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Epidemiological Aspects and Anatomopathological of Ear Nose and Throat (ENT) and Cervico-Facial (CF) Cancers at the Military Hospital of Nouakchott

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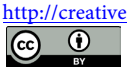

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Abstract

This retrospective study, the first of its kind in Mauritania, was carried out at the military hospital of Nouakchott. We sought to approximate the epidemiological, anatomopathological profile of Ear, Nose and Throat (ENT) and cervico-facial (CF) cancers in Mauritania. Over a period of two years, from January 1, 2019 to December 31, 2020, we noted 36 histologically confirmed cases, they represented 15.47% of all patients consulted in ENT and CF cancers affected the age group between 25 and 70 years, the age group most affected was that of 50 and 59 years, with 33.33% of cases. More affected in the proportion of 2 men to women, which can be explained by the risk factors mainly found in men, including smoking. First rank was cancers of the upper aero-digestive tract, the pharyngolarynx in head. Histologically, ENT and CF cancers were dominated by squamous cell carcinomas 78%, well ahead of papillary carcinomas 8% and vesicular thyroid carcinomas 5%, UCNTs, adenosquamous carcinomas and lymphomas each represented 3%.

Keywords

Anatomopathological, ENT, Cancers, Cervico-Facial, Military Hospital, Mauritania

1. Introduction

ENT and cervico-facial cancers are the most frequent cancers in the world; their incidence is significantly increasing 14.1 million in 2012 including 8.2 million

deaths in poor countries [1]. They represent the 3rd cause of death, and they are estimated at around 600,000 new cases every year around the world [2]. The incidence of ENT-CF cancers varies from 5% to 50% depending on the geographical location. They are the 6th largest cancer in the world, the 5th cancer mortality in France and the 4th in humans, over 50 years in Cameroon [3] [4]. In industrialized countries, their genesis is largely favored by alcohol smoking [5]. ENT and CF cancers are dominated by squamous cell carcinomas [6]. Several risk factors are associated with these cancers: tobacco, alcohol, oncogenic viruses (HIV, EBV, HPV), genetic and nutritional factors [7] [8]. Differentiated thyroid cancer is rare. It represents 1% of cancers. Women are more frequently affected (sex ratio 3/1). The 10-year survival for papillary, follicular and anaplastic cancers is 93, 85 and 14%, respectively [9]. The objective of this study was to identify the epidemiological data and the anatomopathological aspects of ENT and cervical facial cancers, assess the risk and prognosis and compare them with the data in the literature in the ENT and CF Department of the Military Hospital of Nouakchott.

2. Materials and Methods

This is a retrospective study on all cancers diagnosed in the ENT and head and neck surgery department of the Military Hospital of Nouakchott, during the period from January 1, 2019 to December 31, 2020, *i.e.* a period of 24 months. Data were collected from patient records and anatomo-pathological findings. Results came from the pathological anatomy laboratories of the National Oncology Center, the Nouakchott National Hospital Center and various private laboratories in Nouakchott or abroad, especially when it comes to an immunohistochemical supplement. Benign and doubtful pathologies, all files without histological proof, and metastases were excluded from this study. The data were entered and analyzed using SPSS 20.0 and Microsoft Excelle 2007.

3. Results

During the study period, we collected 557 files from which we found 36 usable files of ENT and CF cancers, *i.e.* a frequency of relative of 15.47%. The ages of our patients ranged from 25 to 70 years old. The average age was 53.4 years. The most affected age group was between 50 and 59 years old, *i.e.* 13 cases (33.33%). (**Figure 1**). The female sex was affected in 11 cases (31%) and the male sex in 25 cases (69%) (**Figure 2**). In this study, the organ most affected was the larynx in 12 cases (33.33%) of which 37% concerned the vocal cords, the supra and glottic stages were affected in 27% each, the subglottic stage was least affected in 9%. It was followed by the hypopharynx 7 cases or (19.44%), thyroid cancers come in 3rd position 5 cases or 13.88%, cancer of the base of the tongue found in 4 cases or (11.11%), caval cancer found in 3 cases (8.33%) (**Table 1**), gum cancer in 2 cases (5.55%), maxillary sinus, amygdala and soft palate 1 case each is (2.77%). The most represented histological type was squamous cell carcinoma in 28 cases, *i.e.* (78%), with 3 degrees of differentiation; well, moderate and poorly differentiated

