

*Research Article***Punch Grafting in Segmental and Non Segmental Vitiligo****Tag El-Din E. Anbar, Amal T. Abd EL-Rahman, Mohammed A. El-Khyaat and Marwaa M. Ashraf**

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Abstract

Introduction: Vitiligo is a common depigmented skin disorder characterized by circumscribed white spots on the skin surface. **Aim of the Work:** The aim of this work is to compare between 1 mm and 1.5 mm punch grafting in segmental (SV) and non-segmental vitiligo (NSV). **Patients and Methods:** Patients: The present study was a controlled study that was conducted on 36 patients with stable vitiligo, attending the Dermatology Outpatient Clinic of Minia University Hospital. **Results:** The present study was conducted on 36 patients divided into 2 groups. Group 1 with 20 patients of NSV and group 2 with 16 patients of SV attending the Dermatology Outpatient Clinic of Minia University Hospital. In group 1, 1 mm punch graft was done on the right side while 1.5 mm punch graft was done on the left side. In group 2, 1 mm and 1.5 mm punch graft were done in 2 areas if available otherwise if there was one lesion it was divided into 2 halves. The punch grafting was followed by post-operative (NB-UVB) two session/week for 3 months in a fixed dose of 0.36 J/cm² per session which was started 1 week after surgery. **Discussion:** Vitiligo is an acquired skin disorder characterized by white (depigmented) patches in the skin caused by the loss of functioning epidermal and/or hair follicle MCs. Non-surgical and surgical therapies are available for the treatment of vitiligo. Meanwhile, surgical therapies are considered for the treatment of stable vitiligo patches that are resistant or respond unsatisfactory to non-surgical therapies. **Summary:** In conclusion, the use of smaller sized punch yields better results in terms of pigmentation. Moreover, the smaller diameter punch is more preferable decrease incidence of cobblestoning.

SV: Grafting in segmental**NSV:** Non-segmental vitiligo**Introduction**

Vitiligo is a common depigmented skin disorder characterized by circumscribed white spots on the skin surface (Ortonne and Bose, 1993). The precise etiology of vitiligo is not known, however, it has become clear that complex genetic, immunological, melanocytorrhagy, autocytotoxic and neural mechanisms are involved in its pathogenesis (Huggins et al., 2006).

Current treatment modalities are directed towards stopping the progression of vitiligo and achieving repigmentation in order to repair the morphological and functional deficiencies of the depigmented skin areas (Njoo et al., 1998). No single therapy for vitiligo produces predictably good results in all patients as the response to therapy is highly variable (Kwinter et al., 2007).

Topical corticosteroids are still considered by most dermatologists to be the first line of treatment for vitiligo (Lotti et al., 2008).

Advantages of this therapy are a relative low cost, ease of application and ability for home use (Forschner et al., 2007).

Narrowband-ultraviolet B (NB-UVB), a form of phototherapy that uses wavelengths between 305 and 311 nm, is more effective than Psolaren plus ultraviolet A (PUVA), with faster repigmentation and less contrast between normal and depigmented skin in vitiligo patients. Moreover, NB-UVB can be used in children, pregnant or lactating women and in individuals with hepatic or kidney dysfunction (Westerhof and Nieuweboer-Krobotova 1997 and Jones et al. 2007).

Surgical treatment of vitiligo is an option for repigmentation in patients with stable vitiligo, which is refractory or partial responsive to medical treatment (Wijngaard et al., 2000 and Chen et al., 2004). Among these surgical methods, autologous punch grafting is considered the easiest, fastest, safest and least aggressive means of vitiligo surgeries (Burge et al., 1996).

Aim of the Work

The aim of this work is to compare between 1 mm and 1.5 mm punch grafting in segmental (SV) and non-segmental vitiligo (NSV).

Patients and Methods

The present study was a controlled study that was conducted on 36 patients with stable vitiligo, attending the Dermatology Outpatient Clinic of Minia University Hospital.

Inclusion Criteria:

Segmental and non-segmental vitiligo patients.

Patients aged from 10 to 60 years.

Stable vitiligo for more than 6 months Malakar and Dhar, 1999.

Patients received no topical, systemic therapy or phototherapy for at least 2 months prior to the study.

Results

The present study was conducted on 36 patients divided into 2 groups. Group 1 with 20 patients of NSV and group 2 with 16 patients of SV attending the Dermatology Outpatient Clinic of Minia University Hospital. In group 1, 1 mm punch graft was done on the right side while 1.5 mm punch graft was done on the left side. In group 2, 1 mm and 1.5 mm punch graft were done in 2 areas if available otherwise if there was one lesion it was divided into 2 halves. The punch grafting was followed by post-operative (NB-UVB) two session/week for 3 months in a fixed dose of 0.36 J/cm² per session which was started 1 week after surgery.

Table (1): Descriptive statistics in all patients.

All patients (number (n)=36)	Descriptive statistics
Age	
Range	(12-55)
Mean ± SD	24.75 ± 12.04
Sex	
Male	8 (22.2%)
Female	28 (77.8%)
Age at onset	
Range	(2-48)
Mean ± SD	14.75 ± 11.46
Duration of disease	
Range	(3-20)
Mean ± SD	10 ± 5.28

Discussion

Vitiligo is an acquired skin disorder characterized by white (depigmented) patches in the skin caused by the loss of functioning epidermal and/or hair follicle MCs. Non-surgical and surgical therapies are available for the treatment of vitiligo. Meanwhile, surgical therapies are considered for the treatment of stable vitiligo patches that are resistant or respond unsatisfactory to non-surgical therapies.

The punch grafting technique is relatively simple in comparison to other surgical modalities and can be used in an outpatient clinic.

The aim of this study was to compare between 1 mm and 1.5 mm punch grafting in SV and NSV. This study was done on 36 vitiligo patients who were divided into 2 groups. Group 1 formed of

20 patients of NSV and group 2 formed of 16 patients of SV. Each patient was subjected to 1 mm and 1.5 mm punch grafting.

To evaluate the results of punch grafting in vitiligo, several methods have been tried. Malakar and Dhar (1999); Hiroshi et al., (2011) and Feetham et al., (2012) evaluated the results of punch grafting by estimating the percentage of repigmentation subjectively while Boersma et al., (1995); Aydin et al., (2007) and Fongers et al., (2009) performed the objective assessment of the percentage of repigmentation. Boersma et al., (1995) and Fongers et al., (2009) using the digital image analysis system (DIAS) while Aydin et al., (2007) used point counting procedure beside DIAS technique.

In the present work, the results of punch grafting were evaluated by the following parameters; the percentage of pigmentation between punches subjectively and objectively, the number of graft loss, the degree of pigmentation between punches and for the development of cobblestoning.

Summary

In conclusion, the use of smaller sized punch yields better results in terms of pigmentation. Moreover, the smaller diameter punch is more preferable decrease incidence of cobblestoning.

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