

## **Summary**

Vitiligo is one of the oldest and the commonest pigmentary disorders affecting about 1 % of the population worldwide. It is characterized clinically by milky white macules and patches. Vitiligo has a tremendous impact on the patient`s life affecting the self confidence and it may lead to many psychological problems.

The etiopathogenesis of vitiligo is not clearly understood. It is due to destruction of functioning melanocytes from the epidermis. Many theories suggest that the loss of melanocytes may be due to immune, neural, autocytotoxic or inherent defect of melanocytes.

Patients suffering from vitiligo need a global therapeutic approach. The disease and its course need to be fully explained to the patients and all therapeutic options discussed. Medical treatments bring very useful ways to repigment or decrease the contrast with healthy skin. Potent topical steroids and NB-UVB are considered to be the best first choices for localized and generalized vitiligo, respectively. However, treatments such as topical calcineurin inhibitors and focused phototherapy provide interesting options.

Vitiligo was thought to be exclusively medical condition till 1960s when surgical approaches began to emerge. There are many surgical options for treatment of vitiligo including melanocyte culture, dermo-epidermal graft, chemical peeling with phenol, etc. The surgical treatment is always reserved the resistant cases who dont respond adequately to medical treatment.

Chemical peeling is one of the oldest dermatologic procedures that was used decades ago for many purposes like facial rejuvenation, wrinkles removal, pigmentary disorders and acne scars. There are many chemical agents that can be used as peeling agents to produce controlled removal of the epidermis alone or the epidermis and a part of the dermis like TCA, salycilic acid, pyruvic acid, phenol, etc. Chemical peeling is classified into light, medium and deep according to the depth of wounding.

Phenol ( $C_6H_5O$ ) or carbolic acid was used as an antiseptic antipruritic agent since the 18<sup>th</sup> century. It was used as a killing agent in the second world war by injecting the soliders by phenol. Nowadays it is used in many modern industries. As a peeling agent, phenol produces deep chemical peeling by removing the epidermis and the papillary dermis reaching the mid reticular dermis.

In this study, we assessed the efficacy of chemical peeling using phenol in the form of Becker Jordon solution in treatment of vitiligo. The lesions treated were localized, stable for at least 1 year and resistant to other lines of treatment.

The study was conducted on 30 patients of stable resistant vitiligo. They were collected from the dermatology clinic, Fayoum University. All patients were subjected to complete history taking, general examination and local examination including wood`s light examination.

Chemical peeling was done using Baker Jordon solution (88% phenol, crotton oil, distilled water, liquid soap). The patients were reassessed after 2 weeks for the perifollicular repigmentation. The patients who responded the the first peeling session then underwent NB-UVB sessions till clinical improvement occurs or a maximum of 6 moths.

If there was no response after the first peeling session, the patient had a second session till we reach a maximum of three sessions after which the patient was documented for failure. The patients were photodocumented before, after peeling and at the end of the study

Our data revealed that out of the 30 patients treated with this regimen, 16 showed excellent response (> 90% repigmentation), 6 patients showed good response (65-89% repigmentation), 2 patients showed fair response (25-64% repigmentation), 6 patients showed poor response (< 25% repigmentation).

The site of the lesion was of great significance. The results were most favorable on the neck, chest, back, knee, face, legs and elbows, and poor on the acral areas of the hand and foot. Also patients with short disease duration, long stability time or with small total vitiligo area responded best to the procedure.

In conclusion, our finding indicates that phenol peeling is a very effective method for treating localized lesion in a stable resistant vitiligo. The procedure is safe, cheap and effective. However further studies on a larger scale and longer follow up periods are needed.