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Prevalence of Squamous Cell Carcinoma of Oral Cavity at Oral and Maxillofacial Surgery Department Dr. Hasan Sadikin Hospital Period of 2019-2020

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Abstract

Background: International Agency Data for Research on Cancer (IARC) in 2018 showed that cancer of the lips and oral cavity was ranked the 17th most common cancer in the world, there were 354,864 new cases of oral cancer in the world and cases of death from oral cancer were 177,384. case. New cases of oral cancer in Indonesia in 2018 were 5,078 cases and cases of death caused by oral cancer were 2,326 cases. Research on the characteristics of squamous cell carcinoma in the oral cavity in Indonesia is still relatively low.

Objective: To analyze the prevalence of squamous cell carcinoma patients in the oral cavity at the Department of Oral and Maxillofacial Surgery, Dr. Hasan Sadikin Hospital Bandung from January 2019 to December 2020.

Methods: Retrospective observational study by taking medical record data of patients with oral squamous cell carcinoma which had been clarified from histopathological results at the Oral Surgery Clinic, Dr. Hasan Sadikin Bandung. The sampling process was carried out using a purposive sampling method. The variables in this study were age, gender, location of the lesion, histopathological features, duration of the lesion and the complications caused. Data analysis using Microsoft Excel program.

Results: The number of respondents aged 25-36 years as many as 4 people or 14%, ages 37-48 years as many as 7 people or 24%, and ages over 48 years as many as 18 people or 62%. There were 12 male patients or 41% and 17 female patients or 59%. Patients with a history of smoking as many as 10 people or 33%, a history of chronic irritation as many as 6 people or 20% and others as many as 14 people or 20%. The results of anatomical pathology showed that patients with poorly differentiated were 0 people or 0%, moderately differentiated were 9 people or 41%, well differentiated were 12 people or 55%, and others were 1 person or 4%.

Conclusion: The age criteria of patients with the most squamous cell carcinoma are over 48 years old as many as 18 people or 62%. Based on the gender criteria, the patients with the highest incidence of

squamous cell carcinoma tumors were 17 people or 59% female. anatomical pathology well differentiated as many as 12 people or 55%.
Keywords: squamous cell carcinoma, oral cancer, patient characteristics

Introduction

Oral cancer is a malignant neoplasm that appears on the lips or oral cavity. Traditionally defined as squamous cell carcinoma, because in the oral region, 90% of cancers are histologically derived from squamous cells. [1] Data International Agency for Research on Cancer (IARC) in 2018 showed that cancer of the lips and oral cavity was ranked the 17th most common type of cancer in the world, of which there were 354,864 new cases of oral cancer in the world and the number of deaths from oral cancer was 177,384 cases. [2] New cases of oral cancer in Indonesia in 2018 were 5,078 cases and cases of death caused by oral cancer were 2,326 cases. [3]

Oral cancer is more common in men than women in a 2:1 ratio in most ethnic groups. The average age of patients with squamous cell carcinoma of the oral cavity in the United States is 62 years. [4] The risk of squamous cell carcinoma of the oral cavity increases with the period of exposure to risk factors, and increasing age adds a further dimension of age-related mutagenic and epigenetic changes.

The location of oral cancer differs depending on race and lifestyle. According to a calculation by the Japanese Association of Oral and Maxillofacial Surgeons in 2002, the most common oral cancers occurred in the tongue 40%, mandibular gingiva (20.3%), maxillary gingiva (12.0%), buccal mucosa (10.3%). %), floor of the mouth (9.2%), antrum and palate. [5]

Research on the characteristics of squamous cell carcinoma in the oral cavity in Indonesia is still relatively low. It is hoped that this study can become a database of oral squamous cell carcinoma at the Department of Oral and Maxillofacial Surgery, Dr. Hasan Sadikin Hospital Bandung.

The aim of this study was to analyze the prevalence of patients with squamous cell carcinoma of the oral cavity at the Department of Oral and Maxillofacial Surgery, Dr. Hasan Sadikin Hospital Bandung from January 2019 to December 2020.

Methods

This research is a retrospective observational study by taking medical record data of patients with oral squamous cell carcinoma which has been clarified from histopathological results at the Department of Oral and Maxillofacial Surgery, Dr. Hasan Sadikin Hospital Bandung. The sampling process was carried out using a purposive sampling method. The way of sampling is done intentionally by researchers and not done randomly according to the order of subject data that meets the inclusion criteria. Sampling in this study was based on the results of histopathological examination with inclusion criteria, namely, patients with oral squamous cell carcinoma abnormalities confirmed by histopathological examination results and patients with complete medical record data, including medical record number, age, gender. , location of the lesion, histopathological appearance, duration of the lesion and complications. While the exclusion criteria in this study were patients with incomplete medical records. The variables in this study were age, gender, location of the lesion, histopathological features, duration of the lesion and the complications caused. The data obtained were then processed and presented in the form of a distribution table, namely age, gender, location of the lesion, histopathological description, duration of the lesion and complications caused. This research has received approval from the Ethics Committee of the Faculty of Medicine, University of Padjadjaran and Hasan Sadikin Hospital, Bandung.

Results

This research was conducted at the Department of Oral and Maxillofacial Surgery, Dr. Hasan Sadikin

Hospital Bandung from January 2019 to December 2020. The data obtained were 92 cases. The data were obtained from secondary data through the medical records of patients with squamous cell carcinoma tumours at the Dr. Hasan Sadikin Hospital for the period January 2019 – December 2020 to determine the prevalence based on age, gender, domicile, family history, location, lymph node metastasis and involvement, anatomical pathology results, diagnostic modalities, therapy and preoperative complications. The research results are presented in the form of tables and diagrams.

