

HISTOPATHOLOGICAL GRADATION OF ORAL SQUAMOUS CELL CARCINOMA IN NISWAR (SNUFF) DIPPERS

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ABSTRACT

The study was carried out on the biopsies confirmed Oral Squamous Cell Carcinoma patients, in oral and maxillofacial surgical unit of Khyber College of Dentistry, Peshawar over a period of one year. A total of 80 snuff (niswar) dipper patients were included in the study. Well differentiated squamous cell carcinoma was the most common tumour reported. The aim of the study was to determine the histopathological gradation of the oral squamous cell carcinoma in snuff dipper patients in the region.

Key words: Snuff dipper's carcinoma, Niswar Dippers's Carcinoma, Oral SCC, Grading, Histopathology.

INTRODUCTION

Squamous cell carcinoma is also termed as epidermoid carcinoma and it is by far the most common malignant tumour of oral cavity, representing about 90% of all oral cancers. For this reason, oral squamous cell carcinomas are often designated as "oral cancers".¹

The term differentiation refers to the extent the tumour cells resembles their mother cells (cells of origin) i.e. cells of stratified squamous epithelium both structurally and functionally. And according to the degree or grade of differentiation of its neoplastic cells, Oral SCC graded as follows.²

GO- Grade cannot be assessed

G1- Well differentiated oral SCC

G2- Moderately differentiated oral SCC

G3- Poorly differentiated oral SCC

G4- Undifferentiated oral SCC

Most of the oral squamous cell carcinomas belong to the well differentiated category (about 80%).³

Histopathological features of oral SCC vary from well differentiated to moderately differentiated to poorly differentiated. Poorly differentiated oral SCC has the worst prognosis. Understanding the biological behaviour of tumours is established through histopathological investigations.⁴

Oral squamous cell carcinoma is the third commonest malignant tumour in males in North West Frontier Province (NWFP). While it is the commonest tumour encountered in the Oral cavity. Recent trends besides few exceptions indicate that the incidence and mortality rates of oral cancer are declining and it can be due to the reduced exposure to various etiologic agents.⁵

MATERIALS AND METHODS

A total of 80 patients (68 male and 12 female) biopsy proved Oral SCC patients, with a positive history of niswar dipping were included in the study. Patients

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having no history of niswar dipping were excluded from the study. Both incision and excision biopsies were performed in oral and maxillofacial surgical unit Khyber College of Dentistry Peshawar and the specimens sent to pathologists for histopathology. While some of the old biopsy confirmed Oral SCC patients, having biopsy reports at the time of presentation were also included in the study. All these biopsy reports were received and grading of the tumour done from G0 to G4.

RESULTS

Out of 80 snuff dipper Oral SCC patients 68 were males and 12 females. Male to female ratio being 6.66: 1. Results show that G1, i.e., well differentiated squamous cell carcinoma is the most common grade of the tumour reported in niswar dipper oral SCC patients (67.5%), followed by G2 i.e. moderately differentiated (27.5%) and G3 i.e., poorly differentiated oral SCC (5%). For grading of the tumour see table 1.

