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A study of epidermal and dermal tumors over face in ageing skin

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ABSTRACT

Introduction: Ageing is a complex process that has been defined as the accumulation of molecular damage over time. signs of ageing skin are atrophy, laxity, wrinkling, sagging, dryness, yellowness, a multiplicity of pigmented and other blemishes and sparse grey hair. More than 90% of age-associated cosmetic problems are caused by ultraviolet (UV) radiation on exposed skin, which damages telomeres, generates free-radicals and whose effects are largely proportionate to skin type. Skin tumours develop as a result of proliferation of a single or multile components of the skin. Skin tumours are a challenging group of conditions that can be categorized into epidermal and dermal tumors depends on their origin. skin tumours in ageing skin are challenging because of wide variatios in cliical presentations, the occurence, behaviour and variety of the epidermal and dermal tumours makes it worthwhile to study this topic.

Aim: The aim of this study was to study the clinical features and epidemiology of epidermal and dermal tumours of skin over face in ageing.

Materials and Methods: fifty patients with Epidermal and Dermal skin tumors over face in ageing skin attending the opd of department of dermatology.

Results: The highet age prevalances was in 5th decade (50%), The female: male ratio was 1.2: 1. The commonest skin tumours recorded were epidermal tumours (74%), followed by dermal tumors (26%). Commonest among Epidermal tumours were seborrheic keratosis – 28 cases (75.07%), were firm in consistency in 30 cases (81.08%), cystic in 04 cases (10.81), soft in 03 cases (8.1 %). Among Commonest among dermal tumors were compound nevus – 5 cases (38.46%), Among dermal tumors, 06 cases were biopsied.clinical diagnosis concordance with histopatholgical diagnosis was seen in 04 cases (66.66%). Discordance seen in 02 cases (33.33%), clinically suspected as sebaceoma and dermal nevus turned out to be dermal nevus and dermatofibroma histopathologically.

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1. Source of Data

50 patients of Epidermal and Dermal skin tumors of both sexes over face with age more than 50 years. Attending the department of Dermatology

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1.1. Exclusion criteria

cutaneous infections like warts ,erysipelas3. Skin lesions other than tumors 4. Melanocytic nevus those not fulfilling tumor criteria (>5mm in size) i.e flat lesions like junctional nevus, dysplastic nevus and small lesions like DPN.

1.2. Method of collection of data

Informed consent was taken from all the patients included in the study.

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All patients in our study undergone a detailed history taking, general physical, systemic and dermatological examination and a set of routine investigations. Skin biopsy routinely not done for all patients as the lesions were present over the face and patients were not willing due to cosmetic concerns

However 15 cases were subjected to skin biopsy when there was a diagnostic dilemmas and patients who were willing. For smaller lesions, excisional biopsy and for larger lesions incisional biopsy was done Special stains like mason fontana for melanin were used whenever diagnostic dilemma in histopathology.

Clinical photographs were taken in all cases of facial tumors.Patient was referred to oncosurgeon in case of suspested malignant epidermal, dermal tumors for biopsy and further necessary management.

1.3. Evaluation

For the study, a proforma was prepared to record the relevant details of the patient like age, sex, occupation, socioeconomic status, number of lesions, site, symptoms, and clinical examinations which include presnting lesion, consistency etc. In clinically doubtful cases and those willing for biopsy skin biopsy was done. Results were correlated for concordance and discordance.

Records were maintained and data analyzed, variables was tested using apropriate statistical tool .(SPSS Software version 16).

2. Results

The highest age prevalance was in the age group of 51 - 60 years, 25 cases (50%), followed by 61-70 years 13 cases (26%) and 71-80 years 10 cases (20%), 81-90 years 02 cases (4%), The least prevalance was observed in 81-90 years.

Among males, maximum numbers of cases were in the age group of 51-60 years,9 cases (18%) and least was in the age group of 81-90 years 02 cases(4%), whereas in females, commonest was in the age group of 51-60 years, 16cases (32%) and least was in the age group of 71-80 years, 04cases (8%). Out of 50 cases, 28 were females and 22 were males.

The female: male ratio being 1.27: 1.Patients from Urban area (76%) outnumbered those from rural areas (24%). Most frequently affected individuals are housewives (54%) followed by clerks (16%), business and agriculturists (12% each), Labourer, supervisor and anm(2% each). Out of 50 patients studied 04 patients belongs to lower class (8%), 42 patients belongs to middleclass (84%) and 04 patients belongs to upper class (8%). Most common skin tumors were epidermal tumors (74%) followed by dermal tumors (36%). Commonest among Epidermal tumours were seborrheic keratosis – 28 cases (75.07%), (observed pvalue -0.014 < 0.05) followed by epidermoid cyst 4 cases (10.81%), acrochordons 3 cases (8.1) and keratoacanthoma

,basal cell carcinoma 1 case each (2.75%). The commonest tumours in this study among dermal tumors were compound nevus – 5 cases (38.46%), (observed pvalue -0.09 < 0.05) followed by syringoma and sebaceous hyperplasia 3 cases each (23.07%), and Dermal nevus, Dermatofibroma 01 case each (7.6%). Tables 1 and 4 .