Table 1: Characteristics Patients

Characteristics	Frequency (n)	Percentage (%)
Age		
25 - 36 years	4	14%
37 - 48 years old	7	24 %
over 48 years old	18	62%
Gender		
Male	12	41%
Female	17	59%
Domicile		
Bandung Regency	14	48%
Tasikmalaya Regency	6	21%
Cirebon Regency	1	4%
Indramayu Regency	3	10%
Sukabumi Regency	1	3%
Banda Aceh	1	3%
Garut Regency	1	3%
Purwakarta Regency	1	3%
Karawang Regency	1	3%
Family History		
Yes	0	0%
No	29	100%
Predisposing Factors		
Smoking	10	33%
Chronic irritation	6	20%
Others	13	47%
Region		
Tongue	19	66%
Buccal mucosa	3	10%
Maxilla	1	3%
Mandibulla	6	21%
Size of Mass		
T1	1	5%
T2	1	6%

T3	7	39%
T4	9	50%
Lymph Nodes		
N0	1	5%
N1	12	63%
N2	6	32%
Metastases		
Mx	0	0%
Mo	19	95%
M1	1	5%
Result of Pathology Anatomy		
Poorly differentiated	0	0%
Moderately differentiated	9	41%
Well differentiated	12	55%
Others	1	4%
Diagnostic Modalities		
FNAB	2	5%
CT Scan of head and neck	15	39%
Panoramic	9	24%
USG Colli	12	32%
Therapy		
Chemoterapy	9	26%
Radiotherapy	6	17%
Excision	4	11%
Hemiglossectomy	8	23%
Hemimaxillectomy	1	3%
Hemimandibulectomy	7	20%
Preoperative complications		
Systemic	9	50%
Malnutrition	4	22%
Preoperative bleeding	5	28%

From the results of the study through medical records based on age, patients with age were categorized into several groups of 25-36 years, 37-48 years, and >48 years. The number of respondents in the 25-36 year age group is 4 people or 14%, the 37-48 age group is 7 people or 24%, and the age group over 48 years is 18 people or 62%

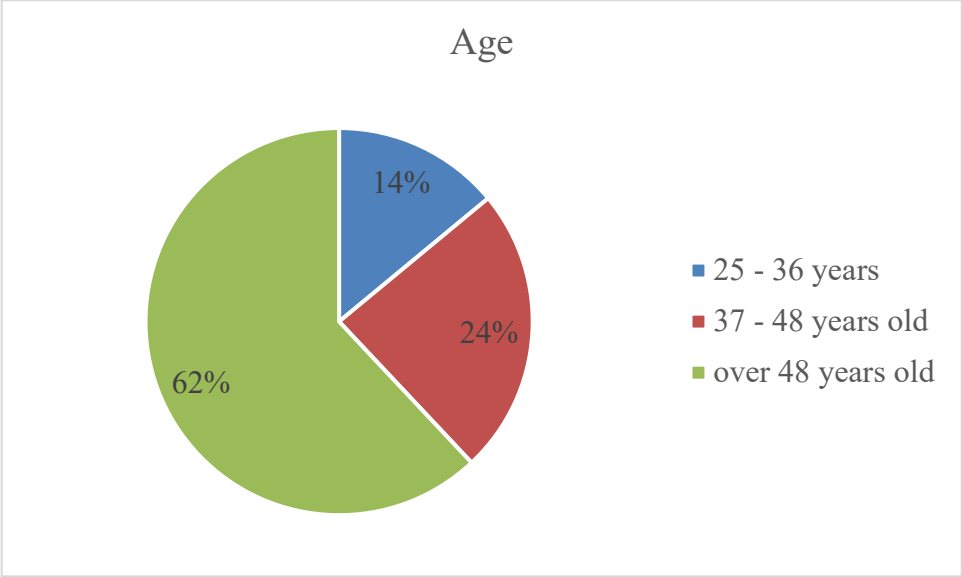

Figure 1. Diagram of Patient Characteristics Based on Age

From the results of the study through medical records based on gender criteria, 12 patients were male or 41% and female as many as 17 people or 59 %

