

## Epidemiological and Pathological Profile of Cutaneous Adnexal Tumors, Central Laboratory of Pathological Anatomy and Cytology of Ibn Sina Hospital, Rabat Morocco: Report of 35 Cases

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DOI: [10.36347/sjmcrr.2023.v11i10.042](https://doi.org/10.36347/sjmcrr.2023.v11i10.042)

| Received: 15.06.2023 | Accepted: 17.07.2023 | Published: 29.10.2023

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### Abstract

### Original Research Article

Skin appendix tumors are rare and highly varied tumors. Are mostly benign characters, rarely malignant and dominated from the morphological point of view by their lesional polymorphism. These tumors may present with follicular, apocrine/eccrine, sebaceous and sometimes mixed differentiation, posing diagnostic problems. The aim of this study is to describe the epidemiological profile and the different anatomopathological aspects of this group of tumors and to compare them with data from the literature. We carried out a descriptive study with a retrospective stage, of 35 cases of cutaneous adnexal tumors collected at the service of the Central Laboratory of Pathological Anatomy and Cytology of Ibn Sina Hospital, CHU of Rabat during a period of 3 years, from 2019, 2020 and 2021. The result of this study shows the peak frequency of these lesions, which is located between 60 years and older, occupying 34.2% of all cases; the average age of the patients studied is 41 years and we find the predominance of the female sex which corresponds to 62.9% of the cases; the predilection seat of the lesions is the region of the head and neck, which is occupied by 51.4%; tumor differentiation is divided into apocrine/eccrine which represents 68.6% of cases; follicular in 20% of cases and sebaceous in 11.4% of cases; the most common histological type is poroma 25.7% followed by pilomatricoma 14.2% and papilliferous syringocystadenoma 11.4%; benign tumors are frankly in the majority, occupying 91.5%, against 8.5% of malignant tumors.

**Keywords:** Epidemiology, tumours, adnexa, skin, study, series.

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## INTRODUCTION

Skin adnexal tumors are rare and highly varied tumors [1, 2]. Are most often benign, rarely malignant and dominated from the morphological point of view by their lesional polymorphism. They may present with follicular, apocrine/eccrine, sebaceous and sometimes mixed differentiation, posing diagnostic problems [3]. The diagnosis of these tumors is sometimes difficult and relies essentially on anatomopathological study [4]. We have as the objective of this study, to present a series of 35 cases, made at the Central Laboratory of Anatomy and Pathological Cytology of the Ibn Sina Hospital, CHU of Rabat in a period of 3 years, from 2019, 2020 and 2021.

## METHOD

We carried out a descriptive study with a retrospective stage, of cutaneous adnexal tumors collected at the service of the Central Laboratory of Anatomy and Pathological Cytology of the Ibn Sina Hospital, CHU of Rabat during a period of 3 years, from

2019, 2020 and 2021. This study focuses on the use of liaison files and anatomopathological reports, collected in the archive and the electronic register of the service, we used as an exclusion criterion, the files which did not carry enough information needed for this job. From these liaison forms and electronic register of anatomopathological information, we collected the following data: age, sex, location of lesions and histological type and thus we classified them according to tumor differentiation and the character of benignity or malignancy. We presented the result of our work through tables and with graphical representation for better understanding, and discuss it with other studies.

## RESULT

The result of this study shows 35 cases in total, listed between January 2019 and December 2021.

On the population studied.

**Citation:** Papys Mendes, Hanae Benabdembli, Fouad Zouaidia, Ahmed Jahid, Kaoutar Znati, Zakia Bernoussi. Epidemiological and Pathological Profile of Cutaneous Adnexal Tumors, Central Laboratory of Pathological Anatomy and Cytology of Ibn Sina Hospital, Rabat Morocco: Report of 35 Cases. Sch J Med Case Rep, 2023 Oct 11(10): 1885-1890.

Regarding the general character of the population, this study shows the average age of 41 years with extremes of 7 and 77 years. The distribution of histological types according to age shows a predominance of the more affected age group between 60 and over, which corresponds to 34.2%, and the less represented group is 20-39 years representing 8.5% (Table 1). The breakdown by sex shows a predominance of the female sex occupying 62.9% of the cases (Table 2) against 37.1% of the male sex.

### The pathological result

Benign tumors represent a total of 32 cases, which correspond to 91.5%, and malignant tumors 3 cases, which represent 8.5% (Table 5). The predominant localization is the head and neck, with 18 cases, corresponding to 51.4% followed by lower limbs with 7 cases, which represents 20%, upper limbs with 6 cases occupying 17.2% and the less frequent localization is the trunk with 4 cases and 11.4% of the total. The three malignant tumors found, two (sebaceous carcinoma and hidradenocarcinoma) are located in the lower limbs and one (porocarcinoma) in the head and neck (Table 3). Tumor differentiation is distributed as follows: Apocrine/eccrine occupies 68.6% of cases (in number of 24 cases); follicular differentiation followed by 20% (in number of 7 cases) and at the sebaceous end which represents 11.4% (in number of 4 cases (Table 4).