It is observed from the above table, the calculated p-value (.009) islesser than the level of significance i.e. 0.05. (p <0.05) So, we reject the null hypothesis and concluded that there is association between most common dermal tumors and compound nevus.

Most of the patients with epidermal tumors suffered for years (86.48%), compared to those with months (13.5%), most commonly seborrhoiec keratosis presented for years (observed p value 0.01 < 0.05). Among dermal tumors most patients suffered for years (46.15%), compared to those with months (30.76%) at birth (23.07%). Majority of the epidermal tumors presented with multiple leisons 22cases(59.45%) and 15 cases with single leisons (40.54%). majority of the dermal tumors presented with multiple leisons 9cases(69.23%) and 4 cases with single leisons (30.76%).

Commonest presenting symptoms among epidermal tumours was itching (8.1%), pain (2.7 %), bleeding (2.7 %) most of the patients among dermal tumours were asymptomatic (100%). Commonest site in face among epidermal tumors were cheeks (67.56%), followed by forehead (16.21%) eyelids (8.1), chin (5.4%) and nose (2.7%). Table 9 B shows, that among dermal tumors commonest site in face is cheeks (46.15%), followed by eyelids (23.07), by forehead (15.38%), chin (15..38%) Table 5 A&B.

2.1. Morphology

Commonest presenting lesions among epidermal tumors were papule (56.7 %), followed by plaque (32.43%), nodule (10.8%). Commonest presenting lesions among dermal tumors were nodule (53.84 %), followed by papule (46.15%).%)

Among epidermal tumors majority of the leisons were firm in consistency (81.08%), soft (10.81%) and cystic (8.1). Among dermal tumors all the leisons presented with firm consistency(100%). Among epidermal tumors, 09 cases were biopsied. clinical diagnosis concordance with histopatholgical diagnosis was seen in 08 cases(88%). Discordance seen in 01 case (12%), clinically confirmed as melanocytic nevus turned out to be dysplastic nevus histopathologically.

Table 1: Prevalance of various types of epidermal skin tumours

Group	Type of epidermal tumour	No. of cases	Percentage (% in epidermal tumours)	Percentage (% of total tumours)
I	Benign keratinocyte tumours	36	97.29	72
	A) Seborrhoeic keratosis	28	75.07	56
	B) Keratoacanthoma	1	2.7	2
	C) Acrochordons	3	8.1	6
	D) Epidermoid cyst	4	10.81	8
II	Malignant epidermal tumours	1	2.7	2
	A) Basal cell carcinoma	1	2.7	2
	Total	37	100	74

Table 2: : Prevalance of seborrhoeic keratosis in epidermaltumors - statistics Chisquare

0: There is no association between most common epidermal tumors and seborrhoeic keratosis H1: There is association between most common epidermal tumors and seborrhoeic keratosis Case Processing Summary

	N		N	Percent		
epidermaltumours *seberrohoeic keratosis	37	97.4%	1	2.6%	38	100.0%

Epidermaltumours * Seberrohoeic Keratosis Crosstabulation

				No	Total
			28	8	36
		% within epidermaltumours	77.8%	22.2%	100.0%
	benign	% within seberrohoeic	100.0%	88.9%	97.3%
. 1 1		% of Total	75.7%	21.6%	97.3%
epidermaltumours			0	1	1
	Malignant	% within epidermaltumours	0.0%	100.0%	100.0%
		% within seberrohoeic	0.0%	11.1%	2.7%
		% of Total	0.0%	2.7%	2.7%
			28	9	37
T-4-1		% within epidermaltumours	75.7%	24.3%	100.0%
Total		% within seberrohoeic	100.0%	100.0%	100.0%
		% of Total	75.7%	24.3%	100.0%
-Square Tests					
_				. Sig. (2-sided)	
Chi-Square		9.198a	1	.014	

^{. 2} cells (50.0%) have expected count less than 5. The minimum expected count is .24.

Among dermal tumors, 06 cases were biopsied.clinical diagnosis concordance with histopatholgical diagnosis was seen in 04 cases(66.66%).Discordance seen in 02 cases (33.33%), clinically suspected as Fibrous papule of faces turned out to be dermal nevus and dermatofibroma histopathologically. Table 6 A ,B

2.2. Associated Diseases

Most patients did not have any associated conditions 34 cases (68%), associated conditions seen were diabetes mellitus in 07 cases (14%) and hypertension 9 cases (18%).