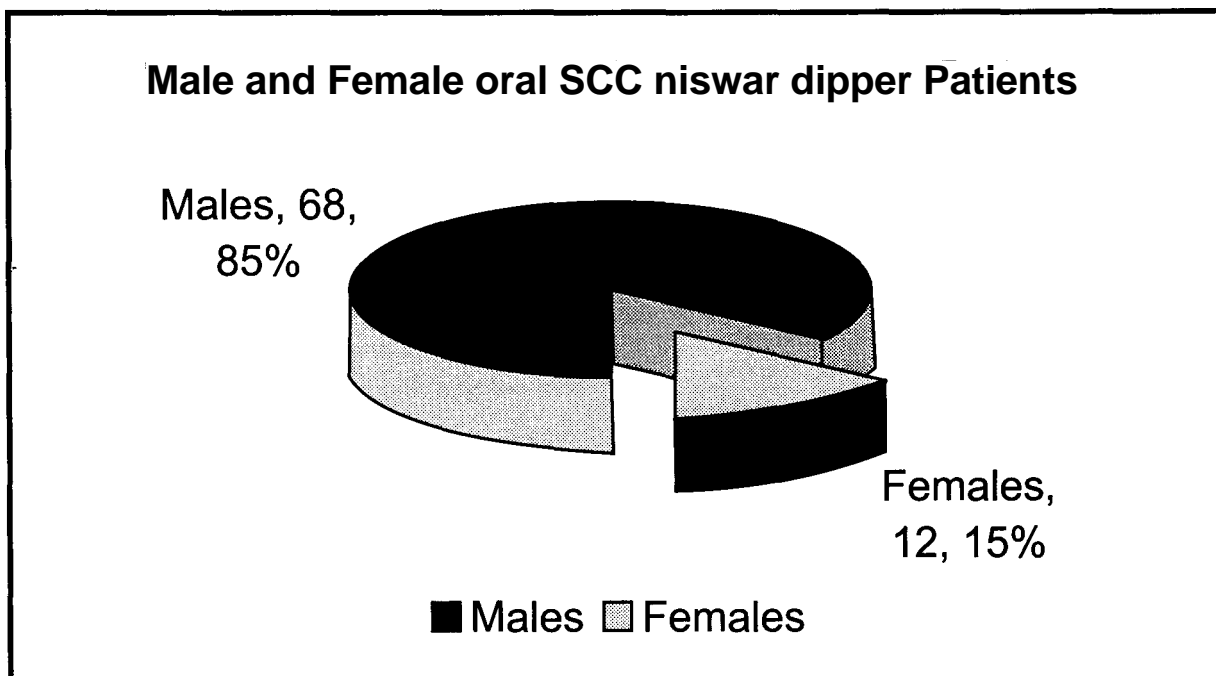


TABLE 1: GRADING OF THE ORAL SCC SNUFF DIPPER PATIENTS

Grading	Males	Females	Total	%age
G0	0	0	0	0
G1	47	7	54	67.5%
G2	18	4	22	27.5%
G3	3	1	4	5%
G4	0	0	0	0
TOTAL	68	12	80	100%

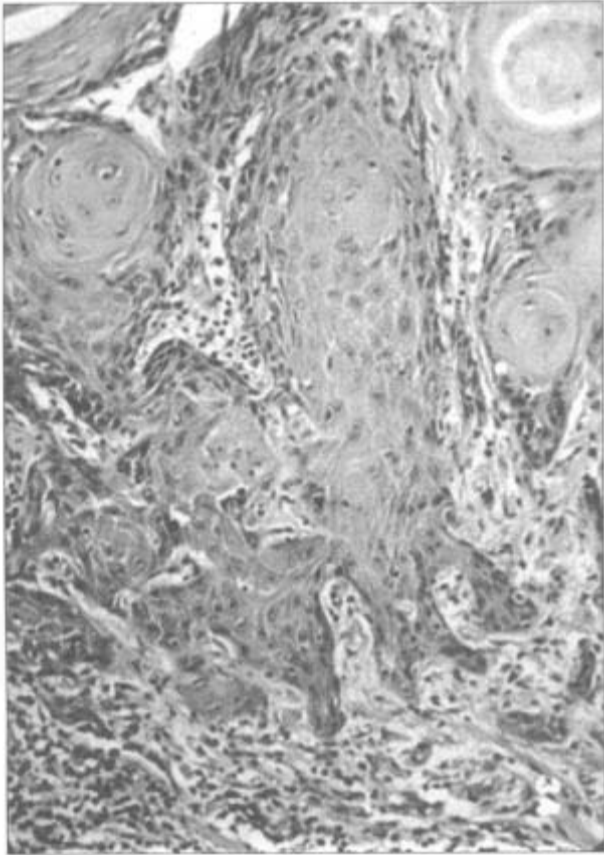


Fig 1. (G1) Well differentiated Oral SCC

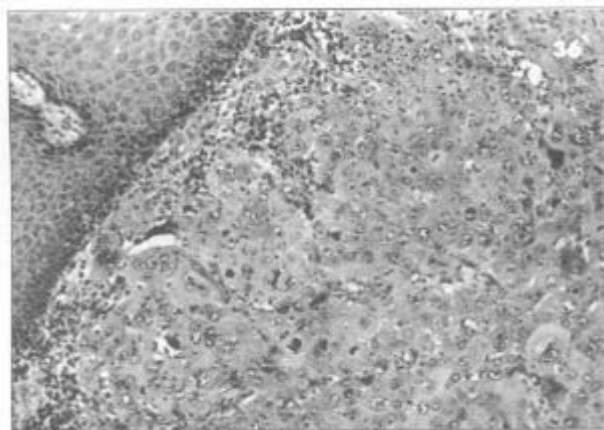


Fig 3. (G3) Poorly differentiated Oral SCC

DISCUSSION

Tobacco in its various forms has been used for centuries. In Pakistan, tobacco is used in both smoking as well as in smokeless form. Smoking cigarette is