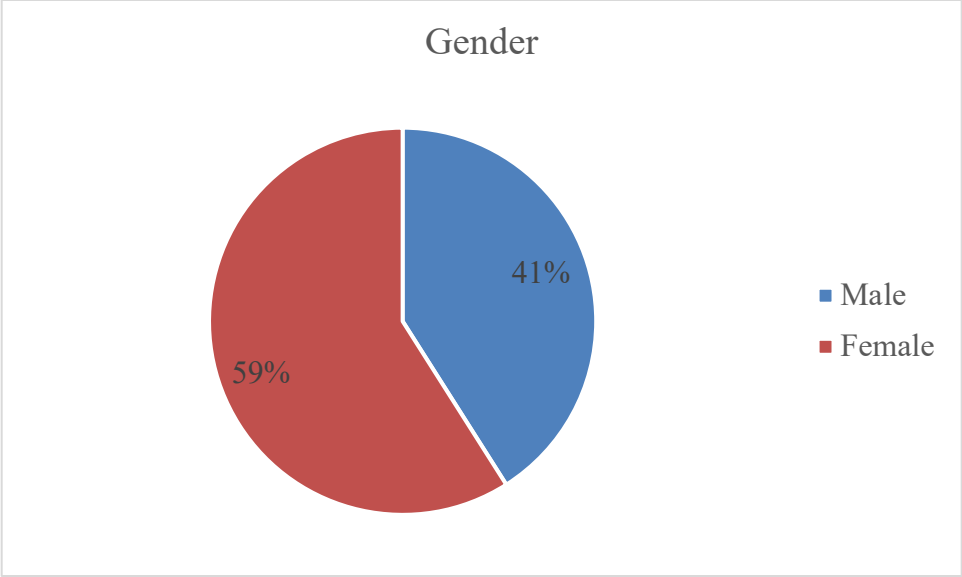

Figure 2. Diagram of Patient Characteristics Based on Gender

From the results of the study through medical records based on the criteria of domicile, it was found that patients with domicile in Bandung Regency as many as 14 people or 48%. Tasikmalaya Regency as many as 6 people or 21%, Cirebon Regency as many as 1 person or 4%, Indramayu Regency as many as 3 people or 10%, Sukabumi Regency as many as 1 person or 3%, Banda Aceh as many as 1 person or 3%, Garut Regency as many as 1 person or 3%, Purwakarta Regency as many as 1 person or 3% and Karawang Regency as many as 1 person or 3%.

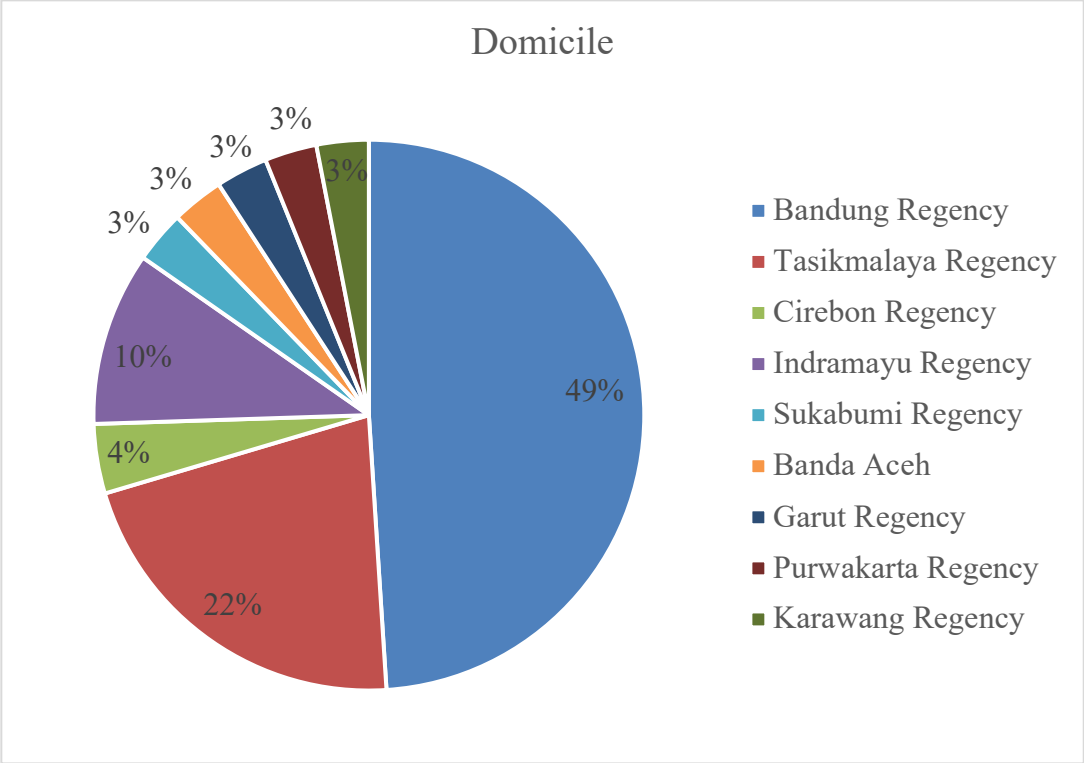

Figure 3. Diagram of Patient Characteristics Based on Domicile

From the results of research through medical records based on family history criteria, 29 patients with no family history or 100% and no patients with family history were found.