2.3. Clinical and histopathologial

Epidermal Tumors

b. Computed only for a 2x2 table

It is observed from the above table, the calculated p-value (.014) is lesser than the level of significance i.e. 0.05. (p <0.05). So, we reject the null hypothesis and concluded that there is association between most common epidermal tumors and seborrhoeic keratosis.

Table 3: Prevalance of Seborrhoeic Keratosis In Epidermal Tumors - Statistics

H0: There is no association between most common dermal tumors and compound nevus

H1: There is association between most common dermal tumors and compound nevus Case Processing Summary

* compoundnevus 13 * compoundnevus Crosstabulation		100.0%	0	0.0%	13	100	.0%
							Total
				5		1	6
	agguirad	% within Dermaltur	mors	83.3%		16.7%	100.0%
	acquired	% within compound	nevus	100.0%		12.5%	46.2%
		% of Total		38.5%		7.7%	46.2%
				0		6	6
Dermaltumors	appandageal	% within Dermaltur	mors	0.0%		100.0%	100.0%
Dermanumors		% within compound	nevus	0.0%		75.0%	46.2%
		% of Total		0.0%		46.2%	46.2%
	soft tissue			0		1	1
		% within Dermaltumors	mors	0.0%		100.0%	100.0%
		% within compound	nevus	0.0%		12.5%	7.7%
		% of Total		0.0%		7.7%	7.7%
				5		8	13
Total		% within Dermaltur	mors	38.5%		61.5%	100.0%
10tai		% within compound	nevus	100.0%		100.0%	100.0%
		% of Total		38.5%		61.5%	100.0%
-Square Tests							
				. Sig. (2-side	ed)		
Chi-Square	9.479a		2			.009	

a. 6 cells (100.0%) have expected count less than 5. The minimum expected count is .38.

Table 4: Prevalance of various types of dermal skin tumours

Type of dermal tumours	No. of cases	Percentage (% in dermal tumours)	Percentage (% of total tumours)
Acquired melanocytic nevi	6	46.1	12
A) Compound nevus	5	38.46	10
B) Dermal nevus	1	7.6	2
Appendageal tumours	6	46.1	12
A) Sebaceous hyperplasia	3	23.07	6
B) Syringoma	3	23.07	6
Soft tissuetumours	1	7.6	2
A) Dermatofibroma	1	7.6	2
Total	13	100	26

Table 5: A. Site And Distribution Of Lesions Of Epidermal Tumors

Type o tumou		te F	orehead				Chin
). Seborrhoei keratoses	c	6	2	1	17	2
Epidermal Tumours). Keratoacan	thoma	0	0	0	1	0
). Acrochordo	ons	0	1	0	2	0
). Epidermoio	dcyst	0	0	0	4	0
). Basal c	ell	0	0	0	1	0
/ Percenta	ge	6 /	16.21	2 / 5.4	1 / 2.7	25 / 67.56	2/5.4B:
		Site	and distribution	of lesions of de	ermal tumors		
Type of Tumours							
). Compound nevus	1	0	0		2 2	
Dermal). Dermal nevus	0	0	0		1 0	
Tumours). Sebaceous hyperp	lasia 1	0	0		2 0	
). Syringoma	0	3	0		0 0	
). Dermato fibroma	0	0	0		1 0	
/ Percentag	ge	2 / 15.38	3 / 23.07	0	6/4	46.15 2 / 15.38	

Table 6: Clinico Path Correlation Of Epidermal Tumors

Type of tumours		diagnosis	diagnosis		Discordance
) Seborrhoeic keratose	s 28	6	6	0
Epidermal Tum	ours) Keratoacanthoma	1	0	0	0
) Acrochordons	3	0	0	0
) Epidermoid cyst	4	2	2	0
) Basal cell carcinoma	1	1	1	0
		37	9	9	0
: Clinico Pathol	logical Correlation Of Dermal T	umors			
of Tumours		nosis	Diagnosis		
) Compound nevus	5	3	3	0
D1) Dermal nevus	1	1	0	1
Dermal Tumours) Sebaceous hyperplasia	3	0	0	0
) Syringoma	3	1	1	0
) Dermato fibroma	1	1	0	1
	Total	13	6	4	2

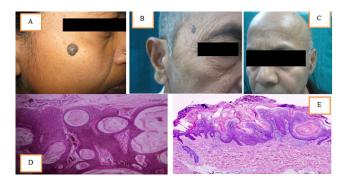


Fig. 1: A ,B,C: Seborrhoiec Keratosis, (D) - histopathology of pigmented seborrhoiec keratosis 10 X, (E) histopath of hyperkeratotic seborrhoiec keratosis Thin interwoven cords of basaloid cells show cytoplasmic melanin pigmentation Horn cysts are also present.

