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Histopathological Analysis of Scalp Lesions

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Abstract: The scalp is a specific anatomic district, in which the most elevated density of pilo-sebaceous follicles is available and terminal hairs are concentrated. Scalp lesions are the most disregarded since they are not effortlessly seen with ensuing deferral in recognition and late treatment. This examination is expected to decide the histopathological investigation of Scalp Lesions. The present review think about assessed 65 instances of scalp lesions from the record of one of the tertiary care hospital of Uttar Pradesh over a span of three years. All the histopathologically demonstrated instances of scalp lesions were explored and clinical points of interest were gotten from the documents. Age, sex, and histology of the considerable number of examples were assessed. Among the 65 cases, 38 (58%)) cases were benign lesions. The male to female proportion was 1.5:1. Benign conditions were most conspicuous and small portion were malignant. Age appropriation in benign lesions was 20-40 years though malignant lesions were found in the elderly. Scalp injuries are uncommon, benign lesions are more common. For each situation of a scalp lesion a wide differential conclusion must be considered. Enhanced clinical experience and hospital participation with more thorough detailing would yield more illustrative information.

Keywords: Scalp Lesions; Keratinous Cyst; Squamous Cell Carcinoma

INTRODUCTION

The skin of the scalp has a few extraordinary highlights that guide in its basic part of securing the head. To begin with, the follicular thickness is substantially higher, making a dark, warm and damp condition. This gives warm protection, yet in addition makes a domain helpful for parasitic pervasion [1]. Second, in grown-ups there is a high rate of sebum generation, which alongside desquamated skin cells can give a sustenance source to microorganisms. At last, the scalp skin is subjected to brushing and contact with other styling executes that can cause erosion damage and may present microorganisms [2].

These novel highlights of the scalp make it susceptible to mycotic conditions (dandruff, seborrheic dermatitis, and tinea capitis), parasitic pervasion (pediculosis capitis) and inflammatory conditions (psoriasis). These infection procedures of the scalp can have critical cover in clinical symptomatology [3]. Hyperkeratosis (scaling), pruritus, alopecia, and inflammatory signs (erythema, purulence) are normal indications of scalp disorders. An assortment of inflammatory and neoplastic scalp lesions are experienced in clinical practice which can be credited to injury, disease, irritation, abscess, unfavorably susceptible response, or tumor. Inflammatrio can happen from a pharmaceutical response, injury or an immune system illness. These are basic in the two kids and grown-ups [4, 5].

Scalp tumors are the most dismissed since they are not effectively seen with consequent deferral in recognition and late treatment [6]. Roughly 2% of tumors are situated on the scalp .Most of the tumors are benign. 20% of scalp tumors are threatening /malignant. Malignant scalp tumors can be primary or metastatic [7]. By and large, primary tumors are more typical than metastatic tumors. Just couple of articles with respect to the study of disease transmission and histology of scalp lesions could be found in the writing. Besides the vast majority of the writing on scalp lesion is on singular tumors or malignant lesions. The clinical involvement with these uncommon lesions is restricted. The present investigation was embraced to think about the pervasiveness of different scalp lesions and to connect the histopathological finding with clinical highlights.

MATERIALS AND METHODS

A review factual examination was made of 65 affirmed by histopathology from the bureau of pathology, medical college, Uttar Pradesh. The study was endorsed from the Institutional moral council. Therapeutic reports of patients determined to have clinical determination of scalp lesions were considered. H&E recolored slides of the scalp injuries were

recovered and assessed. Special stains were done wherever required.

The information recovered included statistic information, for example, age, sex, occupation, clinical history, radiologic discoveries and histological determination. The types of pathologic substances that showed up in the scalp were organized. Cystic lesions were additionally classified. Neoplastic lesionss were named as benign or malignant. Clinical and histopathological finding was considered for each case to assess clinically misdiagnosed cases.

RESULTS

Among the 65 cases, 38 (58%)) cases were benign lesions. The male to female proportion was 1.5:1. Among benign, conditions like Pilar cyst/ Trichelemmal cyst, Epidermoid cyst keratinous cyst was most conspicuous and small portion were malignant Squamous Cell Carcinoma, Metastatic adenocarcinoma, Pigmented basal cell carcinoma and Adenoid basal cell carcinoma. Age appropriation in benign lesions was 20-40 years though malignant lesions were found in the elderly.

