

Prospective Study of Response to NBUVB in Various Forms of Vitiligo in Different Age Groups.

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Abstract : Vitiligo is an acquired autoimmune disorder characterized by loss of functional melanocytes from the epidermis affecting 0.3-1.1% worldwide with no sex predilection. Topical or systemic PUVA has been the mainstay of treatment until the introduction of NBUVB in 1997. NBUVB (311nm) has been reported to be an effective and safe therapeutic option in Vitiligo patients. We studied 56 patients attending Vitiligo clinic of GGH, VIJAYAWADA with various forms of Vitiligo and treated twice weekly with NBUVB therapy and followed up for repigmentation response. Out of 56 patients studied, majority being paediatric (32.14%) with no sex predilection (M-48.2%, F-51.7%), of them Vitiligo vulgaris-66.7%, Acrofacial vitiligo-28.5%, other forms-5.3%. Dropouts were 32.14% during the course of treatment due to side-effects and poor compliance. Response for repigmentation is Excellent (>75%) in 21.05%, Good (50-75%) in 26.31%, Moderate (25-50%) in 36.84%, poor (<25%) in 15.78% of patients. The patients with poor response were shifted to other modalities. Good response is observed in patients of Vitiligo vulgaris than in other forms. Excellent response is observed in children with less number of sittings. Hence NBUVB is safer and could achieve satisfactory levels of repigmentation. Excellent response is seen in children than in adults. Good to Excellent response is seen in patients of Vitiligo vulgaris than in other forms of Vitiligo. However, long term follow-up is required to establish the stability of repigmentation.

Key words: Adults, Children, Elderly, NBUVB, Various forms of vitiligo.

I. Introduction

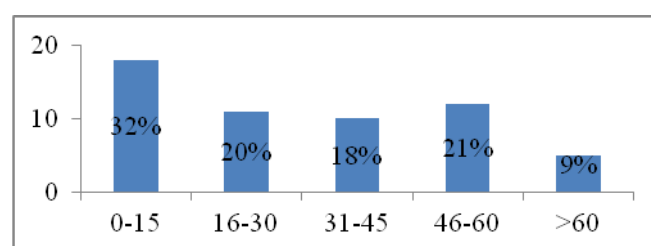
Vitiligo is an autoimmune disorder of pigmentation characterized by loss of functional melanocytes from the epidermis. Prevalence -0.3-1.1%. Vitiligo still remains a difficult disease to treat, although various non-surgical and surgical modalities have been mentioned in literature, PUVA is a well-described therapy for vitiligo and is still the mainstay of treatment. In 1997, Westerhof and Nieuweboer were the first to study the effect of NBUVB in vitiligo. NBUVB is an emerging, effective and safe therapy for vitiligo. It is as effective as PUVA, without or minimal side-effects. NBUVB therapy has also been reported to be safe in pregnant women and children.

II. Methods

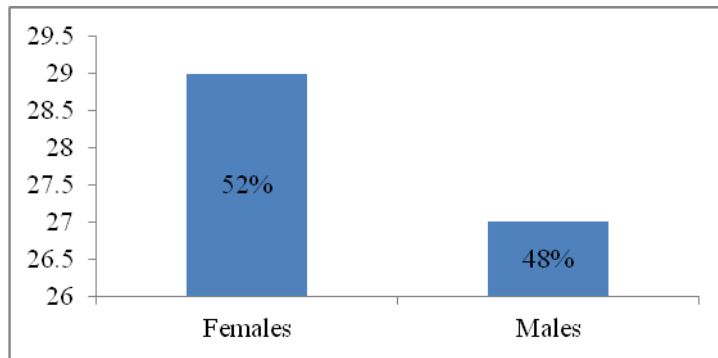
The study group included 56 patients of all types of vitiligo. The study was prospective, open and non-randomized including all age groups. A detailed history and complete general, systemic examination was carried out to know any associated systemic diseases. A thorough dermatological examination was carried out taking note of number, size and site of depigmented macules and classified into different types. As all the patients were of skin types IV & V, the initial dose of 250mJ/cm² was started in adults and children and the treatment was administered twice weekly with increment of 250mJ/cm² every visit till minimal erythema in lesions was obtained.

