Use of electrosurgery (ESG) for treatment of Seborrheic Keratoses (SK).

Dr.Hashim Fathi Yaseen . Dr. Sabhan M. AL.maula

University of Mosul. Ministry of Health
Faculty of Medicine Directorate of Nenva Health

Dep. of physiology Ibn- Sina Teaching Hospital

ABSTRACT

Seborrhiec Keratoses (SK) are benign lesions that are most often irritating. Hard to cover or use cosmetic methods. The first treatments were for these lesions using liquid hydrogen(crytherapy), Scrape the skin, and other methods of treatments that use topical surgery, which leave lasting side effects, especially when these lesions are numerous in number and areas. In this research we use The electrosurgery (ESG) in our patients to quickly and efficiently destroy huge amount of (SK), without any side effects.

***Keywords*: Seborrheic keratosis (SK), Electrosurgery (ESG), Alternating current (AC).**

ملخـص

علاج التهاب الجلد التقرني الدهني باستخدام الجراحـه الكهربائيـه (ESG)

التهاب الجلد التقرني الدهني يعتبر من الافات الحميده والتي تظهر بشكل مبكر غير مرضي من الناحيه التجميليه ،وقد استعملت علاجات عديده منها النتروجين السائل كعلاج بالتبريد، وكشط الجلد،وكثير من العلاجات بالطرق الجراحيه الاخرى المفيده .لكن كان من الصعب تحمل المرضى الذين لديهم أعداد كبيرة من هذه الآفات التي تتطلب العلاج.بالتبريد.او الكشط ولربما تركت اثار جانبيه مستديمه . في هذا البحث يمكنني استخدام الجراحة الكهربائية (ESG) لمرضى لديهم اعداد هائله من التقرنات الدهنيه (SK)،بحيث ازالتها وتدميرها بسرعه وكفاءه عاليه وبدون ظهور اعراض جانبيه مستديمه.

IJSER © 2019
http://www.ijser.org

Introduction

Seborrheic Keratoses (SK) are often brought to the dermatologist's attention because they are either cosmetically undesirable or easily irritated. A variety of therapeutic option are available, but there are a dearth of carefully trials to judge the efficacy and complication of these treatment. Among the most widely practiced method of (SK) treatment is the use of liquid nitrogen cryotherapy. these results depend on the vascularity and depth of the lesion[1]. Other current treatment for "(SK) include the use of chemical irritants, dermabrasion, scissors excision, and scalpel excision. But patient with (SK)is treated with normal mode alexandrite laser produced excellent result, but treatment laser beam, leading to superficial sloughing of the surface[2,3]. Because the treatment by using this laser to be ineffective due to the relativity low energy flounces and depth of penetration.

Also use the method of treating (SK) using alexandrite laser[4] is useless because it does not cover a wide area of treatment, and dangerous for areas near the sensitive body such as the eye. For this reason, we chose the electrosurgery

---

PRICIPLE OF ELECTROSURGERY

Electrocautery:-

The process of electrocautery is used to explain the process of electrical surgery(ESG), where the Alternating current (AC) is used so that the (AC) current is not entered into the patient's body directly completely, but is heating part of tissue by touching the wire directly with the tissue. This is what happens in (ESG), where the patient is included within the electrical circuit quickly and ineffectively on the rest of the body parts without side effects.

IJSER

ELECTROSERGERY TISSUE EFFECTS

Electrosurgical cutting:-

Electrosurgical cutting divides tissue with electric sparks which focus intense heat at the surgical site. [6] By sparking to tissue ,the surgeon produce maximum current concentration for creating this spark and he hold the electrode very slightly away from the tissue. Which producing the greatest amount of heat with very short of time, these results, leads to vaporization of tissue.

Fulguration:-

Electrosurgical fulguration (sparking coagulation waveform), it means coagulates and chars the tissue over a wide area. When the process is repeated we get only 6 percent, less heat is produced, this means creation of coagulum rather than cellular vaporization.