Seborrheic keratosis of hyperkeratotic type with marked papillomatosis and hyperkeratosis. (10 x ,H & E)

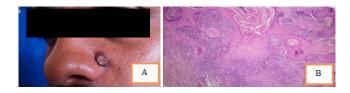


Fig. 2: A: Keratoacanthoma, (B) Histopathology of keratoacanthoma (10 X)

There is a large, central keratin-filled crater. Epidermis extends like a buttress over the side of the crater Irregular epidermal proliferations extend downward from the base of the crater into the dermis

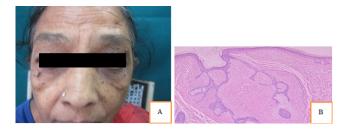


Fig. 3: A acrochordons. (B) Histopathology of acrochordons 10 X

Epidermal hyperplasia with stroma composed of loosely arranged collagen

Epidermal cysts are lined by stratified Squamous epithelium inflammatory cell infiltrate in the adjacent dermis,



Fig. 4: A Epidermoid Cyst, (B) Histopathology -Epidermoidcyst

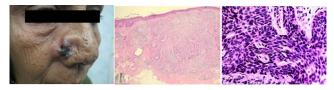


Fig. 5: A Basal Cell Carcinroma - Noduloulcerative Type, FIG 5 B Basal Cell Carcinoma (10X) Islands of basaloid cells with peripheral palisading, BASAL CELL CARCINOMA (40 X) solid type. High magnification. The basaloid tumor cellsflow through the dermis with a variable degree of peripheral palisading.

2.4. Dermal Tumors

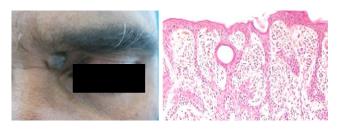


Fig. 6: A Compound Nevi, FIG 6B Compound nevus (H & E 100 X) Both junctional and dermal nests of nevus cells.

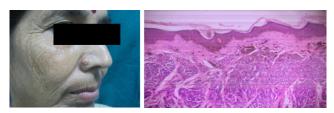


Fig. 7: 7A Dermal Naevus, B Histopathology of intradermal nevi $10~\rm X$) nevus cells arrangedin nests in dermis.

The epidermis overlying the dermal tumor is acanthotic and papillomatous with a central 'dell'.



Fig. 8: A&B – Syringoma, C Histopathology of Syringoma 10 X In the dermis,numerous tubular structures are embedded in a dense, collagenous stroma.



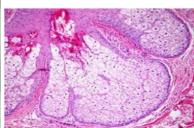


Fig. 9: A Sebaceous Hyperplasia, B Histopathology of sebaceoushyperplasia (100 X) Large sebaceous lobules with a rim of basaloid cellsat the periphery and mature sebocytes in the center are part of the enlarged sebaceous gland

3. Discussion

3.1. Age

In the present study more number of patients, belonged to the age group of 51-60 years, 25 cases (50%), followed by 61-70 years 13 cases (26%) and 71-80 years 10 cases (20%),81-90years 02cases(4%). The least prevalence was observed in 81-90 years.

3.2. Sex

Among males, maximum numbers of cases were in the age group of 51-60 years, 9cases (18%) and least was in the age group of 81-90 years 02 cases(4%), whereas in females, commonest were in the age group of 51-60 years, 16cases (32 %) and least was in the age group of 71-80 years, 04cases (8 %). Out of 50 cases, 28 were females and 22 were males.

The female: male ratio being 1.27: 1.In the present study 38 patients (76 %) belonged to urban area and only 12 patients (24%) belonges to rural area. Though lot of people attend our hospital from rural areas the lower prevalance among them reflects their ignorance regarding the cosmetic orientation and also due to the asymptomatic nature of the lesions

In the present study among the occupational group, housewives constituted the majority (54%), followed by clerks (16%), Business and agriculture (12% each), not

applica le in (2%),labourer (2%), supervisor and nurse (2% each). This reflects the degree of cosmetic orientation in these various occupational groups. In the present study 42 patients (84%) belonged to the middle socio-economic status whereas 04 pateints each (08%) belonged to the upper and lower socioeconomic status. This is in concurrence with the observation that the majority of the patients attending our hospital belonged to middle socio-economic status. The lower prevalance among higher and lower socioeconomic status can be attributed to the fact that these patients as they are capable of attending private consultants remain out of record and thus add to a probable low prevalance.

3.3. Prevalance

In the present most common skin tumors were epidermal tumors (74%) followed by dermal tumors (26%). Table 5. Commonest among Epidermal tumours were seborrheic keratosis – 28 cases (75.07%) (p value = 0.014, <0.05), followed by epidermoid cyst 4 cases (10.81%), and acrochordons 3 cases (8.1%), keratoacanthoma &basal cell carcinoma 1 case each (2.7%).

