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Original Research Article

Retrospective study of facial lesions and their histopathological correlation

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ABSTRACT

Background: Lesions on the face are very common either as a part of the other diseases or disease itself. Different kinds of diseases like infectious, benign neoplastic diseases, malignant tumors, metastatic tumor manifest with different morphology of lesions. So, a brief idea about the clinical history, age, sex and various sites, morphology of lesions is very important.
Methods: In the present study, from January 2019 to December 2019, total 100 pateints of facial lesions were taken for study from department of dermatology Seth G. S. medical college and KEM hospital, Mumbai. All lesions were studied with respect to clinical history, examination, morphology, location of lesion, biopsy for HE stains.
Results: Total of 100 patients who were subjected to the investigation; 57 men and 43 women. There were 13 children and 87 adults in all. The most frequent site was the forehead, and the least common was the angle of the mouth. The most common lesion morphology was plaque whereas the least common lesions were (ulcers, erosion, and cyst). The majority of the lesions were asymptomatic. Benign and premalignant lesions were the most prevalent on the face (30%), and acute inflammatory disorder (2%) least common
Conclusions: Facial lesions are well diagnosed clinically and better correlated on histopathological examination. Facial lesions were common in adults than in children, most often they are asymptomatic which requires prompt diagnosis and treatment.

Keywords: Facial lesion, Histopathology, Benign and malignant

INTRODUCTION

Facial skin lesions are common and they range from acute inflammatory dermatosis to malignant lesions which may be life threatening.[1] Face is the most captivating visual stimuli we come across, which we use to communicate ideas and emotions. So, facial lesions can cause inhibition of normal social habits, depression. The facial skin and the facial dermatoses are unique owing to the fact the facial skin is studded with the largest and most numerous sebaceous glands, making it, prone to development of dermatoses associated with pilosebaceous units.[2] There is a paucity of data on facial lesions, their impact on social judgement. There are number of causes of facial lesions, trauma, congenital deformities, benign or malignant. A skin biopsy for histopathological diagnosis is necessary to distinguish the different facial lesions.

Our objectives were to study and evaluate the incidence of different infectious, benign and malignant diseases manifested with facial lesions. To study the facial lesions in relation to age, sex, site of lesion, morphology of lesion. To carry out, histopathology and clinico-pathological correlation.

METHODS

It is a retrospective study, done at department of dermatology, Seth G. S. medical college and KEM hospital, Mumbai from January 2019 to December 2019. A total of 100 cases of lesions over the face were taken for the study All the patients with facial lesions except acne, of both the sexes and of all the age group who attended the dermatology OPD during the above period were taken for this study. Patients below 12 years of age and with acne were excluded. Preliminary data in the form of age, sex, occupation, onset and duration of symptoms were noted. Relevent history regarding the etiology of the factors such as photosensitivity, trauma, similar complaints in the family, were noted. Study design is purely observational, cross sectional and purpose of it is to determine clinico-epidemiological and pathological correlation of facial lesions. The descriptive data will be analyzed by an independent unbiased statistician. Association of risk factors with outcome variable will be analyzed by chi-square test.

RESULTS

100 patients satisfying the inclusion criteria were enrolled in the study. The various observations were noted as follows.

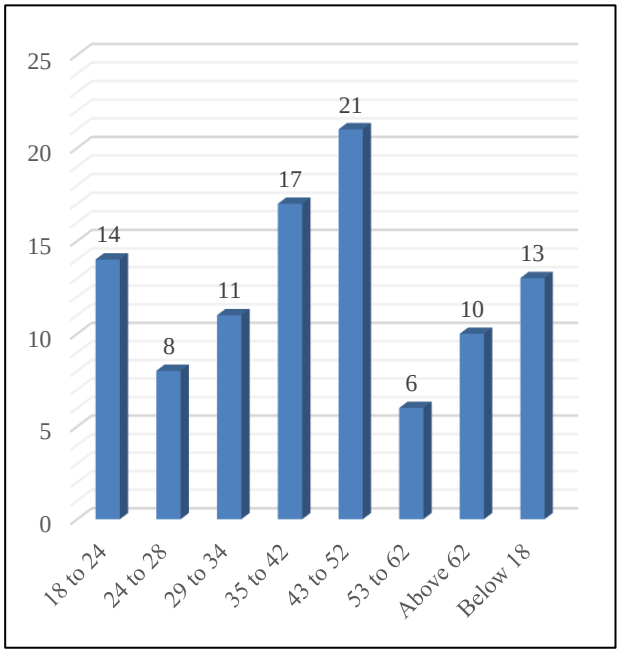

Figure 1: Age scale.

The majority of patients in the current study were 43-52 years old (21%), followed by 35-42 years (14%t), 18-24 years (14%), below18 years (13%), and 29-34 years (13%) (11%). The age group above 53-62 years had the lowest incidence (6%), followed by the age group 24-28 years (8%). The relationship between age and face dermatomes was found to be statistically significant ($p<0.05$).