Desiccation:-

Desiccation occurs effectively and fully with the electricity current cut. When the electrode touches the tissue, the concentration of the

IJSER © 2019
http://www.ijser.org

current is reduced. This results in a slightly high rise in the cell temperature and provided that no cut occurs in the cell, and begins to dry up and coagulate, rather than evaporate the cell or explode.

Safety function to remove the electrode

When the electric current passing through the electrodes for production of heat suitable for burning, there should be a safe to remove the electrodes without any side effects on the patient, where the function of burning on the electricity for a period of time limited divided by the affected area. According to the following equation:-

$$\textbf{Burn} = \frac{\textbf{current} \times \textbf{time}}{\textbf{area}}$$

Tissue Conductivity:-

Various tissue types have a different electrical resistance, which affects the rate of heating. Adipose tissue and bone have high resistance and are poor conductors of electricity, whereas muscle and skin are good conductors of electricity and have low resistance.[7,8]

IJSER

Theory and Method:-

In electrosurgery, undesirable tissue is cut or removed by the electrode of the high frequency on the affected area. Local anesthesia may be used when needed. As a result, the increasing6 temperature of the tissue causes the drying of the tissue and with continuous this operation leads to evaporation or coagulation the desired tissue without leaving any side effects.

This research was done in the specialized clinic for dermatology of Dr.Sabhan M. Almaula. Using a device **Hyfrecator 2000** is the latest model in a long line of Hyfrecator units. First introduced in 1939, the Hyfrecator name symbolizes quality and longevity. Because this device is internationally guaranteed, we did not have any concerns about the treatment of the patients who underwent treatment, as explained in the pictures before and after, and explained the pictures before the treatment. After using the method of electrotherapy, we found during a week the full recovery of the patient. We also note the absence of side effects as shown in the pictures after treatment.

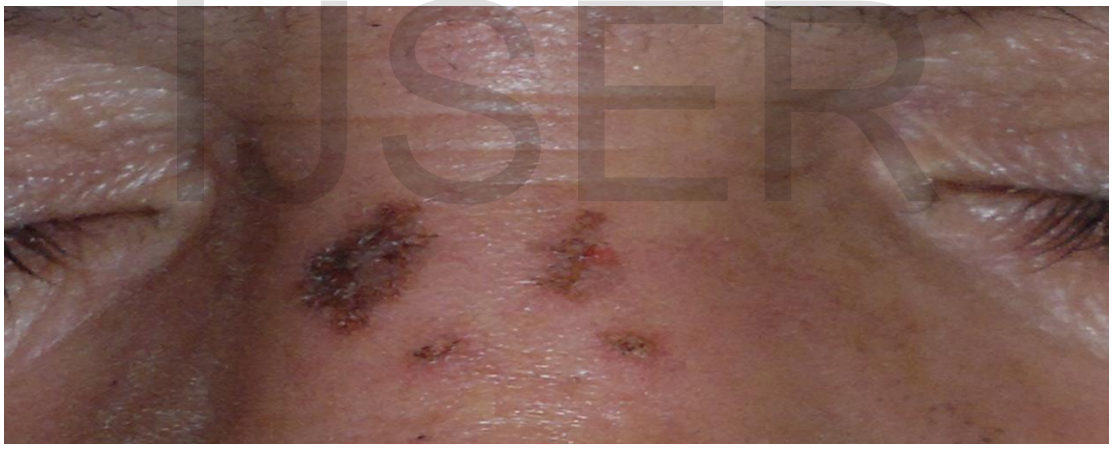
Conclusions and Benefits:-

Doctors, paramedics, and technicians working in the field of electrourgery should be experts in this area, in order for the operation to be successful and reduce the possibility of complications. We have in this research a good range of benefits that we get a good results by:- First, get rid of

IJSER © 2019
http://www.ijser.org

huge amount of these lesion, with a less time. Second, accuracy. Third, without using local anesthesia.
Forth, post inflammatory hypopigmentation or hypopigmentation. Fifth, the same texture of skin. All these benefits can be obtained in this research as an alternative to the treatment of chemical methods that have side effects trying to keep away from modern medicine.

