

A clinicopathological study of lipomas of the head and neck

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Abstract

Background: Lipoma of the head and neck region are fairly common.

Methods: This twelve year retrospective study evaluated thirty-nine cases of head and neck lipomas in Nigerians.

Results: They constituted 14.4% of benign tumours of the head and neck region and 17.6% of total body lipomas seen within the study period. There were two peaks in the age distribution with patients in the fifth and seventh decades of life recording the highest number of cases. More males were affected with a male-female ratio of 2:1. Most cases (33.3%) were seen in the neck, followed by the scalp (23.1%). Only one intra oral case presenting on the tongue was recorded. The two patients with multiple lipomas were negative for associated systemic disease. Two histological variants were seen (conventional and fibrolipoma).

Conclusion: Tumours of adipose tissue are common head and neck neoplasms. While conventional lipomas are the commonest histological variants, the diagnosis of these lesions may be arrived at from clinical presentations supplemented with histological examinations. Treatment by surgical excision (lipectomy) produces satisfactory results.

Key words: Head and neck, lipomas

Introduction

Lipomas are benign tumours of adipose tissue. They are the most common subcutaneous fatty tumours of adulthood, making up about 4-5% of all benign tumours of the body.¹ Less than 15% of lipomas occur in the head and neck and

virtually any tissue in the region may be affected.² The majority of lipomas occur in the immediate subcutaneous tissues and they present usually as slow growing solitary, soft, mobile and painless swellings. When they occur in deeper tissues, however, the clinical presentations depend on the location and

type of structures affected. Lipomas involving the parotid gland, tongue, corpus callosum and upper aerodigestive tracts have presented with such diverse symptoms as facial nerve palsy, macroglossia, convulsions and dysphagia.³⁻⁶ Furthermore, lipomas of the head and neck may just be an extension of either an intra-cranial lesion or as a component of lipoma in other parts of the body as seen in some clinical or familial syndromes.⁷⁻⁹

The aetiology of lipomas is obscure though some forms of lipomatosis accompany inherited or familial syndromes.^{8, 9} Sub-classifications of lipomas according to morphologic features include conventional lipomas, fibrolipomas, angiolipomas, spindle cell lipomas, myelolipomas and pleomorphic lipomas.^{9, 10} Some variants of this tumour have characteristic chromosomal abnormalities. For example, conventional lipomas often show re-arrangement of chromosome 12p 14-15, 6p and 13q, while spindle cell and pleomorphic lipoma has re-arrangements of chromosome 16q and 13q.¹⁰ The diagnosis of superficially occurring lipoma is often dependent on the history and clinical examinations, however, those located in deeper tissues require the use of more specialized diagnostic tools to arrive at a diagnosis. Ultrasonography, computerized tomography, magnetic resonance imaging techniques and recourse to fine needle aspiration biopsy have proved invaluable in resolving such ambiguous cases.⁶

There are many case reports of lipoma involving the head and neck region in the literature.^{2-6, 11} but none has attempted to present a comprehensive study of lipomas of the head and neck in Nigerians.

Patients and methods

We undertook a retrospective survey of the histopathology records and case notes

of all patients who were diagnosed with lipoma in the head and neck region over a twelve-year period (1989-2000) at the cancer registry of the Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Nigeria. Information was retrieved on patients' demographics, clinical features including locations of the lesion and histopathological characterization. Chromosomal abnormalities could not be investigated because the facilities were not available to us at the time the patients were being managed. We also sought to evaluate the treatment modalities, associated complications and recurrence rate. The duration of the lesion was analyzed only for eighteen patients whose data on this was available. Data were then analyzed by computer using the window version of the statistical package for the social sciences (SPSS) Release 5.0.1.¹²

Results

During the course of this study a total number of 271 benign head and neck tumours were histologically diagnosed and 221 lipomas were also encountered within the same period. Of these, head and neck lipomas were 39 cases and accounted for 14.4% of all benign head and neck tumours and 17.6% of total body lipomas.

Table 1 shows the age and sex distribution of the patients. Their ages ranged from 26-74 years (mean \pm SD; 51.6 ± 12.9). Males were 26(66.7%) while females were 13(33.3%). The mean age \pm SD for males and females were 53.2 ± 11.7 and 46.5 ± 15.1 years respectively. There were two peaks in the age distribution with patients in the fifth and seventh decades of life recording the highest number of cases. Over 76% of lipomas occurred in patients in the fifth to seventh decades of life. The site distribution of lipomas is shown in Table 2. While the neck recorded the highest number of cases (33.3%), followed by

the scalp (23.1%), only one case each (2.6%) of intra oral lipoma seen on the tongue and intraosseous lipoma were encountered.

Tables 3 show the histological types of lipomas according to age. Conventional lipomas accounted for 34 cases while fibro- lipomas were 5. The M: F ratio for

conventional lipomas is 1.8:1 while that for fibro-lipoma is 4:1. The mean duration of the 18 cases where the duration of the lesion was stated is 3.6 years. Treatment was mainly surgical excision no patients presented with any recurrence. No associated functional deficits were observed in all the patients.