Among the tumor differentiations: Apocrine/eccrine, are 24 cases whose predominant histological type is Poroma with 9 cases, representing 25.8%, followed by Syringocystadenoma with 4 cases

representing 11.4%, Apocrine Tubular Adenoma, Spiradenoma and Myoepithelioma have 2 cases each that corresponds to 5.8% and Hidradenoma, Chondroid Syringoma, Cystadenoma, Porocarcinoma and Hidradenocarcinoma are represented by 1 case each, occupying 2.8% each of these histological types. Follicular, are 7 cases whose predominant histological type is Pilomatricoma with 5 cases, representing 14.2% and Trichofolliculoma with 2 cases occupying 5.8%. Sebaceous are 4 cases, the predominant histological type is sebaceoma, with 2 cases, which represents 5.8% and sebaceous adenoma and sebaceous carcinoma 1 case each (Table 4). Regarding the distribution according to age group, the 0-19 year old group is represented by 10 cases with 28.5%, of which 4 cases are of pilomatricoma, 3 of Syringocystadenoma, 1 of Trichofolliculoma, Spiradenoma and Cystadenoma and the rest of histological types are not represented in this age group. For a group of 20, 39 are 3 cases in total which represent 8.5%, divided by Trichofolliculoma, Chondroid Syringoma and Sebaceoma (1 case each) and the rest of histological types are not represented. The 40-59 year old group had 10 cases (28.5%), divided by 3 cases of poroma, 1 case of pilomatricoma, apocrine tubular adenoma, syringocystadenoma, myoepithelioma, hidradenocarcinoma, sebaceous adenoma and sebaceoma. The group of 60 and over is represented by 12 patients corresponding to 34.2% distributed by 6 cases of poroma, 1 case for each of hidradenoma, apocrine tubular adenoma, spiradenoma, myoepithelioma, porocarcinoma, sebaceous carcinoma and the rest of the types histological without representations.

**Table 1: Frequency of cutaneous adnexal tumors according to age group**

Tumor differentiation	Histological types	0-19	20-39	40-59	60 et +
Follicular	Trichofolliculoma	01	01	-	-
	Pilomatricoma	04	-	01	-
Apocrine/Eccrine	Poroma	-	-	03	06
	Hidradenoma	-	-	-	01
	Apocrine tubular adenoma	-	-	01	01
	Spiradenoma	01	-	-	01
	Chondroid Syringoma	-	01	-	-
	Syringocystadenoma	03	-	01	-
	Myoepithelioma	-	-	01	01
	Cystadénome	01	-	-	-
	Porocarcinoma	-	-	-	01
	Hidradenocarcinoma	-	-	01	-
Sebaceous	Sebaceous Adenoma	-	-	01	-
	Sebaceoma	-	01	01	-
	Sebaceous Carcinoma	-	-	-	01
Total		10 (28,5%)	3 (8,5%)	10 (28,5%)	12 (34,2%)

**Table 2: Distribution of histological types according to sex**

Tumor differentiation	Histological types	Male	Wemen	Total
Follicular	Trichofolliculoma	01	01	02
	Pilomatricoma	01	04	05
Apocrine/Eccrine	Poroma	02	07	09
	Hidradenoma	-	01	01

Tumor differentiation	Histological types	Male	Wemen	Total
	Apocrine tubular adenoma	02	-	02
	Spiradenoma	01	01	02
	Chondroid Syringoma	-	01	01
	Syringocystadenoma	03	01	04
	Myoepithelioma	01	01	02
	Cystadenoma	01	-	01
	Porocarcinoma	-	01	01
	Hidradenocarcinoma	-	01	01
Sebaceous	Sebaceous Adenoma	-	01	01
	Sebaceoma	01	01	02
	Sebaceous Carcinoma	-	01	01
Total		13 (37,1%)	22 (62,9%)	35 (100%)

**Table 3: Distribution of histological types according to location**

Tumor differentiation	Histological types	Head and Neck	Upper limbs	Lower limbs	Trunk
Follicular	Trichofolliculoma	02	-	-	-
	Pilomatricoma	03	02	-	-
Apocrine/Eccrine	Poroma	04	01	02	02
	Hidradenoma		01	-	-
	Apocrine tubular adenoma	01	01	-	-
	Spiradenoma	01	01	-	-
	Chondroid Syringoma	-	-	-	01
	Syringocystadenoma	03	-	01	-
	Myoepithelioma	-	-	02	-
	Cystadenoma	01	-	-	-
	Porocarcinoma	01	-	-	-
	Hidradenocarcinoma	-	-	01	-
Sebaceous	Sebaceous Adenoma	01	-	-	-
	Sebaceoma	01	-	-	01
	Sebaceous Carcinoma	-	-	01	-
Total		18 (51,4%)	6 (17,2%)	7 (20%)	4 (11,4%)