The commonest tumours in this study among dermal tumors were compound nevus – 5 cases (38.46%), (p value = 0.09, < 0.05) followed by syringoma and sebaceous hyperplasia 3 cases each (23.07%), dermal nevus, and dermatofibroma 01 case each (7.6%). Table-1&4 / 2&3chi square charts

3.4. Duration

Most of the patients with epidermal tumors suffered for years (86.48%), compared to those with months (13.5%) . In epidermal tumors SK most commonly presented for years (p value = 0.02 , < 0.05) Among dermal tumors most patients suffered for years (46.15%), compared to those with months (30.76%) at birth (23.07%) . In dermal tumors, compound nevus most commonly presented for years (p value = 0.01 , < 0.05)

3.5. Number of lesions

Majority of the epidermal tumors presented with multiple leisons 22cases(59.45%) and 15 cases with single leisons (40.55%). Majority of the dermal tumors presented with multiple leisons 9cases (69.23%) and 4 cases with single leisons (30.76%).

3.6. Symptoms

Commonest presenting symptoms among epidermal tumours was itching in 3 cases (8.1%), pain in 1 case (2.7%), bleeding in 1 case (2.7%). All the patients with dermal

tumours were asymptomatic (100%).

3.7. Site and distribution of lesions over face

Commonest site in face among epidermal tumors were cheeks in 25 cases (67.56%), followed by forehead in 06 cases (16.21%) eyelids & chin in 02 cases each (5.4%), and nose in 1 case (2.7%). Among dermal tumors commonest site in face is cheeks in 06 cases (46.15%), followed by eyelids 03 cases (23.07%), forehead and chin in 02 cases each (15.38%), Table 5 A,B.

3.8. Morphology

Commonest presenting lesions among epidermal tumors were papules in 21 cases (56.7 %), followed by plaques in 12 cases (32.4%), nodule in 04 cases (10.8%). Commonest presenting lesions among dermal tumors were nodule in 7 cases (53.84 %), followed by papules in 06 cases (46.15%).

3.9. Consistency of lesions

Among epidermal tumors majority of the leisons were firm in consistency in 30 cases (81.08%), cystic in 04 cases (10.81),soft in 03 cases (8.1%). Among dermal tumors all the leisons were firm in consistency (100%).

3.10. Clinico pathological correlation

Among epidermal tumors, 09 cases were biopsied.clinical diagnosis concordance with histopatholgical diagnosis was seen in 09 cases (100%). No discordance seen.

Among dermal tumors, 06 cases were biopsied.clinical diagnosis concordance with histopatholgical diagnosis was seen in 04 cases(66.66%).Discordance seen in 02 cases (33.33%), clinically suspected as sebaceoma and dermal nevus turned out to be dermal nevus and dermatofibroma histopathologically. Table 6 A ,B.

3.11. Associated diseases

Most patients did not have any associated conditions 34 cases (68%), associated conditions seen were diabetes mellitus in 07 cases (14%) and hypertension 9 cases (18%).

3.12. Discussion of individual tumours

3.13. Benign tumours of epidermis

3.14. Seborrhoiec keratosis

In the present study, most common among epidermal tumors were seborrhoiec keratosis seen in 28 pateints (56%) (pvalue

0.014 < 0.05) out of which there were 15 females and 13 males. The female male ratio was 1.15:1. According to Quinn et al, 1 the males and females are equally affected. The highest age of onset was 87 years and least being 51 years. With mean age of onset was 67.42 years. This correlates well with statement by Jain et al8 that, seborrhoeic keratosis is common in the middle aged and elderly person.

Most commonly seborrhoeic keratosis presented for years. (pvalue 0.02 < 0.05). In our study, 25 patients were asymptomatic (pvalue 0.01 < 0.05), while 3 patients had itching, lesions were located over cheek in each of the patients, they were diagnosed as inflamed seborrhoiec keratosis.

Most commonly it presented as papules in 17 patients The commonest site found was on the cheek (pvalue 0.02 < 0.05) and forehead. Other sites were chin. observations in the pre ent study are almost identical to the observations mentioned in the literature. $^{1-3}$

In our study, only 6 patients were biopsied, and the remaining 22 patients did not agree for biopsy as the lesions were located over co metically concerned areas. Out of 6 patients, three showed features of irritated type, two showed features of hyperkeratotic type, and other one showed features of pigmented type. Observatios in the present study are almost identical to the observatios mentioned in the literature. ^{1,4}

3.15. Epidermal cyst (Epidermoid cyst)

In the present study, there were 4 cases of epidermal cysts (8 %), 2 male and 2 females. According to Quinn et al,⁵ it is commonly seen in young and middle aged adults. In this study the mean age of onset was 55.33 years. According to kirkham,² the commonest site of involvement is face, scalp, neck and trunk but in our study all lesions were seen over the face.

