# World Journal of *Clinical Cases*

World J Clin Cases 2023 September 26; 11(27): 6318-6669





Published by Baishideng Publishing Group Inc

W J C C World Journal of Clinical Cases

#### Contents

Thrice Monthly Volume 11 Number 27 September 26, 2023

#### **MINIREVIEWS**

6318 Characteristics of amino acid metabolism in colorectal cancer

Xu F, Jiang HL, Feng WW, Fu C, Zhou JC

#### **ORIGINAL ARTICLE**

#### **Clinical and Translational Research**

Exploring the pharmacological mechanism of Wuzhuyu decoction on hepatocellular carcinoma using 6327 network pharmacology

Ouyang JY, Lin WJ, Dong JM, Yang Y, Yang HK, Zhou ZL, Wang RQ

6344 Identification of potential diagnostic and prognostic biomarkers for breast cancer based on gene expression omnibus

Zhang X, Mi ZH

#### **Retrospective Cohort Study**

6363 Treatment of proximal humeral fractures accompanied by medial calcar fractures using fibular autografts: A retrospective, comparative cohort study

Liu N, Wang BG, Zhang LF

#### **Retrospective Study**

- 6374 Effectiveness of out-fracture of the inferior turbinate with reduction nasal bone fracture Kim SY, Nam HJ, Byeon JY, Choi HJ
- 6383 Prognostic model of hepatocellular carcinoma based on cancer grade

Zhang GX, Ding XS, Wang YL

6398 Oncologic efficacy of gonadotropin-releasing hormone agonist in hormone receptor-positive very young breast cancer patients treated with neoadjuvant chemotherapy

Choi HJ, Lee JH, Jung CS, Ryu JM, Chae BJ, Lee SK, Yu JH, Kim SW, Nam SJ, Lee JE, Jung YJ, Kim HY

6407 Correlation analysis of serum thyroglobulin, thyroid-stimulating hormone levels, and thyroid-cancer risk in thyroid nodule surgery

Shuai JH, Leng ZF, Wang P, Ji YC

6415 Closed thoracic drainage in elderly patients with chronic obstructive pulmonary disease complicated with spontaneous pneumothorax: A retrospective study

Wang W, Zhu DN, Shao SS, Bao J

#### **Observational Study**

6424 Helicobacter pylori eradication treatment for primary gastric diffuse large B-cell lymphoma: A single-center analysis

Saito M, Mori A, Kajikawa S, Yokoyama E, Kanaya M, Izumiyama K, Morioka M, Kondo T, Tanei ZI, Shimizu A



#### Contents

Thrice Monthly Volume 11 Number 27 September 26, 2023

#### **Prospective Study**

6431 Effect of polyene phosphatidylcholine/ursodeoxycholic acid/ademetionine on pregnancy outcomes in intrahepatic cholestasis

Dong XR, Chen QQ, Xue ML, Wang L, Wu Q, Luo TF

#### SYSTEMATIC REVIEWS

6440 Maternal diaphragmatic hernia in pregnancy: A systematic review with a treatment algorithm Augustin G, Kovač D, Karadjole VS, Zajec V, Herman M, Hrabač P

#### **META-ANALYSIS**

6455 Laparoscopic vs open radical resection in management of gallbladder carcinoma: A systematic review and meta-analysis

He S, Yu TN, Cao JS, Zhou XY, Chen ZH, Jiang WB, Cai LX, Liang X

#### **CASE REPORT**

- 6476 Acute acquired concomitant esotropia with congenital paralytic strabismus: A case report Zhang MD, Liu XY, Sun K, Qi SN, Xu CL
- 6483 Tumor recurrence after pathological complete response in locally advanced gastric cancer after neoadjuvant therapy: Two case reports Xing Y, Zhang ZL, Ding ZY, Song WL, Li T
- 6491 Acute peritonitis secondary to post-traumatic appendicitis: A case report and literature review Habachi G, Aziza B, Ben-Ammar S, Maherzi O, Houas Y, Kerkeni Y, Sahli S, Jouini R
- 6498 Fournier's gangrene after insertion of thermo-expandable prostatic stent for benign prostatic hyperplasia: A case report

Jung HC, Kim YU

6505 Methyl-CpG-Binding protein 2 duplication syndrome in a Chinese patient: A case report and review of the literature

Xing XH, Takam R, Bao XY, Ba-alwi NA, Ji H

6515 Blood purification for treatment of non-liquefied multiple liver abscesses and improvement of T-cell function: A case report