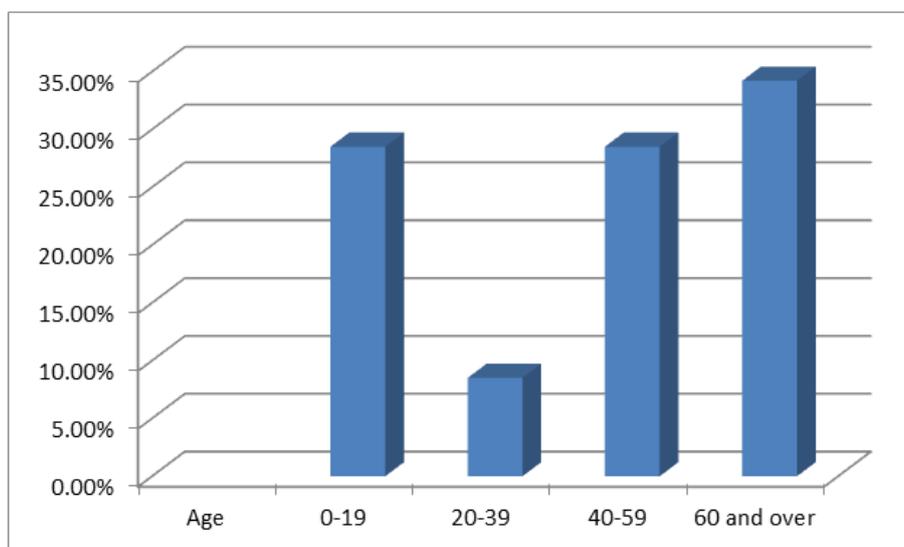
**Table 4: Overall distribution of the different histological types**

Tumor differentiation	Histological types	Number	%
Follicular	Trichofolliculoma	02	5,8%
	Pilomatricoma	05	14,2%
Apocrine/Eccrine	Poroma	09	25,8%
	Hidradenoma	01	2,8%
	Apocrine tubular adenoma	02	5,8%
	Spiradenoma	02	5,8%
	Chondroid Syringoma	01	2,8%
	Syringocystadenoma	04	11,4%
	Myoepithelioma	02	5,8%
	Cystadenoma	01	2,8%
	Porocarcinoma	01	2,8%
	Hidradenocarcinoma	01	2,8%
Sebaceous	Sebaceous Adenoma	01	2,8%
	Sebaceoma	02	5,8%
	Sebaceous Carcinoma	01	2,8%
Total		35	100%

**Table 5: The benign or malignant character of the histological types**

Tumor differentiation	Histological types	Benign	Malignant
Follicular	Trichofolliculoma	02	-
	Pilomatricoma	05	-
Apocrine/eccrine	Poroma	09	-

Tumor differentiation	Histological types	Benign	Malignant
	Hidradenoma	01	-
	Apocrine tubular Adenoma	02	-
	Spiradenoma	02	-
	Chondroid Syringoma	01	-
	Syringocystadenoma	04	-
	Myoepithelioma	02	-
	Cystadenoma	01	-
	Porocarcinoma	-	01
	Hidradenocarcinoma	-	01
Sebaceous	Sebaceous Adenoma	01	-
	Sebaceoma	02	-
	Sebaceous Carcinoma	-	01
Total		32 (91,5%)	3 (8,5%)



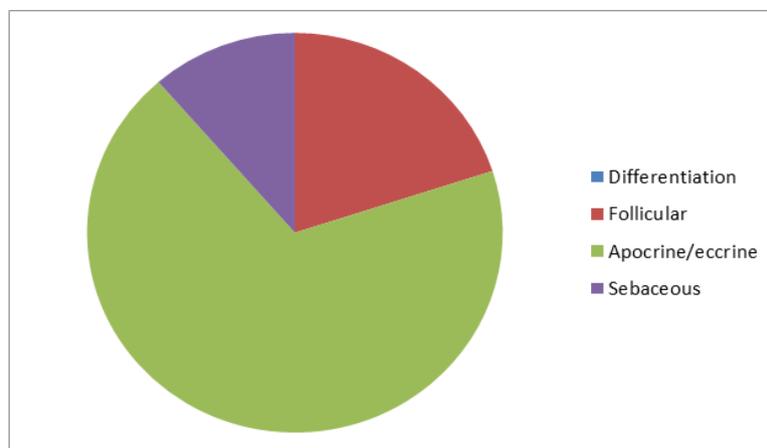
**Graph 1: Distribution of cases by age**