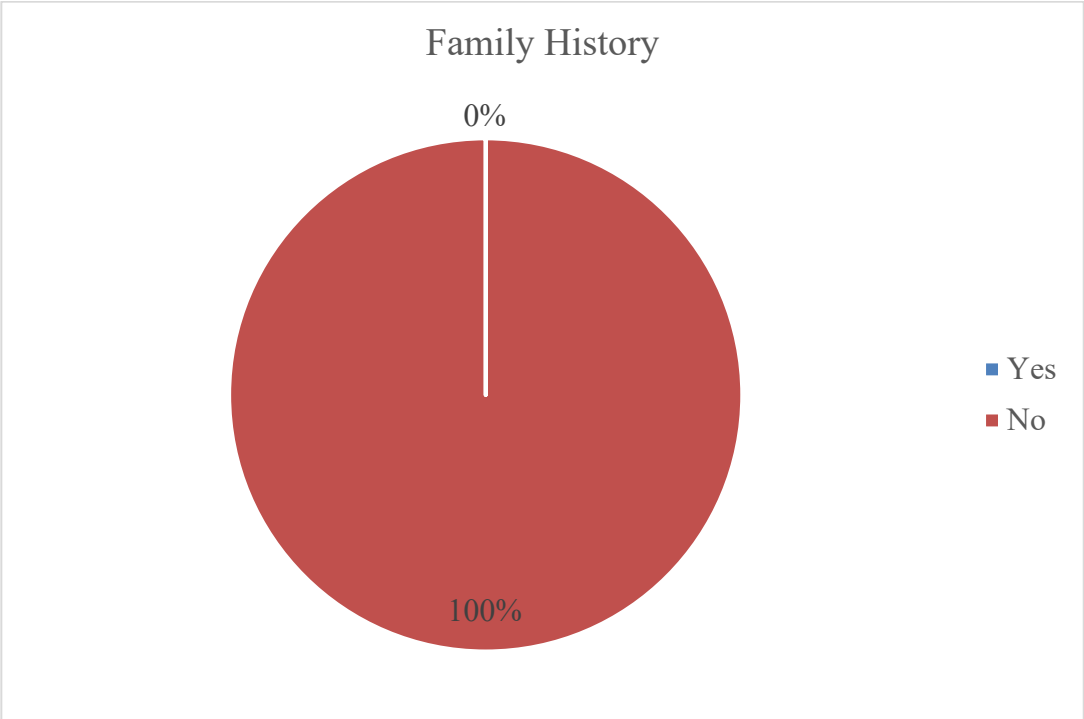

Figure 4: Diagram of Patient Characteristics Based on Family History

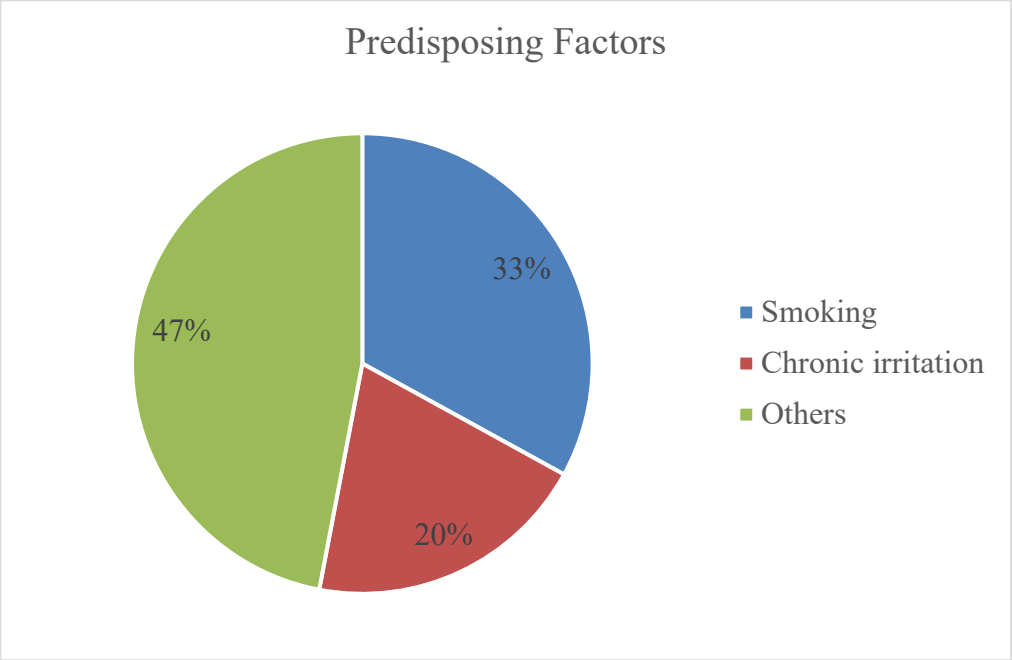

Figure 5. Diagram of Patient Characteristics Based on Predisposing Factor

From the results of the study through medical records based on the criteria of predisposing factors, it was found that patients with a history of smoking as many as 10 people or 33%, a history of chronic irritation as many as 6 people or 20% and others as many as 14 people or 20 %.

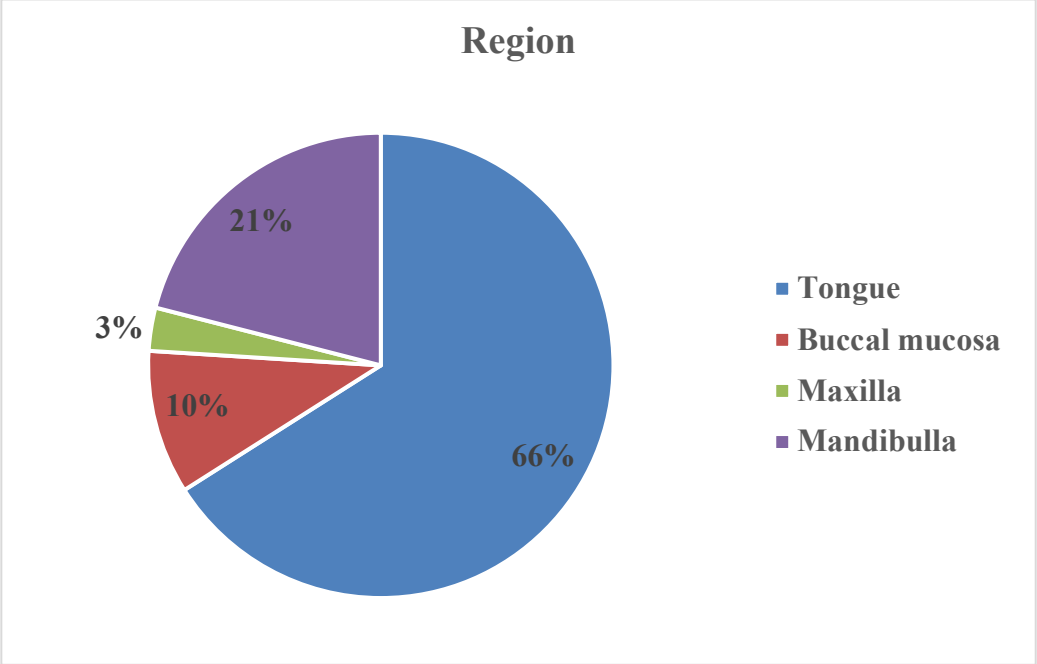

Figure 6. Diagram of Patient Characteristics Based on Region

From the results of the study through medical records based on regional criteria, 19 patients or 66% of patients with tumors on the tongue or 66% of the patients, buccal mucosa 3 or 10%, maxillary 1 or 3% and mandibular 6 people or 21%.

