CHROMOSOMAL STUDIES IN PSORIATICS

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Psoriasis is a common disease seen in dermatological practice. In India the incidence is about 1% (Desai)[5],

The incidence at skin department of Gandhi Hospital, Secunderabad is about 1%. Much work has been done on different aspects of Psoriasis but the fact remains that its exact cause is still unknown. Literature is replete with various theories regarding its causation. In about 30% of cases a family history of the disease can be elicited (Andrews, 1963, Mackenna, 1964). Achner et al (1957) believed that it is transmitted by a single, irregular dominant gene. Abele et al (1963) suggested that psoriasis could result from a dominant mutant gene on an autosome chromosome mode of inheritance. Some insist that there is a recessive inheritance as well. (Macknenna 1964). Rook et al (1968) concluded that at present the evidence remains inferential and incomplete and the problem is still unsolved.

Since chromosomal abnormalities have been reported in a few genetically transmitted diseases, we have thought it worthwhile to undertake a study of chromosomes in Psoriatics.

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Material and Methods

Twelve cases of Psoriasis proved by clinical and histological examination were selected for this study. These patients had not received any previous treatment with corticosteroids, antimetabolities or X-rays. Chromosomes were studied by leukocyte cultures using microtechnique. Mitosis was induced by Phyto and arrested with Colchicine.

Observations

In 6 cases there was total failure of cultures. In the rest the mitotic index was generally low. Over 100 cells were analysed by direct microscopy. Except in one case the spreads did not show any gross abnormalities of karyotype. Few abnormalities such as breaks, gaps and acentric fragments were observed. In the exceptional case where the subject was a 18 year old female, aberrations such as fragmentation of chromosomes, exchange figures and an endoreduplication were found. This Karyotype is suggestive of viral damage.

Conclusion

Study of chromosomes did not reveal any gross abnormalities in five out of six cases of psoriasis. In the only case which showed changes suggestive of viral damage it was possibly due to some other viral infection, not related to psoriasis.

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REFERENCES

1. Abele, DC: Dobson, RL, and Graham, JB: Arch Derm 88 : 38, 1963.

2. Andrews, GC and Domonkos, AN: Disease of skin Ed 5 W B Saunders Co, Philadelphia and London 1963, p. 106.

3. Aschner B, Curth HO and Gross, P: Proc First Internat Cong Human Genetics Part IV, 197, 1957.

4. Baer RL, and Witten VH: Year Book of Dermatology 1961-1962. Year Book Medical Publishers, Chicago 1962.

5. Desai SC : Twentyfive years of Dermato-Venereology in India (A review) Indian J Derm and Ven 35 : 271, 1969.

6. Mackenna, RMB and Cohen EL : Concise Medical Text Books - Dermatology Ed. 1, Bailliere Tudial and Cox London 1964, p 26.

7. Rook A and Wilkinson DS:—Text Book of and Ebling, FJG :—Dermatology Ed 1 Blackwell Scientific Publications Oxford and Edinburgh, 1968.

False

Only about 80% of patients with atopic dermatitis have been shown to have increased Ig E. The serum level does not always depend upon the activity of the skin lesions.

Reference : Brit J Derm 82 : 10, 1970