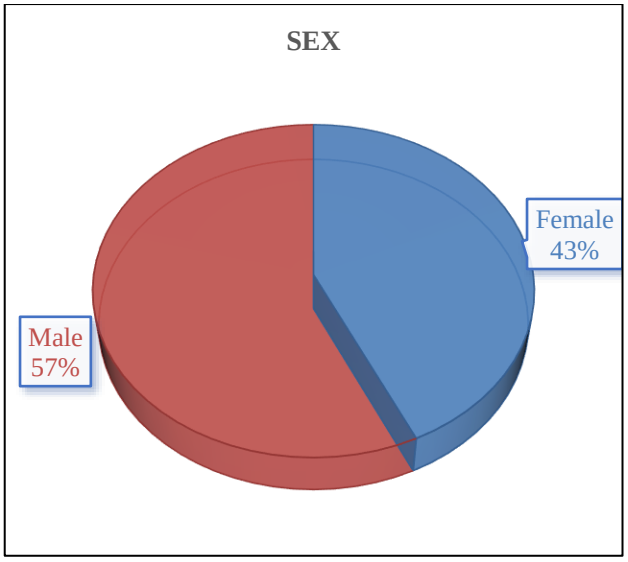

Figure 2: Gender distribution.

In the present study, there is higher male preponderance (57%) as compared to females (43%) as shown in Figure 2.

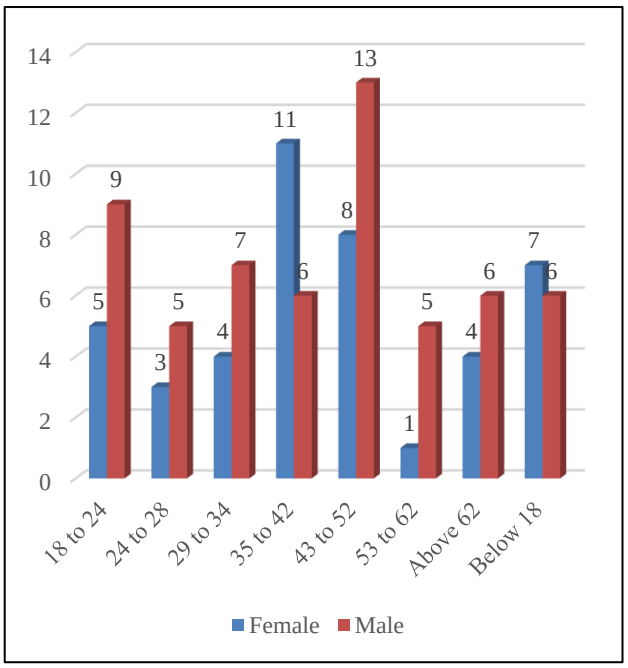

Figure 3: Age and gender distribution.

Table 1: Site of the lesion.

Site	Frequency	Percent (%)
Chin	4	4
Others	21	21
Forehead	47	47
Left cheek	6	6
Nose	13	13
Right cheek	9	9
Total	100	100

In the present study most common site was forehead (47%). Least common site was chin.

Table 2: Morphology of the lesion.

Valid	Frequency	Percent (%)
Atrophic plaque	1	1
Cyst	1	1
Erosion	1	1
Growth	1	1
Macule	4	4
Nodule	7	7
Papule	25	25
Patch	28	28
Plaque	27	27
Swelling	1	1
Ulcer	1	1
Vesicle	3	3
Total	100	100

Most common morphology of facial lesions was patch (28%), plaque (27%), papule 25%. Least common was ulcer, cyst, erosion (1%)

Etiology of facial lesions

Benign and premalignant lesions were most common (22%) on face, followed by chronic inflammatory condition (21%), autoimmune (15%), miscellaneous (12%), infections (9%), malignant lesions (6%), blistering disorder (5%), acute inflammatory disorder (2%).

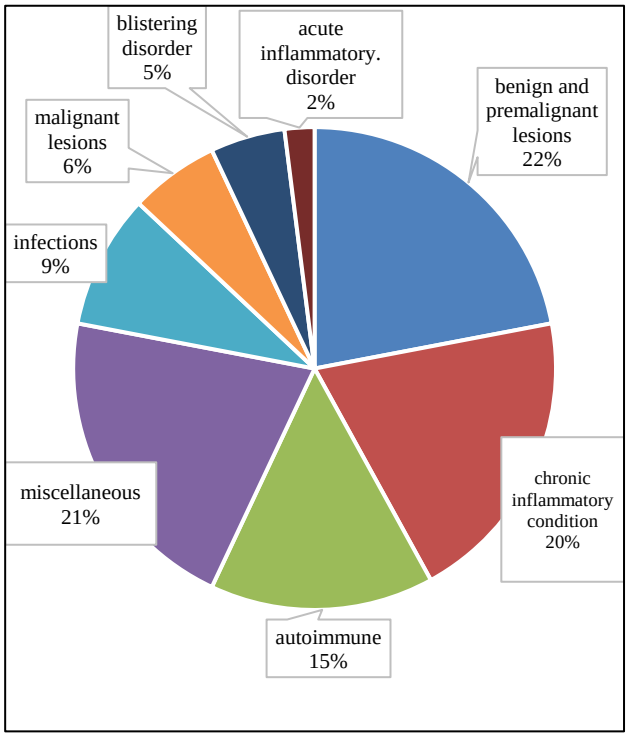

Figure 3: Etiology of facial lesions.