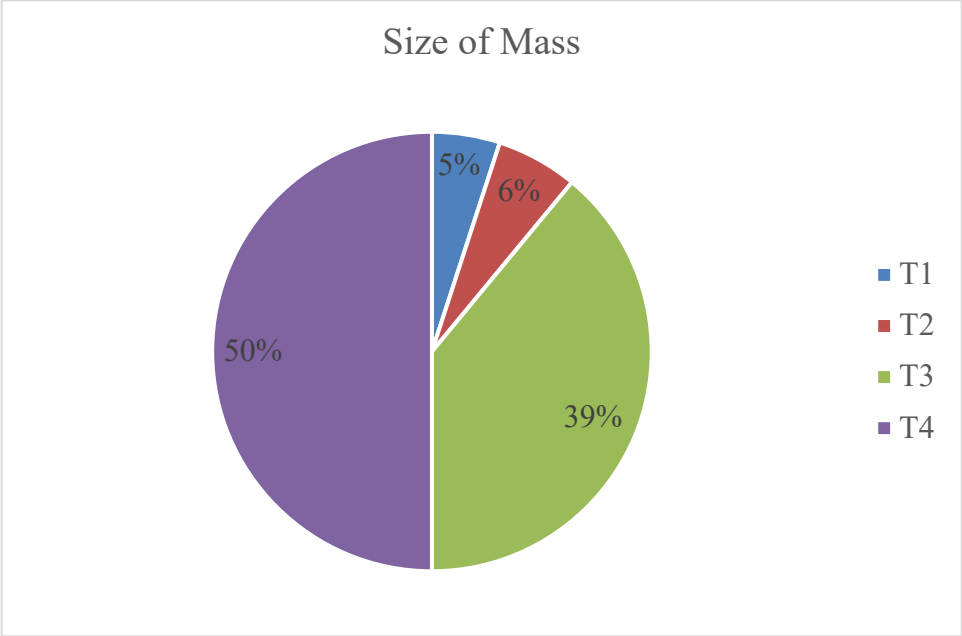

Figure 7. Diagram of Patient Characteristics Based on Size of Mass

From the results of the study through medical records based on the criteria for mass size, it was found that patients with mass size T1 were 1 person or 5%, T2 was 1 person or 6%, T3 was 7 people or 39% and T4 was 9 people or 50%.

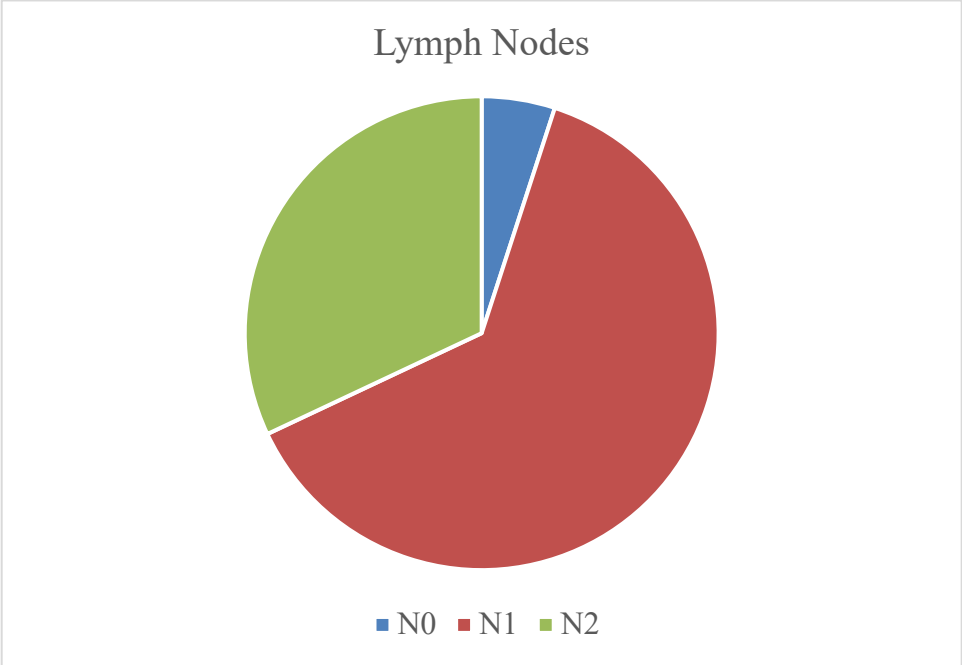

Figure 8. Diagram of Patient Characteristics Based on Lymph Nodes

From the results of the study through medical records based on lymph nodes criteria, it was found that 1 person or 5% of patients had lymph node involvement, N0 or 5%, N1 12 people or 63%, N2 6 people or 32%.