In our study, only 1 patient were biopsied and the remaining 3 patients did not agree for biopsy. one patient showed features of typical histopathological features which were consistent with the findings of Quinn et al ¹ Kirkham.²

3.16. Acrochordons

In the present study, acrochordons were seen in 03 pateints (6%), of which 2 were males and 1 were females. According to Quinn et al, ⁵ females were more commonly affected than males. The mean age of onset was 63.63 years, which is similar to the study by Zaher et al. ⁶ Majority of lesions were multiple, small pedunculated papules (9%) located over periorbital, cheek.

According to Kumar et al, ⁷ acrochordons are associated with diabetes mellitus, obesity, hyperlipidemia, acromegaly

and intestinal polyps, however in our study diabetes mellitus and hypertension was not associated with acrochordon. The observations made in the present study with regard to the clinical features of lesions are not in concurrence with the observations made in other studies. ^{1,7}

3.17. Benign Tumours of Melanocyte

3.18. Compound nevus

In the present study, most common among dermal tumors were compound nevi seen in 5 patients (10 %) (pvalue 0.009 < 0.05) 3, females and 02 males they belonged to 50-70 years of age group. Most commonly presented as single lesions observed in 3 patients (p value 0.05 = 0.05) and asymptomatic in all 05 patients (pvalue 0.009 < 0.05). All the lesions were located over the face Observations in the present study are almost identical to the observatio s mentioned in the literature. ^{8,9} In our study, two patients were biopsied and the others did not agree for biopsy as the lesion was located over cosmetically co cerned area. Histopathological features showed junctional activity of nevus cells and superficial dermis was composed predominantly of type a nevus cells arranged in nests. The observations in the reent study are in concurrence with the observation mentioned in the literature. 8-10

3.19. Intradermal nevi

In the present study, intradermal nevi were seen in 1 female patient. The lesions was single and situated over the cheek. In our study, initially thought of sebaceoma clinically but confirmed as dermal nevus with typical histopathological features of intradermal nevus which were consistent with the findings of Elder ¹⁰, Newton Bishop ⁸ Katarkar. ¹¹

3.20. Appendageal tumours

In the present study, appendageal tumours were seen in 5 pateints (10%). Out of which three patient had syringoma (6%) and two patient had sebaceous hyperplasia (4%). In our study, 2male and 1 female patient (6%) had syringoma of onset 50-60 years of age concordant with study by Ramaswamy et al, 12 which showed that it was common in middle aged males. All cases presented with multiple lesions (p value 0.01 < 0.05) were seen around the eyelids (p value 0.01 < 0.05). According to Calonje, 13 commonest site involved is head and neck, rarely over trunk and extremities. Histopathological findings were typical as descriedy Ramaswamy et al 12 Calonje 16Ahmed. 17In the resent study, 01 male and 02 female patient (4%) had sebaceous hyperplasia. The lesions were multiple, yellow to skin coloured papules and nodules over forehead, nose and cheek. Observations in the present study are almost identical to the observations mentioned in the literature. ¹² 16, Histopathological findings were typical as descried by Ahmed. ¹⁴ Kumar et al. ¹⁵

3.21. Benign soft tissue tumours

In the present study, benign soft tissue tumours was seen in 1 pateint (2%), had dermatofibroma (2%). In our study, there was 1 Dermatofibroma male patient (2%), Lesions were multiple over face, however according to calonje et al, 16 they are common in young adults, however in our study found in old age, clinically thought of intradermal nevus initially but after histopathology diagnosed as dermatofibroma. Histopathology showed cellular type of dermatofibroma. Observations made in the present study are almost identical to the observations mentioned in the literature. 14

3.22. Basal cell carcinoma

In the present study, basal cell carcinoma were seen in 01 pateint (2 %) According to minnesota study, ¹⁶ males were more commonly affected than females. In our study, 01 female patient had basal cell carcinoma. with age of onset was 69 years. According to australian case—control study by Kricker et al. ¹⁷ presence of large number of naevi, freckles and solar elastosis all add to the BCC risk, however in our study large numberof nevi, freckles was not as ociated. It is more common in sun exposed areas like head and neck. The observations made in the present study with regard to the clinical features of lesions are in concurrence with the observations made in by purnima et al. ¹⁸

In our study, 1 case (2%) was biopsied by oncosurgeon, showed typical features of Noduloulcerative type basal cell carcinoma. which were consistent with the features described by purnima et al ¹⁸ Immunohistohistochemistry was not done as this patient lost her follow up in our hospital.

