najkraće.

Može se reći da su tumorske ćelije konstatovane na ivicama patohistoloških preparata ekscidiranih intraoralnih karcinoma u izuzetno visokom procentu od 81,07% što može ukazivati na razlog čestih recidiva i agresivnog toka ovih tumora. Međutim, direktna veza širine hirurške ekscizije i dužine preživljavanja nije konstatovana, te se moraju uzeti u obzir i drugi faktori koji mogu uticati na preživljavanje bolesnika. *Acta Medica Medianae 2003; 42 (3): 23-25.*

Ključne reči: *karcinomi', intraoralno, patohistolcški, ivice*