Table 1: Demographic details of subjects under study

Variables	Number
Age (years)	27.5±7.5
Gender	
Male	47
Females	18
Medical history	
Positive	21
Negative	44
Misdiagnosed cases	3

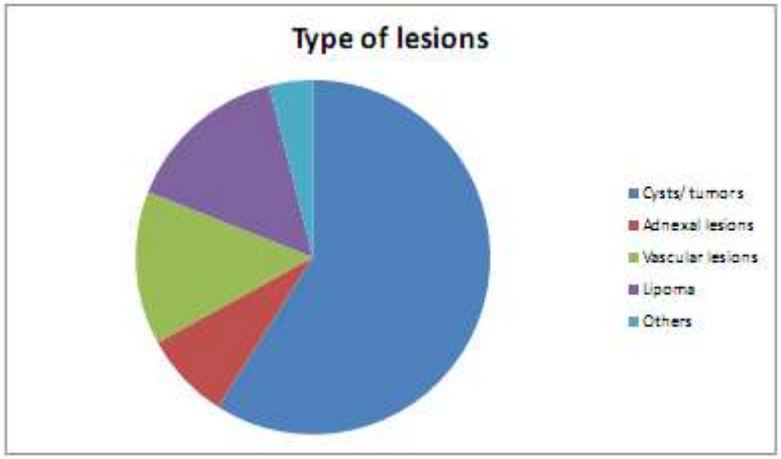

Fig-1: Type of lesions

Table 2: Details of lesions

Lesion	**Number**
Cyst/tumor	
Benign	
Pilar cyst/ Trichelemmal cyst	11
Epidermoid cyst	8
Neurofibroma	4
Pyogenic granulloma	3
Hemangioma	3
Seborrhic keratosis	2
Lipoma	7
Malignant	
Squamous cell carcinoma	2
Metastatic adenocarcinoma	1
Pigmented basal cell carcinoma	1
Adenoid basal cell carcinoma	1
Metastatic mammary osteosarcoma	1

Vascular lesions	
Capillary hemangioma	5
Granuloma pyogenicum	3
Adnexal lesions	
Chondroid syringoma	3
Dermoid cyst	2
Miscellaneous	
Nevi	1
Inflammatory lesions	2
Mycotic infection	1
Schwannoma	1
Psoriasis	1
JXG (juvenile xanthogranuloma)	1
Parasitic conditions	1

DISCUSSION

In our examination the patient's age gone from 20 to 60 years. The mean age being 27.5±7.5 years. which is in dissonance with an investigation led by Spitz *et al* in which the age assemble went from 30 to 90 yrs, with a mean age of 60 [8]. The male to female proportion in our examination was 1.5:1 though 1.1:1 was accounted for by HJ Carson *et al* in their investigation [9]. Spitz *et al* detailed a comparable sex conveyance as our own [8].

The scalp is a typical site for the development of tumors. These might be benign or malignant, primary or secondary. These may incorporate conditions, for example, epidermoid cysts, pilar cysts, actinic keratosis. There is scarcity of concentrates done on amiable tumors of the scalp, their rate and pervasiveness is not precisely known but rather there are singular case reports of the unprecedented histological sorts of benign tumors. The absence of information is most likely because of the kind idea of the tumors, little size, covering of the tumor by hair follicles which go unnoticed and dismissed. Just two percent of epithelial tumors are situated on the scalp. In the present investigation the benign tumors were the commonest with larger part being epidermoid cysts and trichelemmal cysts. Trichelemmal cyst was the most widely recognized amiable tumor for our situation exhibit in 11 subjects. Trichilemmal cyst are keratin filled cysts with a divider taking after the outer root sheath of a hair follicle. These cysts influence 5% to 10% of the populace. They are frequently benign and can repeat after inadequate excision. Sometimes, malignant degeneration and intrusion can happen [10].

In an examination done on scalp biopsies, greater part were benign injuries took after by malignancies like our investigation. Malignant tumors of the scalp are uncommon. The majority of the malignant tumors are squamous cell carcinoma and basal cell carcinomas. We had 7 instances of Lipoma representing 10.8% of all scalp sores. This finding was equivalent to ponder completed by Truhan *et al* [11]. Carson *et al* [9] and Spitz *et al* [8] revealed 5.5% and 2.8% cases individually of lipoma in their investigation of scalp injuries, there was a slight harshness in the frequency of our examination and these two examinations. Capillary haemangioma was the most widely recognized vascular injury found in our examination discovered in 3.25% cases, Kapuria *et al* in their investigation demonstrated comparable discoveries [12].