Table 3: Clinicopathological correlation.

Correlations		Provisional diagnosis	Final diagnosis
Provisional diagnosis	Pearson correlation	1	0.694**
	Sig. (2-tailed)		0.000
	N	100	100
Final diagnosis	Pearson correlation	0.694**	1
	Sig. (2-tailed)	0.000	
	N	100	100

**Correlations is significant at the 0.01 level (2-tailed).

Pearson's r

First is Pearson' r value, which is correlation coefficient. The Pearson correlation figure is 0.694 in this situation. Pearson's r ranges between +1 and -1, with +1 being a perfect positive correlation and -1 representing a perfect negative correlation. A value of 0 indicates that there is no linear association at all. Our correlation coefficient of 0.694 suggests very strong positive association.

Significance

We're also curious in the 2-tailed significance value, which in this case is 0.000. The usual alpha value is 0.05, indicating that our association is extremely significant and not just due to random sampling error, etc. This seems to be paradoxical. The answer is related to the size of our sample. Our data set has 100 instances. This suggests that our research has sufficient statistical power to detect even minor impacts.

DISCUSSION

Face is the most captivating stimuli which is encountered, by which we receive and convey ideas and emotions.[1] Facial lesions have impact on quality of life depending on size of lesion and location. Facial lesion would be bothersome, disturbing, and important to repair in a manner dependent on their size and location. Facial skin is affected by various dermatological diseases. They can be classified as acute inflammatory dermatosis, chronic inflammatory dermatosis, infections, autoimmune diseases, blistering disorders benign and premalignant epithelial lesions and nevi, malignant epidermal tumor, and some miscellaneous disorders (Table 4). Different disease present with different morphology of lesions such as papule, macule, plaque, patch, cyst, nodule.

Demographic details comparison sex incidence

The 100 patients enrolled in this study, out of these majority of them were males (57%). Female preponderance also observed by Jain et al.[4] In contrast to study, Pradeep et al observed male preponderance.[5]

Table 4: Classification of facial dermatosis.

Acute inflammatory dermatosis	Chronic inflammatory dermatosis	Infectious diseases	Auto-immune conditions	Blistering diseases	Benign and premalignant, and nevi	Malignant	Miscellaneous
Urticaria	Lichen planus	Impetigo	SLE	Pemphigus	Nevus of ota	BCC	Sturge Weber
Sebborrheic dermatitis	GA	Fungal	DLE	Bullous pemphigoid	Hydrocystoma	SCC	Drug rash
	PMLE	Leprosy	Morphea		Trichoepithelioma	Cutaneous metastasis	Frictional melanosos
	Lichen Nitidus				Angiofibroma		Milia En plaque
	Rosacea				Lymphangioma		Acanthosisnigri-cans
					Epidermo dysplasia verruciformis		PIH
					Melanocytic nevi		Scar
					Nevi		Porokeratosis
					Actinic keratosis		Infundibular cyst
					Seborrheic keratosis		
					Syringoma		
					Neurofibroma		
					Poroid hydradenoma		

Age comparison

In our study, majority of the patients belong to age group of 43-52 years (21%). Similar finding was observed in Pradeep et al 70 study also.[5]

Symptoms

Most common symptom reported in was asymptomatic

Sites affected

Most common site affected in our study was forehead 47% and the least common site affected was chin (4%).

Pattern of involvement

Benign and premalignant lesions 22% presented most commonly on face, followed by chronic inflammatory condition 21%, autoimmune 15%, miscellaneous 12%, infections 9%, malignant lesions 6%, blistering disorder 5%, acute inflammatory disorder 2%.

Infections

In our study, infections accounted for (9%). Majority of them were leprosy (66%) followed by fungal and bacterial infections. In Jain et al study, viral infection was the most common infection followed by fungal and bacterial infections.[4]

Skin tumours

Benign, premalignant and malignant. Skin tumors were seen in 25% of facial dermatoses in our study. Our study also found that connective tissue diseases (4%) and immune bullous diseases (5%) involving the face were more common than Jain et al study.[4]

Limitation

It was a retrospective study. The main constraint was short duration, which resulted in a smaller sample population. The sample should have been community-based rather than hospital-based, allowing for extrapolation to the general population and therefore determining the true scope of the issue.

CONCLUSION

There are very few studies on clinical and histopathological correlation of the lesions present on face. All the existing studies are of clinic-epidemiological based to the best of our knowledge. There correlation between clinical and pathological correlation was significantly positive.

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Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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