III. Observations And Results

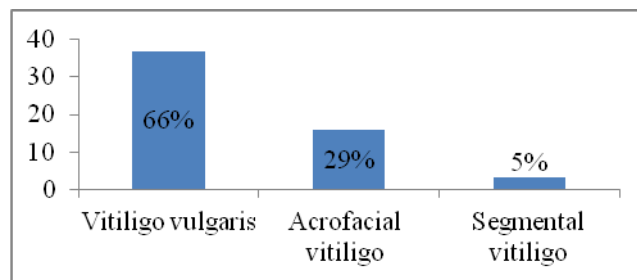
Age Distribution



Sex Distribution



Types Of Vitiligo

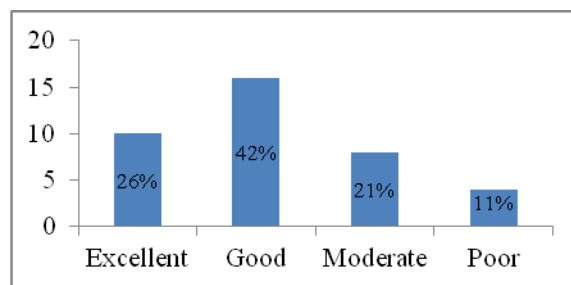


Of the 56 patients treated, 18 (32.14%) were dropouts because of poor compliance. Among the patients who have continued treatment, 38 (67.8%) the response is as follows.

Response to treatment in terms of Repigmentation was based on physicians global assessment:

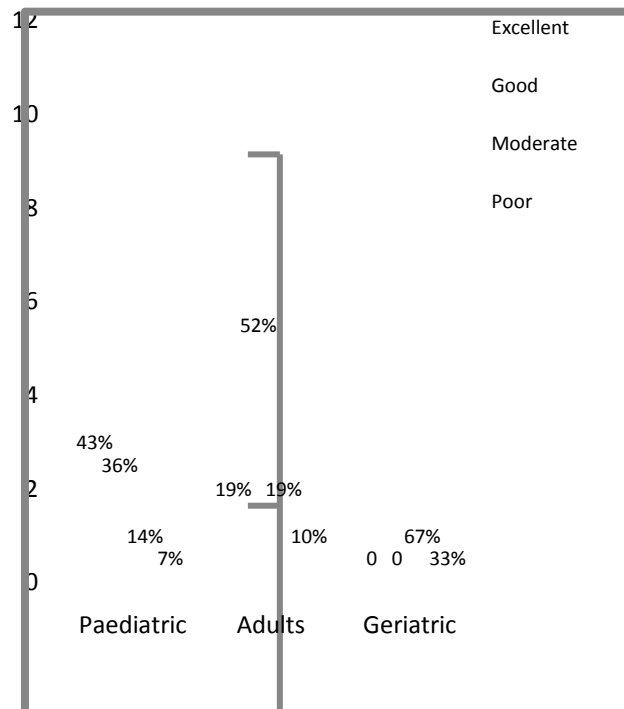
- None ----- no repigmentation
- Poor -----< 25% repigmentation
- Moderate- 25-50% repigmentation
- Good-----51-75% repigmentation
- Excellent-->75% repigmentation

Response To NBUVB



Response among the paediatric age group was excellent when compared with middle aged and elderly with less duration of treatment.

Response To Nbuvb In Various Age Groups



Response varied with site of involvement being excellent(>75%) with lesions located on the face and neck, followed by the trunk, back, arms and legs. The lesions over the lips, knees, elbows and other bony prominences showed poor to moderate repigmentation.