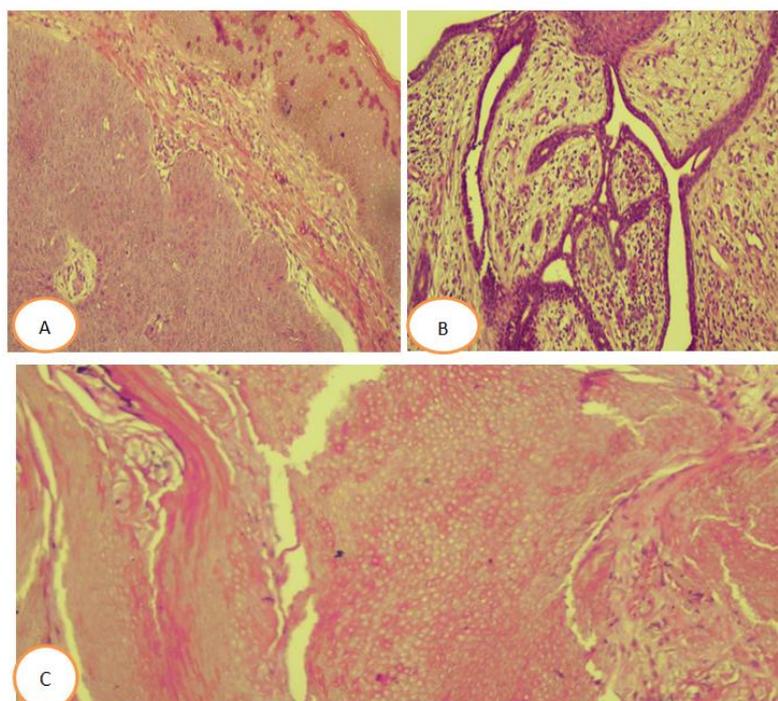
**Graph 2: Distribution of cases by sex**



**Graph 3: Distribution of cases by location**



**Graph 4: Distribution of tumor differentiation**



**Figure: A) Porome, B) Syringocystadénome C) Pilomatricome**

## DISCUSSION

Cutaneous Adnexal Tumors are rare and very varied tumors [1]. They are most often benign and rarely malignant [5, 6]. Our study relates to a series of 35 cases of these tumours, the results of which are illustrated in the tables and graphs compared with those of the literature.

### Age Distribution:

The average age in our series is 41 years old. It is comparable to that reported by El Ochi Mohamed Réda *et al.*, (36 years old) and Samaila *et al.*, (33 years old) [1, 7]. Regarding the peak frequency, for El Ochi M R *et al.*, is between 31 and 40 years old, for Medjamia M *et al.*, is between 20 and 29 years old. For our series, it is located at the age of 60 and over.

### Distribution according to sex:

For some authors, there is a male predominance [1, 5, 8], while for Nair *et al.*, and Saha *et al.*, the sex ratio is 1:2.3 and 1:1.88 respectively [9, 10]. In our series, we note a female predominance (sex ratio of 1:1.69).

### Distribution according to localisation:

TACs are mainly located in the head and neck region 47.9% after the limbs (MS 17.7% and MI 17.7%) and the trunk 16.7% are less affected [1]. For Sharma *et al.*, [8], TACs affect the head and neck region in 64.28% of cases, the trunk in 14.28% of cases and the upper limbs in 12.5% of cases. For our series, a location in the head and neck region is 51.4%, lower limbs 20%, upper limbs 17.2% and the trunk 11.4% of the total cases.

### Distribution according to benign or malignant character:

In our series, benign tumors are the most frequent 91.5% against 8.5% of malignant tumors. This is in agreement with other statistics in the literature [1, 5, 7-9]. Malignant tumors remain rare and occur at a later age [1].

### Distribution according to tumor differentiation:

For El Ochi *et al.*, follicular differentiation is the most frequent (51%), followed by eccrine/apocrine tumors (44.8%) and sebaceous tumors (4.2%), of which Pilomatrixomas is the most frequent histological type. many followed by hidradenoma [1]. In our series, the most frequent differentiation is the Apocrine/eccrine which occupies 68.6% of the cases (in number of 24 cases); followed by follicular differentiation in 20% of cases (in number of 7 cases) and at the sebaceous end which represents 11.4% of cases (in number of 4 cases) and the histological type most found is poroma with 25.8% of the total of cases, followed by Pilomatricoma with 14.2%. Showing the same frequency for the differentiation according to Nair, eccrine/apocrine

tumors are the most frequent, followed by follicular and sebaceous tumors [9].

**Conflict of interest:** No conflict of interest has been declared.

## CONCLUSION

Skin adnexal tumors are rare, predominantly female with peak incidence at advanced ages. Benign tumors with apocrine/eccrine differentiation are present in the vast majority of cases, the head and neck of which are more affected.

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