

## A SURVEY FOR TRANSVERSE NASAL GROOVE

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Out of 3000 consecutive subjects surveyed for the typical lesion of transverse nasal groove, 180 were found to have the characteristic lesions. In 154 patients, the floor of the groove was studded with patulous hair follicles, greasy scales and black comedones. The age of the patients varied from 16 to 45 years, the majority belonged to the 20 to 30 age group. Familial occurrence of the groove was noted in only 7. Seborrhoeic dermatitis, pityriasis versicolor and acne vulgaris were the commonly associated diseases.

**Key words :** Transverse nasal groove, *Stria nasi transversa*.

Transverse nasal groove, also known as *stria nasi transversa*, is characterized by development of a well-demarcated narrow, shallow groove that extends across the nose just proximal to the alae nasi. Some of the affected individuals will develop large follicles and even severe acne within the groove making the furrow more prominent and unsightly. With aging, the groove becomes progressively less apparent, shorter and shallower and finally by the age of 40 to 50, only a faint band of pigment may remain. Because of its asymptomatic nature, this manifestation is probably more common than indicated by the few reported cases.<sup>1,2</sup> Frequent observation of this disorder in many patients attending our OPD for other ailments and paucity of the reported cases made us to undertake a brief survey for this condition covering 3000 patients. We found 180 individuals having characteristic lesion.

### Materials and Methods

All patients attending the OPD for various dermatologic ailments, 200 neonates, 300 infants and 500 children between the ages of 2 and 13 in the paediatric wards were examined for the presence of well-demarcated, narrow and shallow groove that extends transversely across the nose at about the level of alae nasi. Patients found having such lesions were subjected to detailed clinical history especially family history and

duration of the lesion. Their symptoms and associated diseases if any, were also recorded. Routine laboratory tests on blood, urine and stools were performed in all patients. Histopathological study of the groove could not be studied since skin biopsy adjacent to the cartilaginous portion of the nose was thought to be dangerous. An ointment containing 3% salicylic acid and 3% sulphur was prescribed for those who had associated comedones and scales in the floor of the groove.

### Results

Among 3000 patients (males 1400, females 1600), 180 (males 24, females 156) were found to have the characteristic transverse nasal groove at the junction of the middle and lower third of the nose (Fig. 1). The grooves were 2 to 3 cm



**Fig. 1.** Transverse nasal groove in a young female. Note black comedones in the floor of the groove.

long and 1 to 2 cm wide. These were not obliterated by pulling the nose downwards. In 154 cases, the floor of the groove was studded with patulous hair follicles, greasy scales and black comedones. In 24 patients, the groove extended over the entire nose but in the rest there was a small lateral margin of uninvolved nasal area.

The age of the patients varied from 16 to 45 years and majority (73%) belonged to the age group 20 to 30. Their mean age was 24 years, compared to 40 years of the total 3000 patients. The lesion was completely asymptomatic in majority (92%) of cases, though in a few it caused occasional mild pruritus. Only 47 patients were aware of the presence of the groove, and thus the exact duration of illness could be established in them which ranged between 2 and 18 years. Parents and siblings of 60 patients could be examined by the author and familial occurrence of the groove was noted in 7 patients. The other patients were not aware of similar lesions in any of their family members. Various other diseases seen in association with the transverse nasal groove in these patients are given in table I. In spite of continued application of sulphur salicylic ointment, the grooves persisted, even though there was a partial clearing of the comedones and scales.

### Comments

The clinical features of transverse nasal groove are so characteristic that by inspection alone the diagnosis can be made with accuracy in almost all cases. It is easy to differentiate this condition from the more common nasal crease of atopy which is a collection of short wrinkles produced by rubbing or twisting the nose to relieve the pruritus of seasonal pollinosis.<sup>3</sup> This crease usually appears after infancy and is never a shallow groove. Further, it can easily be obliterated by pulling the nose downwards.<sup>4</sup> The present study indicates that transverse nasal groove is not an uncommon disorder. The paucity of reports may be due to its asymptomatic nature and lack of awareness on the part of the dermatologists about this intriguing clinical entity.

The cause of transverse nasal groove is not known. No biopsy specimen has been examined and no laboratory abnormalities have been associated with it. Cornbleet who first described this disorder believed that the abnormality was dependant upon developmental changes in the cartilages of the nose.<sup>1</sup> Anderson is of the view that it is a familial defect due to a single autosomal dominant gene.<sup>2</sup> In the present study, familial occurrence of the groove was seen in only 3.8% of the cases. According to Anderson, the groove starts in infancy and early

Table I. Associated diseases in patients with transverse nasal groove.

Disease	Total number of patients							
	Examined				Having transverse nasal groove			
	Males	Females	Total	%	Males	Females	Total	%
Total number of patients	1400	1600	3000	100	24	156	180	100
Seborrhoeic dermatitis	104	510	614	20.46	14	124	138	76.66
Acne vulgaris	160	484	644	21.46	9	84	93	51.66
Pityriasis versicolor	114	348	462	15.40	8	86	94	52.22
Ichthyosis	127	180	307	10.23	2	8	10	5.55
Atopic dermatitis	30	32	62	2.06	2	6	8	4.44
Psoriasis	25	34	59	1.99	1	3	4	2.22

childhood. But none of the children below 13 years examined by us, was found to have this disorder. Majority (73%) of the patients belonged to the age group 20 to 30. Seborrhoeic dermatitis was associated in 76% of the patients with groove compared to an incidence of 20% in the total 3000 patients examined. This suggests that transverse nasal groove could also be a manifestation of seborrhoeic diathesis. Age of the affected patients, presence of comedones in the floor of the groove and increased incidence of 2 other diseases commonly seen in people with seborrhoeic diathesis ie acne vulgaris and pityriasis versicolor, further strengthen this possibility.

#### References

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