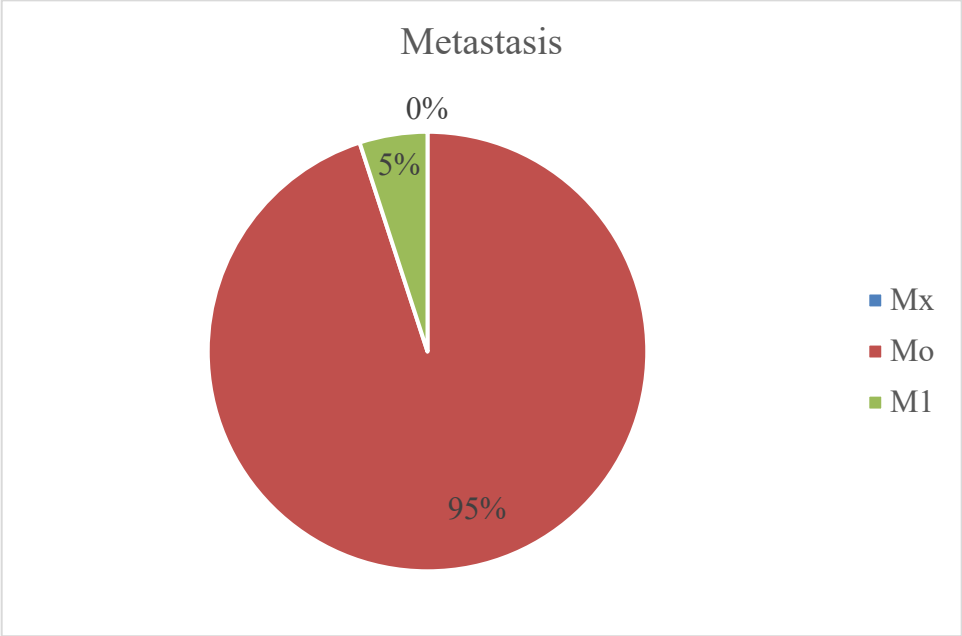

Figure 9. Diagram of Patient Characteristics Based on Metastasis

From the results of the study through medical records based on the criteria for tumor metastasis, it was found that patients with tumor metastases were Mx as many as 0 people or 0%, M0 as many as 19 people or 95% and M1 as many as 1 person or 5%.

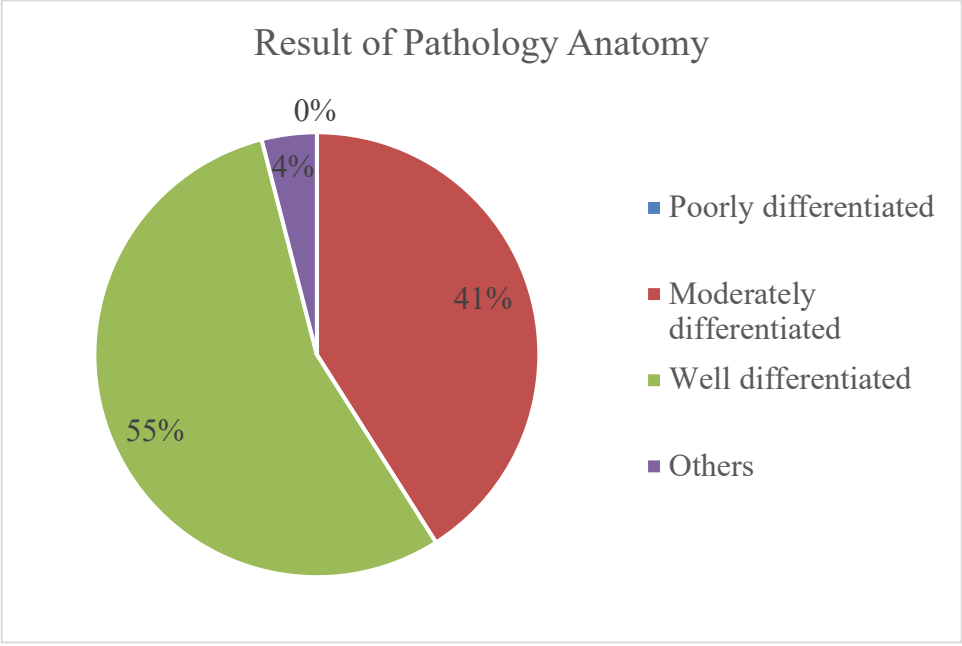

Figure 10. Diagram of Patient Characteristics Based on Result of Pathology Anatomy

From the results of the study through medical records based on the status criteria for anatomical pathology, it was found that patients with poorly differentiated were 0 people or 0%, moderately differentiated were 9 people or 41%, well differentiated were 12 people or 55%, and others were 1 person. or 4%.

