

Electromechanical resection: A novel method for quick, bloodless removal of multiple benign lesions

Problem

In patients with multiple, small benign growths up to 1–2 cm diameter such as acrochordons, filiform warts and neurofibromas, bipolar or monopolar radiofrequency resection in ‘cut and coagulation’ mode is recommended.¹ However, monopolar radiofrequency ablation can be associated with bleeding, smoke generation, charring, scab formation \slow healing and is time-consuming as coagulation is required to control the bleeding post excision. Bipolar forceps are unavailable with most machines used for dermatologic surgery.

Solution

We propose combining radiofrequency energy with a curved scissor excision to reduce the excision time, eliminate bleeding and need for anesthesia. This helps in removing multiple lesions quickly.

The lesion is gently pulled with a fine-toothed forceps, and its base is severed with a scissor, simultaneously touching the monopolar electrode tip in ‘coagulation’ mode to the hinge of scissor blades. The low power radiofrequency energy (10–20 W, 500–4000 kHz)² is transmitted to the tip of scissor as metal is a good conductor.³

Electrocoagulation energy with mechanical resection is used simultaneously in this method of ‘electromechanical resection’ [Figures 1a, b and Video 1]. This combination ensures a quicker procedure along with faster healing and better aesthetic outcome, as minimum energy is utilized. The swift procedure reduces the chance of local pain, however topical or infiltrative anesthesia may be used for multiple lesions or an apprehensive patient. Suturing is recommended in large lesions for faster healing.

Care should be taken to avoid the contact of scissor tips with surrounding skin to prevent unwanted burns. To achieve this,



Figure 1a: Resection of neurofibroma using electromechanical resection technique. The scissors resection is done while the electrocautery probe (green arrow) is touched to the scissors to achieve completely bloodless resection



Figure 1b: Immediate post-procedure, there is no bleeding, charring and crusting at the surgical site (black arrow)

the lesion can be gently pulled up or the surrounding skin can be insulated using a sterile paper (e.g. inner cover of the disposable gloves), protruding the lesion through a hole made in it. However, this cumbersome insulation maneuver may be skipped if the operator remains careful. The need of an assistant to touch the radiofrequency probe with scissors is a limitation of this technique.

How to cite this article: Pangti R, Gupta S. Electromechanical resection: A novel method for quick, bloodless removal of multiple benign lesions. *Indian J Dermatol Venereol Leprol* 2022;88:435-6.

Received: March, 2020 Accepted: June, 2020 Epub Ahead of Print: December, 2021 Published: April, 2022 Videos available on: www.ijdv.com

DOI: 10.25259/IJDVL_278_20 PMID: 33666047

This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 License, which allows others to remix, transform, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

Rashi Pangti, Somesh Gupta

Department of Dermatology and Venereology,
All India Institute of Medical Sciences,
New Delhi, India

Corresponding author:

Dr. Somesh Gupta,
Department of Dermatology and Venereology, All India Institute of
Medical Sciences, New Delhi, India.
someshgupta@hotmail.com

References

1. Pangti R, Dixit A, Gupta S. Bipolar forceps of a high-power electrosurgical unit for precise removal of small benign skin lesions. *J Am Acad Dermatol* 2020;82:e155-6.
2. Sachdeva S, Dogra A. Radiofrequency ablation in dermatology. *Indian J Dermatol* 2007;52:134-7.
3. De D, Gupta S, Malhotra AK. Indirect electrosurgery. *Dermatol Surg* 2006;32:1424.