In the present investigation, we discovered 1 instance of Schwannoma [13]. Histopathological discoveries uncovered normal highlights of Schwannoma. Tumor was epitomized by perineurium, and described by two sorts of histological examples: Antoni type An and Antoni type B. Antoni type A is exceptionally requested cell design in which axle cells are orchestrated in conservative fascicles and their cores are masterminded in palisades (Verocay bodies). Antoni type B tissue is less cell with pale zones of thick framework and admixed with cystic, edematous or myxoid degeneration [14].

One single instance of adolescent xanthogranuloma out of 65 cases representing 1.53% of aggregate cases [15]. The scalp is a typical vault for metastatic tumors, in all likelihood because of its rich vascularity. Consciousness of this reality can be valuable to dermatologists or oncologists in choosing the better demonstrative methodology for a patient.

CONCLUSION

The scalp is the most ignored framework and not an exceptional site for tumors. Albeit benign tumors are watched all the more every now and again in this locale, a high list of clinical doubt is fundamental to guarantee early location of malignancies and start proper treatment.

REFERENCES

1. Erchiga, V., & Florencio, V. (2000). Malassezia species in skin diseases. *Curr Opin Infect Dis, 15*,133–142.
2. Herbert, A. (1988). Tinea capitis. Arch Dermatol 124:1554–1557, 1988 Gemmer C, DeAngelis Y, Theelen B: Fast, noninvasive method for molecular detection and differentiation of Malassezia yeast

species on human skin and application of the method to dandruff microbiology. *J Clin Microbiol, 40*, 3350–3357.
3. Sinclair, R., Banfield, C., & Dawber, R. (1999). Infections and infestations of the hair. In: Handbook of Diseases of the Hair and Scalp. Malden, MA: *Blackwell Science*, 191–200
4. Martin, E., & Elewski, B. (2003). Tinea capitis in adult women masquerading as bacterial pyoderma. *J Am Acad Dermatol, 49*, S177–S179.
5. Adu, E. J. K. (2013). Tumours of the Scalp: A Review of Ten Cases. *Journal of US-China Medical Science, 10*, 57–62.
6. Chang, S. J., Sims, J., Murtagh, F. R., Mc Caffrey, J. C., & Messina, J. L. (2006). Proliferating Trichilemmal Cysts of the Scalp on CT. *Am J Neuroradiol, 27*, 712–14.
7. Conley, J. J. (1964). Malignant tumors of the scalp. I. Analysis of 92 cases of malignant epithelial and somatic tumors of the scalp. *Plast Reconstr Surg, 33*,1-15.
8. Spitz, D. J., Reddy, V., Selvaggi, S. M., Kluskens, L., Green, L., & Gattuso, P. (2000). Fine-needle aspiration of scalp lesions. *Diagn Cytopathol, 23*, 35-8.
9. Carson, H. J., Gattuso, P., Castelli, M. J., & Reddy, V. (1995). Scalp lesions. A review of histopathologic and fine-needle aspiration biopsy findings. *Am J Dermatopathol, 17*, 256-9.
10. Buddrukar, S., & Shet, T. (2007). Malignant pilar tumours of the scalp: A case report and review of literature. *J Can Res Ther, 3*, 240–243.
11. Truhan, A. P., Garden, J. M., Caro, W. A., & Roenigk, H. H. (1985). Facial and scalp lipomas: case reports and study of prevalence. *J Dermatol Surg Oncol, 11*, 981-4.
12. Kapuriya Dharmesh, P. P. P., & Shah Amrish, N. (2012). Histopathological study of 100 cases of vascular tumours. *Nastional Journal of Medicaql Research, 2*, 152-5.
13. Adu, E. J. K. (2013). Tumours of the Scalp: A Review of Ten Cases. *Journal of US-China Medical Science, 10*, 57–62.
14. Chang, S. J., Sims, J., Murtagh, F. R., Mc Caffrey, J. C., & Messina, J. L. (2006). Proliferating Trichilemmal Cysts of the Scalp on CT. *Am J Neuroradiol, 27*, 712–14.
15. Conley, J. J. (1964). Malignant tumors of the scalp. I. Analysis of 92 cases of malignant epithelial and somatic tumors of the scalp. *Plast Reconstr Surg, 33*, 1-15.