Elective Neck Dissection in Node-Negative Early-Stage Oral Cancer

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Editorial Note

In a recent original article published in New England Journal of Medicine D’Cruz et al., reported about the value of elective versus therapeutic neck dissection in node-negative oral cancer [1]. In a prospective, randomized, controlled trial the effect on survival of elective neck dissection (ipsilateral neck dissection at the time of the primary surgery) versus therapeutic node dissection (watchful waiting followed by neck dissection for nodal relapse) in patients with stage T1 or T2 oral squamous cell carcinomas was evaluated. In their article the authors suggested that elective neck dissection improves overall and disease-free survival compared to therapeutic neck dissection after nodal relapse. The results of this study should be discussed critically.

The secure diagnosis of cervical lymph node metastases in head and neck cancer still represents a clinical problem. This is mainly due to the anatomic particularities of the lymph nodes in the head and neck area. In this area the close neighborhood of the primary tumor and the draining lymph nodes are characteristic as well as the dense lymphatic system and the high number of cervico-facial lymph nodes. Further, there is the problem of micrometastases and the fact that a high number of cervical metastases have a size of less than one centimeter. The sensitivity of the exclusive inspection and palpation for detection of the cervical lymph nodes amounts to about 60–70% while the according values for MRT and CT scan vary between 65 and 88% in the literature [2,3]. The most significant procedure for detection of lymph node metastases is currently B mode sonography, completed by Doppler sonography in combination with sonographically guided aspiration cytology. According to the results of a comparative meta-analysis it disposes of a sensitivity of 80% and a specificity of 98% and is thus superior to CT scan and to MRI [4].

While in the context of surgical intervention in cases of clinical suspicion of present lymph node metastases of squamous cell carcinomas of the head and neck a modified radical neck dissection with removal of all five cervical lymph node levels is performed, especially the management of occult metastases in clinical N0 neck is the topic of controversial discussions. The conception of conservative procedure with careful follow-up examination in the sense of wait-and-see policy is opposed to the performance of elective neck dissection. The problem of clinical N0 neck results from the partly insufficient sensitivity and specificity of non-invasive examination techniques. If neither clinically nor after performance of imaging diagnosis no hint for the presence of lymphogenic metastasis can be found, occult metastases must nonetheless be expected in 12-50% of the cases, depending on the location of the primary tumor [5]. Conservative procedures in the sense of wait and see policy bears the risk to overlook those occult lymph node metastases. Finally, it must be emphasized that the planning of selective neck dissection with different extent is only an appropriate therapy with adequate possibilities for follow-up in combination with ultrasound examinations.

About 50% of the patients suffering from oral cancer reveal lymph node metastases while the cancers of the tongue show the highest metastatic rate due to the high lymphatic density and the muscular structure of the tongue. The incidence of occult lymph node metastases of T1 and T2 cancers of the oral cavity amounts to about 30% [6]. The metastatic tendency of oral cancer is directly related to the tumor size and especially to its infiltration depth.

The main factors in determining the usefulness of follow-up by wait and see policy is the quality of initial and follow-up examination of the neck as well as a rigorous postoperative examination schedule [7]. Flach et al., recently reported the results of wait-and-see policy versus elective neck dissection in a series of 285 patients with clinically N0 oral cancer [8]. In the observation group, 27.8% developed delayed metastases. Most of these delayed metastases required modified radical neck dissection followed by adjuvant radiotherapy. However, five year disease-specific and overall survival rates were almost identical for patients undergoing neck dissection for delayed metastases after observation (80.0% and 62.8%, respectively) and for patients undergoing elective neck dissection (81.3% and 64.2% respectively). It is noteworthy that, in this study, ultrasound guided fine needle aspiration cytology was used during follow-up for early detection of initially missed metastases.

D’Cruz et al., however, disregarded the fact that patients without elective neck dissection had neither an adequate staging nor follow-up [1].

Nearly half of all patients in therapeutic surgery group (48%) were lost for ultrasound examination of the neck in the follow-up. High rate of N3 necks (18.4%) proves the insufficiency of the neck examination in this study. Especially this group of patients needs a regular follow-up considering about 30% risk for occult metastases in the literature.

The high incidence of nodal relapse in 114 patients (45.1%) in therapeutic surgery group with small number of recurrences at the primary site revealed that a significant number of patients were initially N+ and wrongly randomized. The high number of false negative results is also not corresponding to the internationally accepted standards for neck staging using ultrasound, CT or MRI with high accuracy.

Furthermore, only 71 (28.1%) patients had adjuvant radiotherapy for regional metastases. In addition, regional metastasis itself is rarely the primary cause of death. The cause of death is unclear with small number of distant metastases and second primaries in this study.

References


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