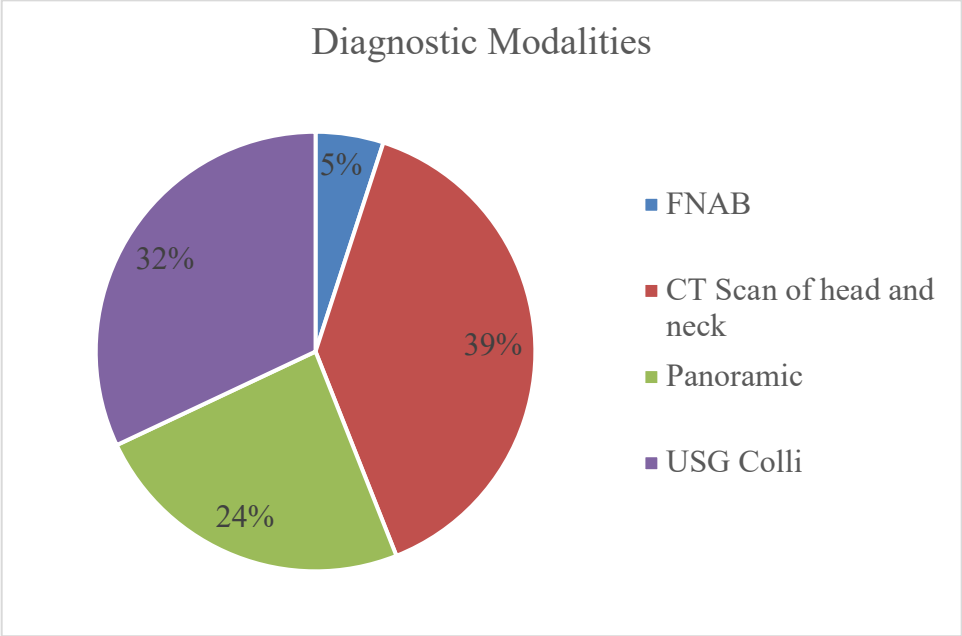

Figure 11. Diagram of Patient Characteristics Based on Diagnostic Modality

From the results of the study through medical records based on the criteria for the status of the results of diagnostic modalities, it was found that patients with FNAB were 2 people or 5%, CT Scan of the head and neck as many as 15 people or 39%, panoramic as many as 9 people or 24%, and USG Colli as many as 12 people or 32 %.

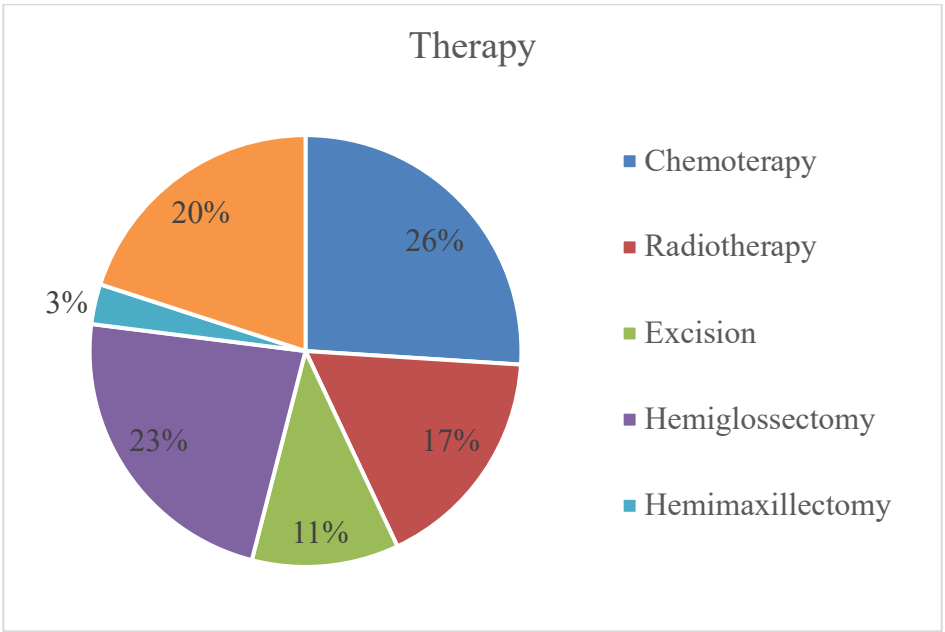

Figure 12. Diagram of Patient Characteristics Based on Therapy

From the results of the study through medical records based on the criteria for therapy status, 9 patients or 26% of patients received chemotherapy, 6 people or 17% of radiotherapy, 4 people or 11% excision, 8 people or 23% hemiglossectomy, 1 person hemimaxillectomy or 3% and hemimandibulectomy as many as 7 people or 20%

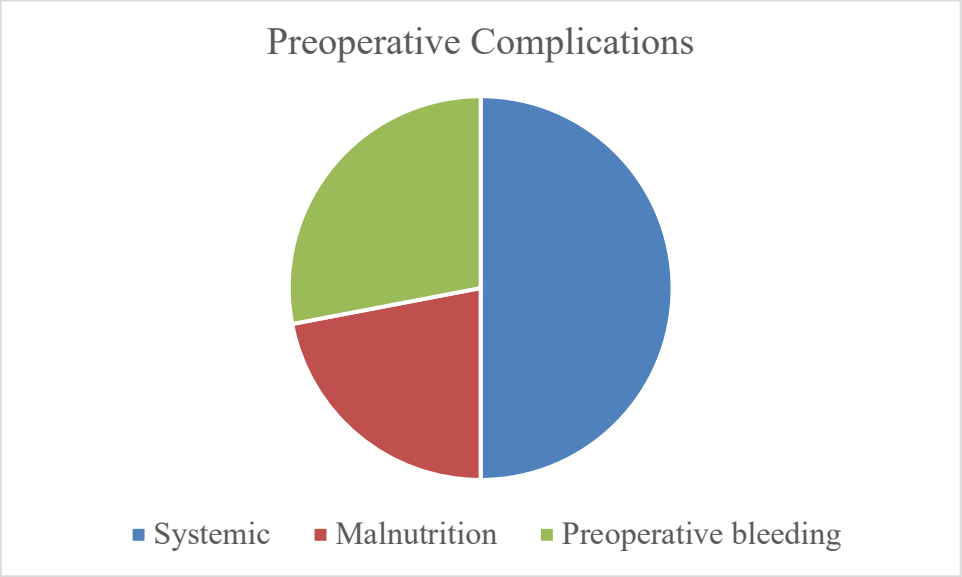

Figure 13. Diagram of Patient Characteristics Based on Preoperative Complications

From the results of the study through medical records based on the criteria for the status of preoperative complications, it was found that 9 patients or 50% systemic history, 4 people or 22% malnutrition and 5 preoperative bleeding or 28%.