3.23. Summary

Fifty patients presented with epidermal and dermal skin tumours attending the Department of Dermatology, Venereology and Leprology. The highet age prevalances was in 5th decade (50%), followed by 6th decade (26%) 7th decade (20%), least prevalance was observed in 8th decade (6%). The female: male ratio was 1.2: 1.Patients from urban area (76%) outnumbered those from rural areas (24%). Patients most frequently affected were housewives (54%), clerks (16%), business and agriculturists (12% each). Most patients belonged to middle class (84%).

The commonest skin tumours recorded were epidermal tumours (74%), followed by dermal tumors (26%). Commonest among Epidermal tumours were seborrheic

keratosis – 28 cases (75.07%), followed by epidermoid cyst 4 cases (10.81%), acrochordons 3 cases (8.1%), keratoacanthoma &basal cell carcinoma 1 case each (2.7%). Most of the patients with epidermal tumors suffered for years (86.48%), followed by months (13.5%). Majority of the epidermal tumors presented with multiple leisons 22cases(59.45%) and 15 cases with single leisons (40.55%). Commonest presenting symptoms among epidermal tumours was itching in 3 cases (8.1%), pain in 1 case (2.7%), bleeding in 1 case (2.7%). Commonest site in face among epidermal tumors were cheeks in 25 cases (67.56%), followed by forehead in 06 cases (16.21%) eyelids & chin in 02 cases each (5.4%), and nose in 1 case (2.7%).

Commonest presenting lesions among epidermal tumors were papules in 21 cases (56.7 %), followed by plaques in 12 cases (32.4%), nodule in 04 cases (10.8%). Among epidermal tumors majority of the leisons were firm in consistency in 30 cases (81.08%), cystic in 04 cases (10.81), soft in 03 cases (8.1 %). Among epidermal tumors, 09 cases were biopsied.clinical diagnosis concordance with histopatholgical diagnosis was seen in 09 cases(100%). No discordance seen.

Commonest among dermal tumors were compound nevus - 5 cases (38.46%), followed by syringoma and sebaceous hyperplasia 3 cases each (23.07%), dermal nevus, and dermatofibroma 01 case each (7.6%). Among dermal tumors most patients suffered for years (46.15%), followed by months (30.76%) and at birth (23.07%). Majority of the dermal tumors presented with multiple leisons 9cases (69.23%) and 4 cases with single leisons (30.76%). All the patients with dermal tumours were asymptomatic (100%). Among dermal tumors commonest site in face is cheeks 06 cases (46.15%), followed by eyelids 03 cases (23.07%), forehead and chin in 02 cases each (15.38%). Commonest presenting lesions among dermal tumors were nodule in 7 cases (53.84 %), followed by papules in 06 cases (46.15%). Among dermal tumors all the leisons were firm in consistency (100%). Among dermal tumors, 06 cases were biopsied.clinical diagnosis concordance with histopatholgical diagnosis was seen in 04 cases (66.66%). Discordance seen in 02 cases (33.33%), clinically suspected as sebaceoma and dermal nevus turned out to be dermal nevus and dermatofibroma histopathologically.

4. Conclusion

- 1. In ageing skin over face Epidermal and dermal skin tumors highest age prevalance was observed in 5th decade (50%), and least prevalance was observed in 8th decade (6 %). The female: male ratio was 1.2: 1. The commonest skin tumours recorded were epidermal tumours (74%), followed by dermal tumors (26%).
- 2. Commonest among Epidermal tumours were seborrheic keratosis (75.07%), followed by epidermoid cyst

- (10.81%). Most of the patients with epidermal tumors suffered for years (86.48%), followed by months (13.5%) . Majority of the epidermal tumors presented with multiple leisons (59.45%) and single leisons (40.55%). Commonest presenting symptoms among epidermal tumours was itching (8.1%), followed by pain and bleeding (2.7 % each). Commonest site in face among epidermal tumors were cheeks (67.56%), followed by forehead (16.21%) eyelids & chin (5.4%), and nose (2.7%). Commonest presenting lesions among epidermal tumors were papules (56.7 %), followed by plaques (32.4%), nodules (10.8%). Among epidermal tumors majority of the leisons were firm in consistency (81.08%), cystic (10.81),soft (8.1 %). Among epidermal tumors, 09 cases were biopsied.clinical diagnosis concordance with histopatholgical diagnosis was seen in 09 cases(100%). No discordance seen.
- 3. Commonest among dermal tumors were compound nevus (38.46%), followed by syringoma and sebaceous hyperplasia each (23.07%), dermal nevus, and dermatofibroma each (7.6%). Among dermal tumors most patients suffered for years (46.15%), followed by months (30.76%) and at birth (23.07%). Majority of the dermal tumors presented with multiple leisons (69.23%) and single leisons (30.76%). All the patients with dermal tumours were asymptomatic (100%). Among dermal tumors commonest site in face is cheeks (46.15%), followed by eyelids (23.07%), forehead and chin in each (15.38%). Commonest presenting lesions among dermal tumors were nodule in (53.84 %), followed by papules in (46.15%). Among dermal tumors all the leisons were firm in consistency (100%). Among dermal tumors, 06 cases were biopsied. Clinical diagnosis concordance with histopatholgical diagnosis was seen in 04 cases (66.66%).Discordance seen in 02 cases (33.33%), clinically suspected as sebaceoma and dermal nevus turned out to be dermal nevus and dermatofibroma histopathologically.
- 4. To conclude that in ageing skin over face most common skin tumors were epidermal tumors followed by dermal tumors. Prevalance of malignant epidermal tumors in patients were (2%). Whenever in diagnostic dilemma histopathology should be supplemented to get unambiguous results.

