

## \* VEGETABLE OILS AND ACNE-FORM LESIONS

By

L. K. BHUTANI, Y. K. MALHOTRA and K. C. KANDHARI

Amongst various conditions that produce comedones or acneform lesions, acne vulgaris is undoubtedly the commonest. The sex hormones, particularly androgens and progesterone play a specially important acnegenic role. Besides this, however, a number of external and internal causes may result in producing acneform lesions, e. g. chloracne, infantile acne; tropical acne; steroid acne; drug acne etc. A recent report (Agius, 1964) indicated that comedones in elderly were often associated with a high incidence of renal involvement particularly secondary to hypertension and diabetes mellitus. In some instances, (Berlin, 1954; Sprecher, 1958) acneform lesions were seen after the use of hair dressing containing paraffin oil and petrolatum or working with machine oils. No report however, has appeared about acneform lesions appearing after the use of vegetable hair oils. A study in this direction was, therefore, undertaken.

*Material and Methods* : The study consisted of twenty cases of acneform lesions not attributable to acne vulgaris, seen in the Department of Dermatology at the All India Institute of Medical Sciences, New Delhi. After the first patient, where a presumptive diagnosis of oil acne was made, all patients were seen by the same observer. In addition to the usual history, a particular enquiry was made about the use of various cosmetics, hair oil, face creams and systemic use of any drugs particularly iodides; bromides; tridiones; cortico-steroids. Family history of similar illness and use of similar oils and cosmetics was noted. Biopsy was taken in 4 cases.

*Results and Observations* : The patients were randomly distributed as to the age as shown in the table below :

	Under 10 yrs.	11-20 years	21-30 years	31-30 years	41 & above years
Female	1	1	2	1	1
Male	8	1	3	—	2

The lesions in all patients consisted of open comedones or black confined to the face most often affecting the cheeks, then the forehead; temples periorbital region, and helices of the ear. The eruption was without inflammation and symptoms. The disease was distinguished from the adolescent type of acne by

† From the Department of Dermatology & Venereology, All India Institute of Medical Sciences, New Delhi-16.

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(1) a fairly uniform character of the eruption, (2) a definite predominance of comedones, (3) lack of seborrhoea, (4) an absence of involvement of back and chest and (5) by the age of the patients, many of whom did not fall in the 'acne-age'.

A common factor that was found in patients was the use of Amla or Brahmi Amla Oil or mustard oil. The duration of use with these oils varied between 6 months to over 10 years and the duration of complaint varied between 1 month to 5 years. In other words, the interval elapsing between the use of oil and the appearance of lesions varied widely from a couple of months to many years. Some patients gave history of anointing their face with the same oil over considerable period of time while others could not confirm this and yet admitted from occasional to frequent contact. All patients denied history of use of any cosmetics or systemic ingestion of any drug and particularly of iodides, bromides, corticosteroids and tridiones. None of the patients was taking any vitamin or tonic pills. In 7 patients family history of similar illness was available.

The patients were treated with lotio alba in 15 cases and no external treatment was prescribed in 5 cases, no selection having been made in this regard. Patients were advised not to use amla or mustard oil. The progress was noticed by subjective observation and by photographic record and the number of comedones. The patients were followed up every month for a maximum of 4 months. Ten patients got completely well, in 4 lesions had improved. Six patients could not be followed up.

*Discussion and Comments :* For reasons listed above, acneform lesions under study in this series did not belong to acne vulgaris group. Also for obvious reasons, it could not be attributed to the use of drugs, or any hormonal imbalance. There was no history of use of any cosmetic creams and lotions. The only common denominator in the series was use of amla and brahmi amla or mustard hair oils. Again the patients seemed to improve and even got completely well, on stoppage of this hair oil. All these factors suggested strongly that these vegetable hair oils may, in some manner, be playing a role in the causation of acneform lesions.

Many previous workers (Berlin, 1954; Baer and Witten, 1958; Sulzberger (1959) attributed acneform lesions or comedones to the paraffin oils; petrolatum; chlorinated oils; hair lacquer, a pan-cake type of make-up or tar containing ointments etc. Crocker in 1884 is accredited with the description of grouped comedones in infants where it was attributed to use of camphorated oil. Gilkins et al (1952) suggested that the grouped comedones had not been reported since 1918 possibly because of improvement in hygiene and progress in infant care. Berlin (1954) described an epidemic outbreak of an acneform eruption in Israel, reportedly due to an impurity in paraffin oil that was used for application to hair. He further expressed the belief that application of oil to the face is not necessary

since oil applied to the hair can saturate the pillow, when the patient is lying down and face will naturally come in contact. In our country particularly in the north, the use of vegetable oil as a cosmetic for hair and face of children is a common practice. Sprecher (1958) presented a 24 year old sailor with similar condition and attributed these to the traumatizing effect of heat, sun and climate. Baer and Witten (1953) reported to have seen several patients presenting similar picture each of whom had used hair dressings containing petrolatum and petroleum oils.

The evidence presented here is suggestive that oil was playing an aetiological role in these acneform lesions. The exact pathogenesis is poorly understood but it seems probable that either those oils contain some aromatic or aliphatic irritant compounds or that they have been adulterated by some mineral oils which have been known to cause acneform lesions by stimulating follicular hyperkeratosis in susceptible individuals. The problem may be expected to attain bigger-magnitude because of possibility of adulteration of oils as the prices of vegetable oils keep on soaring high. The role, that sunlight may be playing in this can only be speculated.

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*Addendum* : An analysis of the hair oils used by the patients indicated adulteration with mineral oil to the extent of 80%.

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