OIL DERMATITIS

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Summary

Presented a study of 50 cases of facial skin lesions due to application of impure oil. Cases had acniform as well as pigmentary lesion.

Cosmetically the face is one of the most important parts of the body. The lesions affecting this area attract the attention of other persons immediately and at the earliest occasion. As the saying goes "first impression is the last impression", so everybody wants to look better and brighter. Therefore, it is not unusual to find that a physician often has to face this delicate problem.

The two important abnormal changes which affect the facial skin are —

(i) abnormalities of pigmentation; and

(ii) acneiform lesions.

The pigmentary disorders present in various forms may be as Leukoderma (a depigmented skin) or as melanoderma — a state of hyperpigmentation. The etiological factors responsible for melanoderma are multiple and varied. They may be local, systemic and not uncommonly idiopathic. Sunlight is very well known photo-sensitizing element. Certain chemicals like coal-tar, petroleum, etheral oils, oil of Bergamot, oil of lemon when they are mixed in perfumes and toilets are important sources in producing localized or generalized pigmentation over the face. The generalized cutaneous pigmentation may occur due to systemic disorders, e.g., chronic liver disease like cirrhosis of liver, Addison's disease, exophthalmic goitre, scleroderma, haemochromatosis, etc. (Pillsbury, et al[2]).

The acneiform lesions over the face occur due to acne vulgaris, chloracne, infantile acne, steroid-acne. Berlin et al in 1954 and Sprecher et al in 1958 have reported acneiform lesion following the use of hair dressing containing paraffin oil and petroleum or working with machine oil. Chloracne occurs as a result of occupational exposure. The industrial workers who come in contact with machine oils and cutting oils are more predisposed to this lesion. That is why it is also known as occupational acne.

Bhutani et al[4] have reported 20 cases of acneiform lesions following use of vegetable hair oils, e.g., Brahmi Amla or Mustard oil. We in our institution observed that not only acneiform but pigmentary dermatitis as well can ensue following these oils. With this observation, this present work was undertaken and here we are reporting 50 cases of pigmentation over face associated with acneiform lesions in the persons using loose Amla or coconut oil.

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Material and Methods

This study consisted of 50 cases of acneiform lesions and hyperpigmentation over face seen in the Department of Skin & V.D., in M.Y. Hospital, Indore, during August, 1971 to April, 1972. After the first patient, where a presumptive diagnosis was made, all patients were seen by same observer. The detailed history was obtained particularly regarding the use of hair oil, its type, duration of its use, its application over the face, use of other cosmetics and use of drugs like iodides, bromides, steroids and arsenicals. Further, the hair oil was obtained for chemical analysis in these cases. Skin Biopsy was done in ten cases only.

Observations

TABLE I

Age distribution

	0—10	11—20	21—30	31—40	41—50	51—60	61—70	71-80
No. of Cases	14	10	8	8	8	1	1	—
Percentage	28	2	16	16	16	2	2	—

TABLE II

Sex distribution

	Male	Female
No. of Cases	39	11
Percentage	78	22

TABLE III

Occupation

	Students	Labourers	House wife	Chemical workers	Sedentary
No. of cases	20	9	8	1	12
Percentage	40	18	16	2	24

TABLE IV

Type of oil

	Amla oil	Coconut oil	Amla coconut oil
No. of cases	38	10	2
Percentage	76	20	4

TABLE V

Type of lesion

	Comendones only	Pigmentation + comendone	Pigmentation only
No. of cases	20	18	12
Percentage	40	36	24

The lesions in all cases consisted of comedones or hyperpigmentation or a combination of both. These were confined to cheeks, temples and forehead. These lesions appeared gradually and patients did not get fever, itching, urticaria, eruptive lesion associated with them.

The patients were mostly from low or middle socio-economic group and they rarely used other cosmetics. Most commonly used article was medicated hair oil called Brahmi Amla oil 76% and 20% coconut oil. Majority of the patients reported within few months to one year but 3 patients had pigmentation for last 9 years, the interval between application of oil and onset of signs varied from 3 months to 1 year.

Discussion

These patients attended the department of dermatology with three types of lesions. A detailed history and physical examination pointed to the fact that some local application must be responsible for this lesion. There was no history of drug ingestion or eruptive fever. This common local factor was identified to be oil which was frequently applied to hair as well as facial skin. We observed these lesions are more common in younger age group probably these children are better cared for than the other members of family. We also noted that the frequency of oil applications in these cases is often more because of the assumption that their skin is more delicate. It is not wise to make firm conclusion but a survey will certainly clear up the situation.

We also found that the males are far more commonly affected than the females. Similar was the observation of Sepaha, G.C. et al, while they were investigating cases of hyperpigmentation of skin at Ujjain, alleged to have been caused by ingestion of Maxican wheat. He felt that this difference is more apparent than real, because the males usually tend to use medicated and perfumed oil while the ladies were left to simple oils without any perfumes. It is also quite likely that the males are exposed to sun more often and for longer duration and therefore, the chances of additional photogenic insults are increased.

The occupation of these patients were different and this bore no statistically significant relationship to the skin lesions.

As we have already stated that the common local factor was detected to be the application of oil. In 76% cases, it was found to be greenish so called Brahmi Amla oil, in remaining it was coconut oil or their mixed use. This oil was examined chemically. The analysis revealed an adulteration with mineral oil upto the extent of 40 per cent, Benzyle acetate and brilliant green was mixed to remove the smell and impart greenish colour to the oil. This produced black pigmentation as well as comendones over the face. Where as those patients using coconut oil only developed pigmentation. This pigmentation was superficial in character.

Many workers, e.g., Berlin et al, 1959; Baer et al, 1968; and Sulzberger et al, 1959; have attributed acneiform lesions or comendones to paraffin oils, petroleum, chlorinated oil etc. Berlin, 1954; and Witten, 1953; reported several cases of acneiform lesion attributable to petroleum or impure paraffin oil. Spreecher (1958) in a sailor with acneiform lesion that these features could be the effect of sun rays and heat.

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TRUE or FALSE

L. E. Cell phenomenon can be demonstrated only in vitro and not in vivo since antinuclear antibodies cannot enter a viable cell in vivo.

(Answer page No. 237)