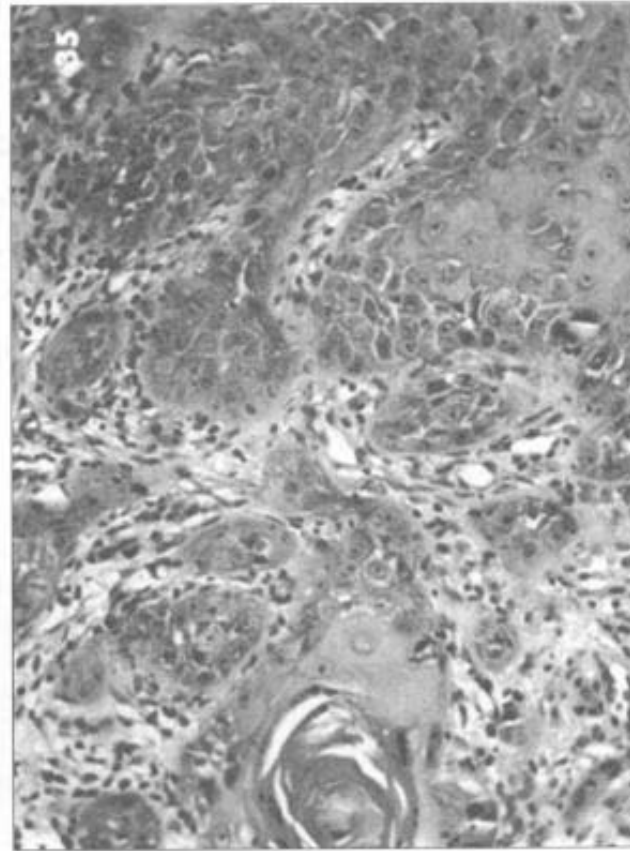


Fig 2. (G2) Moderately differentiated Oral SCC

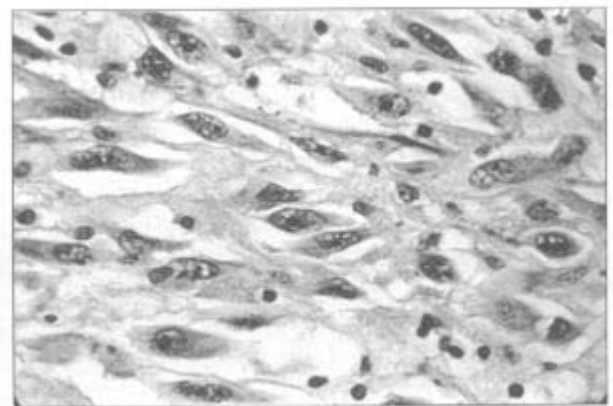


Fig 4. (G4) Undifferentiated Oral SCC

common throughout the country. Pan a type of smokeless tobacco is popular in Karachi and some cities of Punjab. Snuff (Niswar) which is powdered tobacco mixed with ash or lime and some flavoring or chemical agents, is placed between the gums and the lower lip. This type of smokeless tobacco is popular in Balochistan and North West Frontier Province (NWFP).⁶

Niswar is the most frequently used form of tobacco in the periphery of Peshawar and Peshawar, i.e., 64.5% followed by chillum 17.5% (which is a form of smoked tobacco used by local people as an alternative to cigarette smoking). A study from *Sharifullah* shows that the habit of snuff dipping is more common in Afghanistan. In a study at *Nangrahar University* it was found that 80 percent of males and 20 percent of female were used to the habit. Whereas 18% of the University students were in the habit of using niswar.⁷

Snuff use has been recorded as a possible cause of oral SCC.^{8,9} A study from Shah SH, Shah SN and Rizwanullah (1993) shows that Niswar is the most common form of smokeless tobacco, used in the periphery of Peshawar. The results of the study show that 64% of both sexes are used to snuff (Niswar) dipping.¹⁰

Histologically Oral SCC presents itself as well differentiated, moderately differentiated and poorly differentiated tumour. This finding has got a great bearing on prognosis and 5 year survival because the prognosis for poorly differentiated tumours is poor as compared to well differentiated tumours. According to a study from John Isaac carried out on 27 oral SCC patients at Liaquat University of Medical and Health Sciences (LUMHS) Jamshoro, 66% of the tumours were graded as G1 and 34% as G3, while none of the patient was graded as G2 i.e., moderately differentiated oral SCC. The result of this study shows that only 5% of the patients are graded as G3, and 27.5% as G2 contrary to John Isaac study.

67.5 % of patients were graded as G1 which shows that the prognosis of the oral SCC in squamous cell carcinoma in snuff dippers is good as far as the histological gradation (degree of differentiation is concerned), but unfortunately this is not the case when it comes to the staging. At the time of presentation of these tumours, most of them were reported in advanced stages, with involvement of the bone, skin and lymph nodes.

CONCLUSIONS

1. Well differentiated Oral SCC (G1) is the most common grade of the tumour in those patients with positive history of Niswar dipping
2. Grading of this tumour favours good prognosis if the lesion is diagnosed at an early stage.
3. Snuff dipping is the most common form of smokeless tobacco use in this part of the world i.e., North West Frontier Province.
4. Niswar (snuff) dipping is a strong risk factor in the aetiology of oral SCC in Region.

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