IV Clinical Pictures



figure showing Excellent Response over the face and Good Response over lower limbs in a child

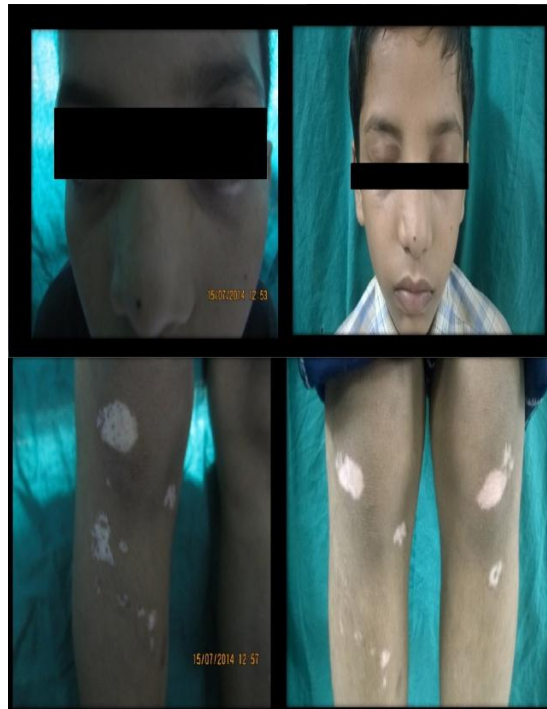


figure showing Good Response over face and Poor Response over knees in a child



figure showing Excellent Response over face, Good Response over chest and back. Poor Response over fingers in an adult



figure showing Moderate Response over pheltrum
,Poor Response over lips in an elderly

V. Discussion

Although PUVA therapy is a well-established first-line treatment for vitiligo, recent studies have shown that NBUVB therapy is more effective, with minimal or no side effects and superior to PUVA therapy^[1,5]. NBUVB therapy in recent times has evolved to be as recommended phototherapy for generalized vitiligo, pregnant women and children in view of high safety profile. We observed 68% patients achieved excellent to good repigmentation after receiving NBUVB for 12 months as comparable with Westerhof et al^[7], Scherschun et al^[8], Kanwar et al^[3]. In our study certain anatomical sites like face, neck, trunk and back responded faster, with better repigmentation to NBUVB therapy, and poor response was observed in lips and acral areas as comparable with Anbar et al^[4]. The repigmentation achieved in all the cases was cosmetically accepted and matched with the surrounding normal skin, unlike in PUVA therapy. No adverse effects were observed in our study^[6]. It has been observed that children responded faster with excellent repigmentation (>75%), as comparable with Njoo et al^[2] and Kanwar et al^[3]. One patient showed depigmentation of the lesions during the follow-up.

VI. Conclusion

Our study supports that NBUVB therapy is an effective and safe first line of modality to treat vitiligo of all age groups especially in paediatric population and sites like face, neck, trunk, back with cosmetically acceptable repigmentation. However, long-term follow-up is needed to observe the stability of repigmentation.

References

- [1]. Lim HW, Haxsel CL. Vitiligo: To treat or not to treat. *Arch Dermatol* 2007;143:643-6.
- [2]. Njoo MD, Spuls PI, Bos JD, Westerhof W. Treatment of generalized vitiligo in children with NBUVB. *J Am Acad Dermatol* 2000;42:245-53.
- [3]. Kanwar AJ, Dogra S. NBUVB for the treatment of generalized vitiligo in children. *Clin Exp Dermatol* 2003;139: 393
- [4]. Anbar TS, Westerhof W, Rahman AT, Khayyat MA. Evaluation of the effects of NBUVB in both segmental and non-segmental vitiligo affecting different sites. *Photodermatol Photoimmunol Photomed* 2006;22:157.
- [5]. JSerish, Srinivas CR. Minimal erythema dose (Med) to NBUVB and BBUVB: A pilot study. *IJDVL* 200;2 :68:63-4
- [6]. Westerhof W, Nieuweboer-krobotova L. Treatment of vitiligo with NBUVB vs PUVA. *Arch Dermatol* 1997;133:1525-8
- [7]. Scherschun L, Kim JJ, Lim HW. NBUVB is a well-tolerated treatment for vitiligo. *J Am Acad Dermatol* 2001;44:999-1003