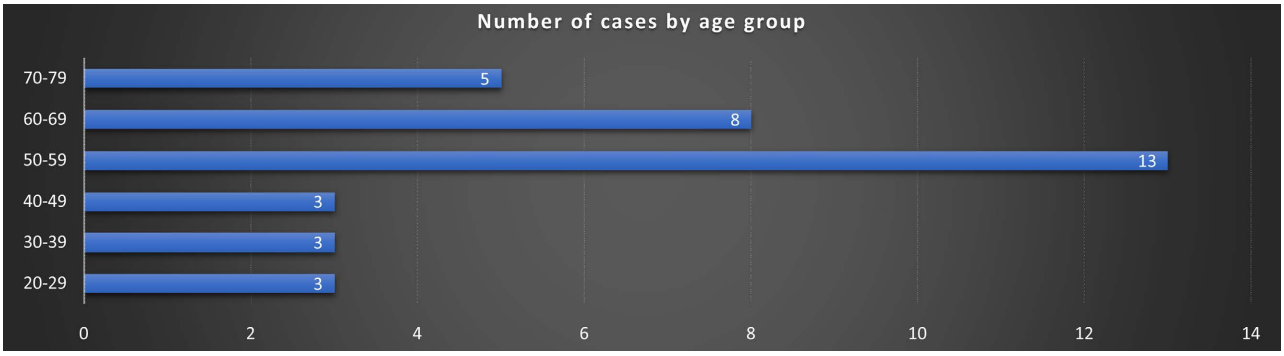

Figure 1. Number of cases by age group.

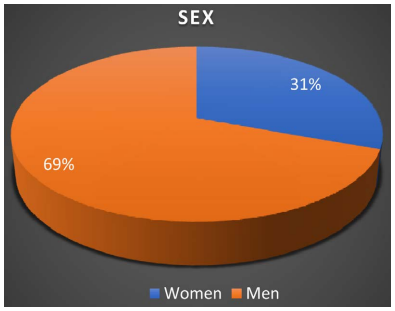

Figure 2. Distribution of patients by sex.

Table 1. Distribution of different cancers according to location.

	Number of cases	%
Pharynx		
• cavum = 3		
• Oropharynx = 0		
• hypopharynx = 7	**10**	**27.77%**
Larynx		
• Glottisus = 5		
• Under glottis and glottis = 7	**12**	**33.33%**
Oral cavity		
• Base of tongue = 4		
• Gum = 2	**6**	**16.66%**
Thyroide	**5**	**13.88%**
Others		
• Amygdala = 1		
• Maxillary sinus = 1		
• Soft palate = 1	**3**	**8.33%**
Total	**36**	**100%**

characterized by the predominance of immature cells with atypical mitosis and keratinization. It was followed by papillary thyroid carcinoma in 3 cases (8%), vesicular carcinoma found in 2 cases (5%), adenosquamous carcinoma; UCNT and lymphoma in 1 case each (3%) (Figure 3). In our study, 4 patients (11.11%) were chronic smokers, with no notion of alcoholism in our study population.