Discussion

Research on the prevalence of squamous cell carcinoma of the oral cavity at the Department of Oral and Maxillofacial Surgery, Dr. Hasan Sadikin Hospital Bandung for the 2019 – 2020 period uses a descriptive method that looks at the patient's medical record. This study wanted to see the prevalence of squamous cell carcinoma based on age, gender, domicile, family history, predisposing factors, region, mass size, lymph nodes, tumor metastases, anatomical pathology results, diagnostic modalities, treatment and preoperative complications. From the results of the study it was found that the number of patients with squamous cell carcinoma at the Dr. Hasan Sadikin Hospital Bandung as many as 34 patients in the 2019 - 2020 period but samples were taken as many as 29 patient medical records, which was due to some data included in the exclusion criteria.

Percentage of patients by age showed that the largest number was found in the age group above 48 years as many as 18 people (62%), then in the 37-48 age group as many as 7 people (24%) and the 25-36 year age group as many as 4 people (14%). The percentage of patients based on gender showed that the largest number was found in the female sex as many as 17 people (59%) while the male sex as many as 12 people (41%).

The percentage of patients based on domicile shows that the largest number is found in Bandung Regency as many as 14 people or 48%. Followed by Tasikmalaya Regency as many as 6 people or 21%, Cirebon Regency as many as 1 person or 4%, Indramayu Regency as many as 3 people or 10%, Sukabumi Regency as many as 1 person or 3%, Banda Aceh as many as 1 person or 3%, Garut Regency as many as 1 person or 3%, Purwakarta Regency as many as 1 person or 3% and Karawang Regency as many as 1 person or 3%.

The percentage of patients based on family history shows that the largest number is in patients with no history of cancer in their family members as many as 29 people (100%). The percentage of patients based on predisposing factors showed that the largest number was in the history of smoking as many as 10 people (33%), then others as many as 14 people (20%) and a history of chronic irritation as many as 6 people (20%).

The percentage of patients based on region showed that the highest number was on the tongue as many

as 19 people (66%) then mandible in 6 people (21%), buccal mucosa in 3 people (10%) and maxilla in 1 person (3%). Percentage of patients based on mass size shows that the largest number in T4 is 9 people (50%), then T3 is 7 people (39%), T1 is 1 person (5%) and T2 is 1 person (6%). The percentage of patients based on lymph node involvement showed that the largest number was in N1 as many as 12 people (63%), N2 as many as 6 people (32%) and N0 as many as 1 person (5%). Percentage of patients based on tumor metastases showed that the largest number of tumor metastases was M0 as many as 19 people (95%) then M1 as many as 1 person (5%) and Mx as 0 people (0%). Percentage of patients based on anatomical pathology results showed that the largest number was found in the well differentiated as many as 12 people (55%), then moderately differentiated as many as 9 people (41%), others as many as 1 person (4%) and poorly differentiated as many as 0 people (0%).

The percentage of patients based on diagnostic modalities showed that the largest number was obtained by patients with head and neck CT Scan as many as 15 people (39%) then USG Colli as many as 12 people (32%), panoramic as many as 9 people (24%) and FNAB as many as 2 people (5%). The percentage of patients based on therapy showed that the largest number was in patients with chemotherapy as many as 9 people (26%), then Hemiglossectomy as many as 8 people (23%), hemimandibulectomy as many as 7 people (20%), radiotherapy as many as 6 people (17 %), excision in 4 people (11%) and hemimaxillectomy in 1 person (3%). Percentage of patients based on preoperative complications showed the highest number in patients with systemic history as many as 9 people (50%) then preoperative bleeding as many as 5 people (28%) and malnutrition as many as 4 people (22%).

Conclusion

Based on the results of research conducted at the Inpatient Installation of the Central General Hospital, dr. Hasan Sadikin in the period January 2019 - December 2020, it can be concluded that the age criteria of patients with the most squamous cell carcinoma are over 48 years old as many as 18 people or 62%. Based on the gender criteria, the patients with the highest incidence of squamous cell carcinoma tumors were 17 people or 59% female. Based on the domicile criteria, patients with the most squamous cell carcinoma were found in Bandung Regency as many as 14 people or 48%. Based on family history criteria, it was found that all patients had no history of disease in other family members, as many as 29 people or 100%. Based on the criteria of predisposing factors, patients with the most squamous cell carcinoma on other factors were 14 people or 47%. Based on the criteria for the location of the tumor (region), patients with the most squamous cell carcinoma in the tongue region were 19 people or 66%. Based on the criteria for the mass size of patients with the most squamous cell carcinoma in patients with the largest mass size on T4 as many as 9 people or 50%. Based on the lymph nodes criteria, the most patients with squamous cell carcinoma were in patients with metastases to the ipsilateral lymph nodes as many as 12 people or 63%. Based on the criteria for tumor metastases, patients with squamous cell carcinoma were mostly in patients with regional metastases as many as 19 people or 95%. Based on the criteria for anatomical pathology results, anatomical pathology well differentiated as many as 12 people or 55%. Based on the criteria for the diagnostic modality of patients with squamous cell carcinoma, most of the patients with CT scan of the head and neck were 15 people or 39%. Based on the criteria for therapy of patients with squamous cell carcinoma, the most patients receiving chemotherapy were 9 people or 26%. Based on the criteria for preoperative complications, patients with squamous cell carcinoma were the most in patients with comorbidities as many as 9 people or 50%.

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