

A 5 Minute in Office Procedure-Ear Lobe Keloid Excision Using Radio Frequency

Udaya Kiran Koduri*

Member of Indian Association of Dermatology, Venereology, and Leprology, Delhi, India

ABSTRACT

Keloids and hypertrophic scars are a product of an imbalance in callogenesis and abnormal proliferation of tissue occurring at the site of cutaneous injury as a result of ear lobe piercing. And occurs usually in persons who are keloid prone.

Radio Frequency ablation (RF) is a versatile dermato-surgical procedure and is used as a standalone intervention as our treatment. The cut and coagulate mechanism of the procedure was helpful. No intra lesion steroids were required to be given after procedure and no pressure bandage. Keloids were left to naturally heal.

The progress of the patient was documented through various stages pre and post keloid removal. Photographs taken and shared by patients online were helpful in recording the follow up of the progress. This helped in cutting down a number of follow-up visits to clinic.

Results observed from the method leveraged were aesthetically acceptable.

Keywords: Ear lobe; keloid; radio-frequency; outpatient; in office procedure

INTRODUCTION

Keloids and hypertrophic scars are abnormal proliferation of tissue occurring at the site of cutaneous injury, and may occur at the site of trauma, post-surgical incision, post vaccination, post-burns. This usually happens mostly in keloid prone patients. Prima facie, the difference between Keloids and hypertrophic scars is that, keloids grow beyond the original margins of the scar and do not regress, whereas hypertrophic scars do not grow beyond the boundaries of the original wound and may reduce over time [1].

Radio Frequency ablation (RF) is a versatile dermato-surgical procedure which uses various forms of alternating current at an ultra-high frequency for the surgical ablation of skin lesions. The procedure can be used with relatively less collateral damage and minimal side effects. It produces a clean surgical field due to simultaneous hemostasis. It is a simple procedure done in less than 5 minutes. With less follow-up visits as we have not used intralesional steroids. No special pressure bandages advocated. The lesions we allowed to heal in a natural process. Effects and produces a clean surgical field due to the simultaneous hemostasis produced. The lesions we allowed to heal in a natural process.

PROCEDURE

Prior to the procedure, local anaesthesia was used in all the cases. For the procedure, we have used an RF machine which generates

sound waves, which aids in breaking the water in the tissue to hydrogen and oxygen and releases energy which aids the loop present to cut and coagulate with minimum collateral damage.

Post procedure, Sterile dressing was done and patient was sent home with required instruction of how to self-dress the wound should there be a requirement for the same. The was done with the aim of reducing number of follow-up visits to the clinic. It is important to note that, as part of the procedure, pressure bandages and steroid injections were not used. As per a study performed in 2020, non-usage of steroid injection, compression therapy and radiation did not have any impact with respect to recurrence. The overall process of keloid excision took approximately 5 minutes, as can be seen from the below pictures with the timestamp. The healing period for the patients was observed to be around 4 weeks

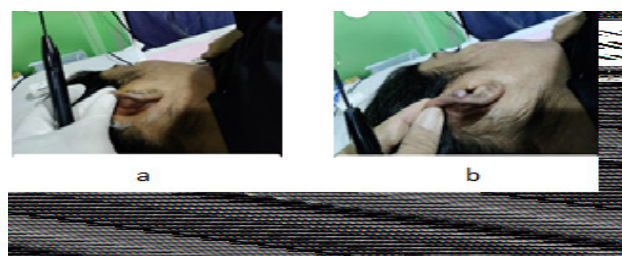


Figure 1: Patient A (Time Period 5 minutes).

Correspondence to: Dr. Udaya Kiran Koduri, Indian Association of Dermatology, Venereology, and Leprology, Delhi, India, E-mail: ukiran927@gmail.com

Received: September 29, 2021; **Accepted:** October 13, 2021; **Published:** October 25, 2021

Citation: Koduri UK (2021) A 5 Minute in Office Procedure-Ear Lobe Keloid Excision Using Radio Frequency Rep 6:197.

Copyright: ©2021 Koduri UK. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

CASE REPORT

We have in this case report presented our experience of treating 4 patients who had presented with Keloids on the ear (sizes ranging from 12 mm-20 mm). All the cases had keloids due to cosmetic ear piercing. Each case went through one sitting radio frequency procedure. The ages of patients were 12-35 years, median age being 23.5 years. The details of each of these cases and management of keloids is presented in brief below

Observations

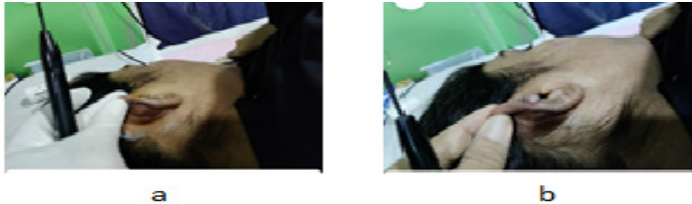


Figure 2: Patient B (Time period 3 minutes).

Case 1: A 25-year-old woman had keloid on the posterior aspect of right ear. Keloidectomy was done by RF with good result and no scar. Follow-up period of two years showed no recurrence.

Case 2: A girl, aged 17 years, with a keloid on the posterior aspect of the left ear. A keloidectomy was done with RF and had an aesthetically good result with no scar. During the follow-up period of two years, no recurrence occurred.

