Difference of WHO Pathological Grading among Different Depths in Oral Squamous Cell Carcinoma and Its Clinical Significance

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Due to the heterogeneity of malignant tumors, the distribution and arrangement of tumor cells within the same tumor is un uniform. So preoperative biopsy and postoperative pathologic examination can not reflect precisely tumor biological characteristics and prognosis. In this project, oral squamous cell carcinoma specimen was divided into surface, central area and deep infiltrating depth and WHO pathological grade was observed respectively in each depth and to study the difference and its clinical significance. 35 oral squamous cell carcinoma patients without preoperative radiotherapy and chemotherapy were included. The pathological specimens were collected from surface, centra, deep infiltration depth in each patient. The average age of the patients was 55.9 years old (range from 29 to 71 years old); in which there were a total of 19 males and 16 females; with a total of 7 cases of cheek, 14 case in tongue, 9 cases in gingival, and 5 cases in floor of mouth; TNM stage: T1 in 4 cases, T2 in 16 cases, T3 in 8 cases, and T4 in two cases. After the localization (surface, central, deep), 35 cases of squamous cell carcinoma were graded respectively of the 3 depth by oral pathologist, and the WHO standard was adopted. Because WHO classification was a semi quantitative index, Radit analysis method was used. Radit analysis: X(0.01)3=11.345, P< 0.01. The results showed that there were significant differences in the WHO pathological grading among surface, central and deep infiltrating depth. Among them, the surface area with the center area, surface area with deep infiltrating area, central area with deep infiltrating area were different (P< 0.05), and compared from the surface to the central area of the area to the deep infiltrating area, differentiation is getting worse and the deep infiltrating area was the highest in pathological grade.

The tumor of human body, especially malignant tumor, is composed of cells with different pathological and biological behavior. The heterogeneity of tumor mainly refers to the difference of tumor cells in the same tumor due to different tumor cell line. The internal structure of the tumor is very complex. Therefore, preoperative biopsy and postoperative pathological tissue might not always contain the most invasive cells which could accurately reflect the tumor biological characteristics. This will affect the significance of prognosis and whether the design is correct or not. The results of the treatment of different researchers will lose comparable.

It is believed that the lower the degree of tumor differentiation, the higher the degree of malignancy, the worse the prognosis. However, in recent years, there have been a lot of reports about the relative contradiction between the pathological grade and prognosis of oral squamous cell carcinoma. Bryne found Broder’s grade I, II, III of oral cancer patients with 5 year survival rate was 34%, 41%, 24% respectively. More et al. found that WHO pathological grade was not associated with prognosis. The reasons for this relative contradiction may be caused by specimen selected area were different, therefore, it is very necessary to put forward a reasonable and consensus area which the specimen was gained.

The results of this study show that compared with surface and central depth, the deep infiltration area, WHO grading difference was higher, differentiation is even worse, the invasion ability of the cells may be located in the frontier area of tumor invasion. Therefore, the depth of infiltration could reflect the biological characteristics of tumor. On the basis of these results, Bryne presented the grading of infiltrating cells which showed that the prognosis was related. Previous reports of inconsistence of WHO grade and prognosis might be with the sites of the authors selected were uniform.