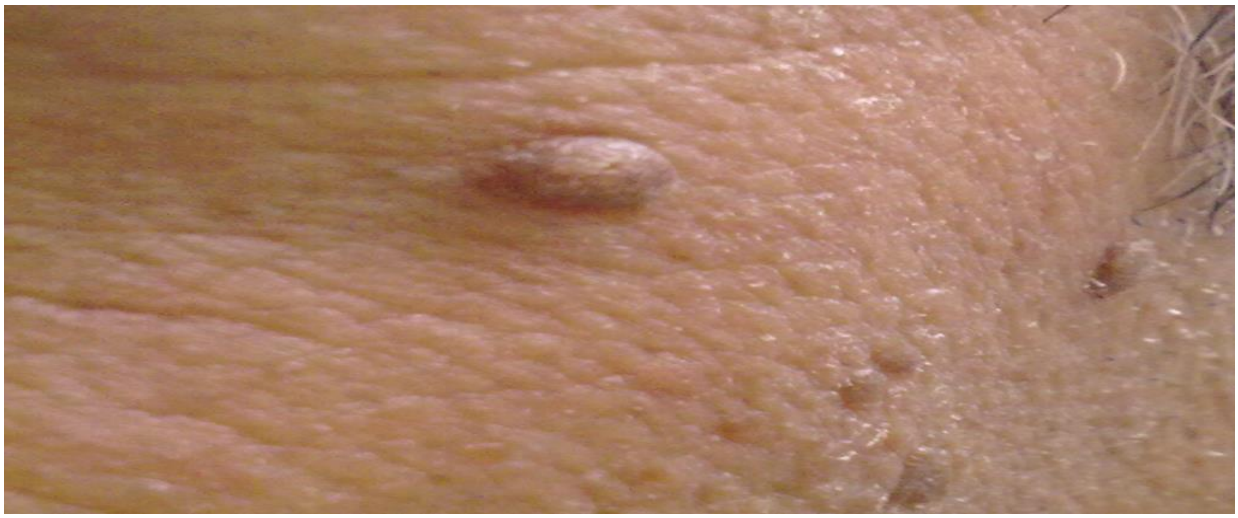
Picture (1). Before treatment.



Picture (2). After three days of treatment.

Picture (3). After ten days of treatment.

IJSER © 2019
http://www.ijser.org



Picture (4). Before treatment.

Picture (5). After three days of treatment.

Picture (6). After ten days of treatment.

IJSER © 2019
http://www.ijser.org

References:-

1- Kee. CE. Liquid nitrogen croytherapy. Arch Dermatol 1976:96;198-203.
2- Jacobsen E, McGraw R , McCagh S , Pulsed dye laser efficacy as initial therapy for warts and against recalcitrant verrucae. Cutis 1997;55:206-208.
3- Webster GF, satur N, Goldman MP, Halmi B, Greenbaum S. Treatmentof of recalcitrant warts using the pulsed laser. Cuts 1995;56:230-2.
4- Reda AM, Taha IR, Riad HA. Clinical and histologic effect of a single treatment of normal mode alexandrite (755nm) laser on melanocytic nevi. J Cutan LaserTher 1999;1:209-15.
5- Recommended Practices for endoscopic minimally invasive surgery. AORN standards and Recommended practices for perioperative Nursing . Colo..Association of operating Room Nurses; 2003:251-255.
6- Recommended Practices for Electrosurgery, AORN Standareds and Recommended practices for perioperative Nursing Denver ,cola;Association of operating room Nurses : 2003:237-244.

.

7- Advincula AP, Wang K. The evolutionary state of electrosurgery: where are we now? *Curr Opin Obstet Gynecol.* 2008;20(4): 353–358.
8- Neufield GR. Principles and hazards of electrosurgery including laparoscopy. *Surg Gynecol Obstet.* 1978;147:705–710.

IJSER

IJSER © 2019
http://www.ijser.org