Case 3: Women aged 35 years, with two keloids. The duration of keloids was 15 years. These keloids were removed at different setting, using radio frequency. The end result was aesthetically good and without a scar and the patient expressed high satisfaction with the result. Follow-up was continued for seven years without recurrence.

Case 4: A 26-year-old with right ear posterior keloid was subjected to keloidectomy by Radio Frequency serial photography, shared by the patient were able to help understand the timeline of the healing process. The end result was cosmetically happy for the patient.

Case 5: The patient was a 12 years presented with multiple keloids.



Figure 3: Serial pictures depicting healing process.



Figure 4: Removal of keloid at different setting using Radio Frequency.



Figure 5: Pictures depicting double keloid procedure performed in 2 sittings and the end result.



Figure 6: Keloidectomy by Radio Frequency serial photography.



Figure 7: Serial pictures depicting Keloid removal.

We resected the biggest keloid among them with RF and the end result was satisfactory to the patient. Patient further requested for more sessions to remove the remaining keloids.

DISCUSSION

Keloids and Hypertrophic scars are difficult to treat and multiple treatment options have been tried and are currently used. Among the broad range of therapeutics currently available for the treatment of keloids, none have been able to show a complete effective result in flattening existing keloids, reducing associated symptoms, or preventing recurrence. Therefore there is a continuous effort to explore newer methods or test out other dermatosurgical techniques to manage keloids, some of the new ones being the use of lasers, intra lesional interferon, fillet flap and imiquimod all of which have shown variable success [2, 3]. The use of intralesional cryotherapy produced reduced keloid volume and can be used especially in primary keloids but is found to be inferior to keloid excision and brachytherapy for resistant keloids [4]. The tissue effect produced on the fallopian tubes by micro electro cautery, CO₂, KTP-532, the Nd-YAG laser and RF were evaluated in a study

using transmission EM sections of the tissue. They found that RF produces the least damage to surrounding healthy tissue [5].

Intralesional radio frequency ablation of keloids and hypertrophic scars is a useful technique and has proven to be reasonably effective in decreasing the size of the lesion and relieving the associated symptoms. The advantages of RF include that it is a short out-patient procedure not requiring an operative facility; requiring simple equipment; little expertise; with the effects evident in a few weeks; and is cost-effective. The social benefit and acceptance of the patient is high.

When compared to other procedure RF is a simple and safe procedure. It causes less lateral heat spread and tissue damage and provides better control in comparison to electric cautery. The cutting mode of radio frequency is more effective and versatile in comparison to the carbon dioxide laser. As hemostasis occurs simultaneously, the time required for the surgery is less. There are fewer side effects and complications. RFA can be easily combined with other surgical modalities such as cryotherapy and laser for treatment [6].

We have used one time procedure using Radio-frequency excision of keloids. The time taken was less than 5 minutes with very little bleeding due to cut and coagulate mechanism of the procedure used. Patients were followed by photographs sent by patients regularly online. This helped in follow-up and monitoring while reducing the number of follow-up clinic visits. The simplicity cost reduction and lesser clinic visits with acceptable aesthetic results was encouraging [7, 8].

CONCLUSION

Radio-frequency alone with local anesthesia is a minimally invasive procedure which can be used effectively as an out-patient, in-office procedure to treat ear keloids. It is cost effective and a procedure that can be completed in one sitting. The achieved results were cosmetically accepted, Use of RFA should be actively explored to treat keloids in other parts of the body as in those patients where follow-up was done for an extended period did not show any recurrence. Further larger studies are required.

REFERENCES

1. Atiyeh BS, Costagliola M, Hayek SN. Keloid or hypertrophic scar: The controversy: review of the literature. *Annals of plastic surgery*. 2005 54: 676-680.
2. Kim DY, Kim ES, Eo SR, Kim KS, Lee SY, Cho BH. A surgical approach for earlobe keloid: keloid fillet flap. *Plast Reconstr Surg*. 2004 113: 1668-1674.
3. Agrawal SN, Pawar SS, Saoji VV, Telhure BJ. Effectiveness of radio-frequency ablation in the treatment of keloids and hypertrophic scar-a short duration interventional study. *J Evid Bas Med & Health Care* 2017 4: 5887-5889.
4. Bijlard E, Timman R, Verduijn GM, Niessen FB, Hovius SER, Mureau MAM. Intralesional cryotherapy versus excision with corticosteroid injections or brachytherapy for keloid treatment: Randomised controlled trials. *J Plast Reconstr Aesthet Surg*. 2018 71: 847-856.
5. Olivar AC, Forouhar FA, Gillies CG, Servanski DR. Transmission electron microscopy: Evaluation of damage in human oviducts caused by different surgical instruments. *Ann Clin Lab Sci*. 1999 29: 281-285.
6. Weshay AH, Abdel Hay RM, Sayed K, El Hawary MS, Nour-Edin F. Combination of radiofrequency and intralesional steroids in treatment of keloids: A pilot study. *Dermatol Surg* 2015 41: 731-735.
7. Sachdeva S, Dogra A. Radiofrequency ablation in dermatology. *Indian J Dermatol* 2007 52: 134-137.
8. A. Khan FA, Drucker NA, Larson SD, Taylor JA, Islam S. Pediatric earlobe keloids: Outcomes and patterns of recurrence. *J Pediatr Surg*. 2020 55: 461-464.