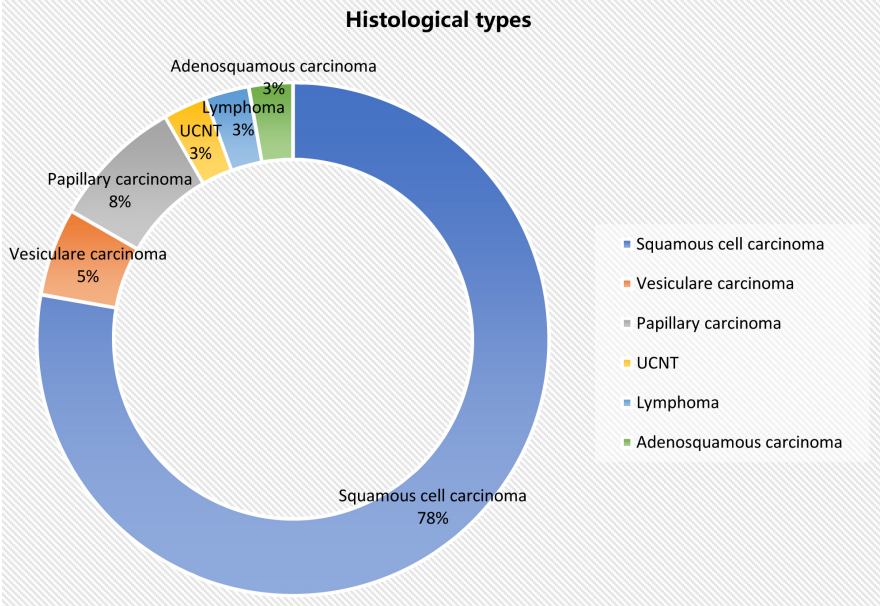

Figure 3. Distribution of patients by histological type.

4. Discussion

The aim of this study was to study the epidemiological and anatomopathological aspects of ENT-CF cancers at the Nouakchott Military Hospital, which is a growing pathology in Mauritania. Over the period of 2 years; 36 cases of ENT-CF cancers were confirmed histologically in the various pathological anatomy laboratories of Nouakchott, with an average of 18.5 cases per year.This incidence is close to 22 cases found by Njifou Njimah *et al.* in Douala [10]. We noted a male predominance with a sex ratio of 2.27, slightly higher than those found by Njifou Njimah A. *et al.* 1.96 [10], Adisa *et al.* in Nigeria 1.9 [11] and Belembaogo *et al.* [12] in Gabon. Ouaba *et al.* in Burkina Faso had found a se ratio of 2 and slightly lower than that of Mouelle *et al.* [13] [14] found 2.5. This male predominance could be explained by the lifestyle and smoking more found among men in our country [15]. The average age of onset of ENT-CF cancers was 53.4 years, and a third of our patients were in the age group between 50 - 59 years. This average age was higher than that found by Abdulai *et al.* in Ghana [16]. However, our most represented age groups were similar. This somewhat advanced age of onset of our patients could be explained by the lack of notion of alcoholism in our patients, which potentiates the effect of tobacco. There is also poor oral health and chronic ENT infections [7] [8]. In industrialized countries, the genesis of ENT and CMF cancers is largely dominated by alcohol smoking, although other factors are now known or suspected [5]. In our country and in Africa, patients generally consult at a late stage of the disease, late and when the neoplasm handicaps them, it is often an unsightly large cervico-facial tumor if not an ulcerative tumor. Budding superinfected, dyspnea, dysphonia, dysphagia [4] [10] [13]. Histologically; we found the carcinomas in the foreground; Squamous cell carcinoma 78%, papillary thyroid carcinoma 8%, vesicular thyroid carcinoma

5%, UCNT, lymphoma and adenosquamous carcinoma in 3% each, comparable to the result of Adisa *et al.* [11] in Nigeria which found 73.4% for carcinomas, with a higher frequency of lymphomas, *i.e.* 17.5%, this could be explained by the absence of immunohistochemical examinations in our country. In general, the treatment of stage cancers early T1, T2 is the first surgical intention. Treatment of lymph node areas is systematic, except for early-stage vocal cord cancers. The surgery is offered as a first-line treatment when it comes to a non-mutilating intervention. Radiotherapy is used postoperatively in patients in whom histopathological analysis of the operative specimen shows ruptured lymphadenopathy and/or several invaded lymphadenopathies.

5. Conclusion

In Mauritania, cancer of the ENT and cervico-facial sphere is a relatively frequent occurrence in daily practice with a frequency of 15.47% in the ENT and Cervico-Facial Department of the Military Hospital of Nouakchott.

Conflicts of Interest

The authors declare no conflicts of interest.

Contributions from the Authors

All the authors have marked when carrying out this work. All authors also declare that they have read and approved the final version of the manuscript.

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