Table 1: Age and sex distribution of patients

Age (yrs)	Female (%)	Male (%)	Total (%)
20-30	2(5.1)	1(2.6)	3 (7.7)
31-40	3(7.7)	2(5.1)	5 (12.8)
4-50	1(2.6)	12(30.8)	13 (33.3)
51-60	4(10.2)	3(7.7)	7 (17.9)
61-70	3(7.7)	7(17.9)	10 (25.6)
71-80	-	1(2.6)	1 (2.6)
Total	13(33.3)	26(66.7)	39 (100)

Table 2: Site distribution of 39 head and neck lipomas

Site	No. (%)
Neck	13(33.3)
Scalp	9(23.1)
Forehead	5(12.8)
Temple	3(7.7)
Preauricular/auricular canal	2 (5.1)
Submental/ submandibular region	2 (5.1)
Cheek	2 (5.1)
Intra osseous (mandible)	1(2.6)
Tongue	1(2.6)
Periorbital region	1(2.6)
Total	39 (100)

Table 4: Histological types according to age distribution

Age (yrs)	Conventional lipoma	Fibrolipoma	Total
21-30	2	1	3
31-40	4	1	5
41-50	12	1	13
51-60	6	1	7
61-70	10	0	10
>70	0	1	1
Total	34	5	39

Discussion

Lipomas are fairly common tumours of the head and neck region,^{1, 13} which when left untreated could result in aesthetic and functional deficits. Over 76 percent of patients seen in the present study were in the fifth to seventh decades of life. Similarly, over 65% of lipomas reported by de-Visscher were seen in patients within the same age range.¹⁵ However, while de-Visscher recorded male-female ratio for conventional lipomas and fibro-lipomas as 1.5:1 and 1:1.3 respectively,¹⁴ our study recorded a slightly higher figure for males. Male-female ratio for both the conventional lipomas and fibro-lipomas were 1.8:1 and 4:1 respectively.

Typically lipomas present as solitary, painless, slow growing lesions.¹¹ This same clinical picture was equally observed for patients in our study. Only one case of intra oral lipoma was observed in this study. This is at variance with the 2.2 percent reported by de Visscher for oral lipomas in comparison with lipomas of the whole body¹⁵ and the 9 percent for oral lipomas in comparison with oral benign tumours reported by Rafindadi and Ayuba.¹⁵ The disparity in figures quoted may be due to under reporting. Late presentation was of frequent occurrence in the present study. It is not uncommon for patients with orofacial lesions in sub-Saharan Africa to present late for treatment due to financial constraints, ignorance and poor access to health care facilities. However, when such lesions interfere with function and or aesthetics, they are obliged to attend a hospital for treatment. Therefore, the prevalence figures obtained in the present report may not be a true reflection of the population under study.

Though no patient presented with any systemic disease, two of them had additional solitary lipomas in other parts of the body. Studies have shown that multiple site involvement is often associated with alcoholics, diabetes

mellitus and some syndromes including Madelung's disease, Kobberling-Dunnigan syndrome.^{8, 16} The low prevalence of multiple site involvement observed in this study for lipomas contrasts with the 6-7% reported by previous workers.¹⁷

The diagnosis of lipoma is usually made based on clinical examination and histological evaluation of biopsy specimen. Various reports^{18, 19} have also highlighted the invaluable role of other diagnostic investigations such as fine needle aspiration, ultrasonography, computerized tomography (CT) scan and magnetic resonance imaging (MRI) particularly for lesions buried deep in the soft tissues. Unlike CT scan and MRI, ultrasonography is relatively cheap and available, hence should be recommended by clinicians in the investigation of lesions suspected to be lipomas. Ultrasonographic findings described by Ahuja et al¹⁹ revealed lipomas as an elliptical mass parallel to the skin surface that is hyperechoic relative to adjacent muscle and contains linear echogenic lines at right angles to the ultrasound beam.

The treatment of lipomas in the head and neck region involves surgical excision (lipectomy) and this was observed to be adequate treatment for all our cases. In order to minimize the adverse effects of lipectomy, liposuction through strategically placed incisions has been recommended.^{20, 21} Although liposuction appears to be an attractive alternative to lipectomy, facilities for this procedure are not readily available in most hospitals in sub-Saharan Africa. Like most benign neoplasms, the recurrence rate for head and neck lipomas is very low. While some workers reported figures below 1%,^{1, 15, 22} in the present study no case of recurrence was recorded. Larger studies are however, advocated to establish the epidemiology of head and neck lipoma in the population under study.

In conclusion, tumours of adipose

tissue are common head and neck neoplasms. While conventional lipomas are the commonest histological variants, the diagnosis of these lesions may be arrived at from clinical presentations supplemented with histological examinations. Treatment by surgical excision produces satisfactory results.

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