

## CAN PUVA DARKEN GREY HAIR

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Grey hairs obtained from patients having premature grey hairs were exposed to UVA or UVB for 30 minutes daily for 17 days, and another group of grey hairs were first daily painted with 1% aqueous solution of psoralen and then exposed to UVA for 30 minutes, for 17 days. Under neither of these conditions, the greys hairs showed any darkening.

**Key words:** Grey hairs, Darkening, UVB, PUVA.

In a recent paper, Pavithran<sup>1</sup> reported excellent response to PUVASOL used for premature greying of hair, 17 of the 32 patients showing complete recovery and another 7 partial recovery from grey hairs in 12 months or so. According to what is known about the dynamics of hair growth, the part of the hair which has already been formed cannot undergo any change. Thus, it was difficult to comprehend, as to how did the grey hairs which had already formed before the treatment, disappeared from the scalp of these patients in such a short period. Such a grey hair has either to be cut off or it must fall off spontaneously. Since a hair can fall off only after completing its anagen phase (which may extend over several years for scalp hair), the report by Pavithran needs explanation. There were two other possibilities; (1) UV exposures to the grey hairs led to darkening (blackening) of some component present in the grey hairs, or (2) psoralen or some other agent somehow got smeared onto the grey hairs and helped to darken the grey hairs following UV exposures. We checked both these possibilities.

### Materials and Methods

Grey hairs were obtained from the scalp of patients having premature grey hairs and mounted on card boards. Each of these hairs was exposed to UVA or UVB for 30 minutes every day for 17 days.

A second group of grey hairs similarly mounted on card boards, were daily painted with a 1% solution of psoralen and exposed to UVA for 30 minutes. This was also continued for 17 days.

### Results

None of the hairs in either of these experiments, showed any significant pigmentation or darkening.

### Comments

Stimulation of melanocytes by PUVA to form melanin pigment is a well known action and possibly the same effect was responsible for repigmentation of the grey hairs in Pavithran's patients. This effect however, should have been observed and recorded in terms of the converted hairs<sup>2</sup> appearing in these patients after the treatment, in comparison with the numbers of spontaneous converted hairs which are often present in several

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of these patients. A converted hair is an unequivocal evidence that a hair follicle which was earlier producing a grey hair, has now started producing a black hair. The grey hair evulsion technique recently described by the author<sup>3</sup> is an even more definitive method for evaluating the results. It is felt that Pavithran should have used one of these parameters.

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#### References

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