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6. Conflict of interest

None.

References

- Quinn AG, Perkins W. Non Melanoma Skin Cancer and other Epidermal Skin tumours. Rook's Textbook of Dermatol. 2012;3:38– 52
- Kirkham N, Elder DE, Elenitsas R, Johnson BL, Murphy GF, Xu X. Tumors cysts of the Epidermis. Lever's Histopathology of the Skin. 2009;p. 791–849.
- Jain AK, Sukhija J, Radotra B, Malhotra V. Seborrheic keratosis of theconjunctiva. *Indian J Ophthalmol*. 2004;52:154–155.
- Burns D, Breathnach. NH Cox and CEMGriffiths. Rook's Textbook of Dermatology.
- Mittal RR, Sonal J. The sign of leser-trelat. *Indian J Dermatol Venereol Leprol*. 2001;67:791–849.
- Zaher H, Safoury OS, Mahmoud SB, Hameed HA, Mcgauran MH, et al. Keratinous cystsof the skin: identification and differentiation of pilar cysts from epidermalcysts. *Indian J Dermatol*. 1966;52(4):499– 508
- 7. Kumar YK, Seema S, Sujatha C, Ambika H. Penile acrochordon: An unusual site of presentation- A case report and review of the literature. *Int J Health All Sci.* 2012;1(2):122–125.
- Bishop N, Lentigos JA, Melanoma MN, Bishop JAN, Breathnach T, et al. Oxford: Blackwell publishing ltd. In: and others, editor. Rook's Textbook of Dermatology. vol. 3. Oxford: Blackwell publishing ltd; 2012. p. 54–57.
- Grichnik JM, Rhodes AR, Sober AJ. Benign neoplasias and hyperplasias of melanocytes. *Dermatol General Med*. 2003;p. 1099– 1122.
- Elder D. Benign pigmented lesions and malignant melanoma. Lever's Histoopathology of skin. 1997;p. 675–679.
- Katarkar A, Shah P, Jain A, Shah M. A rare case of intradermal nevus of external auditory canal presenting with otorrhoea. *Indian J Otology*. 2011;17(1):20–21.
- Ramaswamy AS, Yenni VV, Wilfred C, Manjunatha HK, Shilpa K. Hyaline cell-rich chondroid syringoma of the finger. *Indian J Dermatol*. 2011;56(2):209–217.
- 13. Burns T, Breathnach S, Cox N, Griffiths C. Tumours of the skin appendages. In: and others, editor. Rook's Textbook of Dermatology.

- vol. 3. Oxford: Blackwell publishing ltd; 2012. p. 53-54.
- Ahmedtss P, Jd, Seykora JT, Elder DE, Elenitsas R, Johnson BL. Tumors of the epidermal appendages. In: and others, editor. Lever's Histopathology of the Skin. Southasian: Lippincott Williams Wilkins; 2009. p. 851–909.
- Kumar P, Shashikala P, Kumar J, Kumar P. Sebaceous hyperplasia mimicking lymphangioma. *Indian J Dermatol.* 2007;52(2):102–103.
- Madsen A. Studies on basal-cell epitheliomaof the skin: the architecture, manner of growth, and histogenesis of thetumours-whole tumours examined in serial sections cut parallel to the skinsurface. Acta Pathol Microbiol Scand Suppl. 1965;117:3–63.
- Kricker A, Armstrong BK, English DR, Heenan PJ. A dose-response curve for sun exposure and basal cell carcinoma. *Int J Cancer*. 1995;60(4):482–488.
- Singh A, Ramesh V, Malhotra P. Basal cell carcinoma in the North Indian population: Clinicopathologic review and immunohistochemical analysis. *Indian J Dermatol, Venereol, Leprol.* 2011;77(3):328–330.

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