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**The efficacy of Neodimium–ytrium-aluminium
garnet (Nd: YAG) 1064 nm laser in the treatment of
Pseudofolliculitis Barbae and Acne Keloidals Nuchae**

A dissertation submitted as partial fulfillment for the requirements of the Degree
of Postgraduate Diploma in Laser Application in Medicine-Dermatology

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ABSTRACT

This study intends to make use of neodimium yuttrium aluminium garnet (Nd: YAG) lazer as a cure for pseudofolliculitis barbae and acne keloidalis nuchae (AKN).

For this study a number of nine patients diagnosed as cases of PFB or AKN were enrolled. The laser device used is available in the institute of laser-Sudan University of Sciences and technology, Khartoum Sudan, where the study was conducted. The study was performed between February and May 2009. Laser system used Nd: YAG laser with wavelength 1064 nm manufactured by Dornier Medilas. Nd: YAG laser parameters used were the standard mode, non contact application of bare fibre with a power of 60 Watts, exposure time 0.2 seconds.

All patients were treated under topical anesthesia. A questionnaire was designed and filled for each patient. Patients were submitted to weekly sessions. Lesions, changes were recorded in each visit. The treatment results were assessed according to reduction in number of papules and pustules as well as the side effects encountered during the study.

The results were classified as follows:

Good results: there is significant reduction in the number of papules and pustules (approximately 80% of the pre-existing lesions disappeared,, without hypopigmentation.

Moderate results: The patients showed moderate reduction in number of papules and pustules (60% of the pre-existing lesions disappeared) but with hypopigmentation.



Patients who showed good results were 6 patients.

Patients who showed moderate results were three patients.

All patients included in this study signed a written informed consent before submission to sessions.

All patients were satisfied with the improvement.



مستخلص الاطروحة

هدفت هذه الدراسة إلى الاستفادة من ليزر الياج فى شفاء جريبات أشعار اللحية الكاذب والعد الجدرى على القفا.

شملت الدراسة ٩ مرضى تم تشخيصهم إما بالتهاب جريبات اللحية الكاذب أو العد الجدرى على القفا.

استخدم فى هذه الدراسة جهاز ليزر الياج بمعهد الليزر-جامعة السودان للعلوم والتكنولوجيا، فى الفترة من قبراير إلى مايو ٢٠٠٩م، بالمقاييس الأتية:- طول موجي ١٠٦٤ نانومتر ماركة دورنير ميديلاس، معيار استاندرد، تطبيق الليف الضوئي بدون ملامسة لسطح الجلد، قدرة ٦٠ واط، تعريض زمني ٠.٢ ثانية.

تم معالجة جميع المرضى تحت تأثير التخدير الموضعي بعد موافقتهم، تم ملء استمارة الإستان المعد لهذا الغرض، تم إعطاء المرضى جلسات اسبوعية، تم رصد متغيرات المرض فى كل زيارة.

وضع تقييم نتيجة العلاج بناء على إنخفاض عدد الحطاطات والبثور مع وجود او عدم وجود نقص التصبغ كتأثير جانبي.

قسمت نتائج العلاج كالاتي:

- نتيجة جيدة فى حالة إستجابة هائلة لأكثرية البثور والحطاطات (٨٠%).
- نتيجة معتدله فى حالة إستجابة معتدلة فى عدد البثور و الحطاطات (٦٠%) ولكن مع وجود نقص التصبغ.
- عدد المرضى الذين ظهرت عليهم نتيجة جيدة ٦ مرضي .
- عدد المرضى الذين ظهرت عليهم نتيجة معتدله ٣ مرضي.
- كانت النتيجة مرضية لجميع المرضى.