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## The potential role of hair transplant surgeons in treating vitiligo: A case report

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### Introduction

Vitiligo is an acquired idiopathic condition characterized by patchy loss of skin pigmentation due to the absence of epidermal melanocytes. About 1% of the world's population is affected, including individuals of all ethnic groups and both genders. Fifty percent of cases begin before age 20. Vitiligo is probably determined by an autosomal gene because more than 30% of cases have a positive family history.<sup>1</sup>

As hairs within a vitiliginous patch of skin are often de-pigmented, both the epidermal and follicular melanocytes are targets for the antibody-associated autoimmune response.<sup>2,3</sup>

Cosmetics may not be able to cover vitiligo on exposed areas. When less than 10% of the body surface is involved and the patient is psychologically affected, treatment may be considered.<sup>4</sup> Over the years, many different medical and surgical modalities have been developed in restoring melanocytes at the vitiliginous sites.<sup>5</sup>

Surgical techniques are usually offered to patients with refractory but stable vitiligo that has developed no new lesions over the past two years. Current options include cosmetic tattooing or micro-pigmentation, regional dermabrasion, transplantation of blister epidermis, autologous cultured melanocyte grafting, autologous non-cultured epidermal cell suspension, and single-hair grafting.

Transplanting single hairs for treating vitiligo was described by Na in 1998.<sup>6</sup> Twenty-one patients with a mean age of 23.4 and a mean disease duration of 7.7 years were recruited for the study. From the occiput, a 1cm strip was harvested, slivered, and then divided into many single-hair grafts. The entire follicle was used for hair-bearing areas, while only the upper two-thirds was used for glabrous areas. All grafts were inserted using Choi implanters. The density of transplantation was not mentioned in the study. Follow-up was from 1-3 years.

Different patterns of re-pigmentation were observed in the two groups:

1. **Localized/segmental vitiligo:** Fourteen out of 17 patients (81%) developed peri-follicular re-pigmentation of areas ranging from 2-10mm (average 3mm) in diameter.
2. **Generalized vitiligo:** Only 1 in 4 (25%) developed a peri-follicular re-pigmentation 3mm in diameter.

In this study, all transplanted hair retained pigmentation at 12 months of follow-up. Five patients (23.8%) had re-pigmentation of de-pigmented hair in the vitiliginous areas.

At the time of this study, single-hair grafting had not enjoyed popularity as the authors described hair dissection being "tedious and time consuming" and the number of donor hairs "limited." However, most hair surgeons today are capable of transplanting thousands of grafts in a single session. With good technicians and microscopes, hair transplant surgeons should reconsider their potential role in treating vitiligo.

### Case Report

In August 2001, a 45-year-old Asian male presented to DHT Clinic (Damkerng [Pathomvanich] Hair Transplant Clinic, Thailand). He requested eyebrow transplantation to an area affected by vitiligo. There had been no change in the lesion for many years. He had no other medical condition and was not taking any medications.

On examination there was a patch of vitiliginous skin along the medial two-thirds of the left supra-orbital ridge. It was rectangular in shape and measured about 1cm x 3cm. De-pigmented hairs were

### Plan to Attend