Tang ZQ, Zhao DP, Dong AJ, Li HB

6523 Eosinophilic granulomatosis with polyangiitis, asthma as the first symptom, and subsequent Loeffler endocarditis: A case report

He JL, Liu XY, Zhang Y, Niu L, Li XL, Xie XY, Kang YT, Yang LQ, Cai ZY, Long H, Ye GF, Zou JX

6531 Left atrium veno-arterial extra corporeal membrane oxygenation as temporary mechanical support for cardiogenic shock: A case report

Lamastra R, Abbott DM, Degani A, Pellegrini C, Veronesi R, Pelenghi S, Dezza C, Gazzaniga G, Belliato M



Conton	World Journal of Clinical Cases	
<b>Contents</b> Thrice Monthly Volume 11 Number 27 September 26, 2023		
6537	Successful treatment of eyebrow intradermal nevi by shearing combined with electrocautery and curettage: Two case reports	
	Liu C, Liang JL, Yu JL, Hu Q, Li CX	
6543	Amniotic membrane mesenchymal stromal cell-derived secretome in the treatment of acute ischemic stroke: A case report	
	Lin FH, Yang YX, Wang YJ, Subbiah SK, Wu XY	
6551	Managing spindle cell sarcoma with surgery and high-intensity focused ultrasound: A case report	
	Zhu YQ, Zhao GC, Zheng CX, Yuan L, Yuan GB	
6558	Triplet regimen as a novel modality for advanced unresectable hepatocellular carcinoma: A case report and review of literature	
	Zhao Y, He GS, Li G	
6565	Acute diquat poisoning case with multiorgan failure and a literature review: A case report	
	Fan CY, Zhang CG, Zhang PS, Chen Y, He JQ, Yin H, Gong XJ	
6573	Fungal corneal ulcer after repair of an overhanging filtering bleb: A case report	
	Zhao J, Xu HT, Yin Y, Li YX, Zheng YJ	
6579	Combination therapy with toripalimab and anlotinib in advanced esophageal squamous cell carcinoma: A case report	
	Chen SC, Ma DH, Zhong JJ	
6587	Removal of a pulmonary artery foreign body during pulse ablation in a patient with atrial fibrillation: A case report	
	Yan R, Lei XY, Li J, Jia LL, Wang HX	
6592	Delayed-onset <i>micrococcus luteus</i> -induced postoperative endophthalmitis several months after cataract surgery: A case report	
	Nam KY, Lee HW	
6597	Anesthetic management of a pregnant patient with Eisenmenger's syndrome: A case report	
	Zhang Y, Wei TT, Chen G	
6603	Recurrence of unilateral angioedema of the tongue: A case report	
	Matsuhisa Y, Kenzaka T, Shimizu H, Hirose H, Gotoh T	
6613	Transverse mesocolic hernia with intestinal obstruction as a rare cause of acute abdomen in adults: A case report	
	Zhang C, Guo DF, Lin F, Zhan WF, Lin JY, Lv GF	
6618	Compound heterozygous mutations in tripeptidyl peptidase 1 cause rare autosomal recessive spinocerebellar ataxia type 7: A case report	
	Liu RH, Wang XY, Jia YY, Wang XC, Xia M, Nie Q, Guo J, Kong QX	



Caraban	World Journal of Clinical Cases	
Conten	Thrice Monthly Volume 11 Number 27 September 26, 2023	
6624	Treatment of posterior interosseous nerve entrapment syndrome with ultrasound-guided hydrodissection: A case report	
	Qin LH, Cao W, Chen FT, Chen QB, Liu XX	
6631	Rapidly growing extensive polypoid endometriosis after gonadotropin-releasing hormone agonist discontinuation: A case report	
	Zhang DY, Peng C, Huang Y, Cao JC, Zhou YF	
6640	Preserving finger length in a patient with symmetric digital gangrene under local anesthesia: A case report	
	Kim KH, Ko IC, Kim H, Lim SY	
6646	Reconstruction of the lower back wound with delayed infection after spinal surgery: A case report	
	Kim D, Lim S, Eo S, Yoon JS	
6653	Solitary intraosseous neurofibroma in the mandible mimicking a cystic lesion: A case report and review of literature	
	Zhang Z, Hong X, Wang F, Ye X, Yao YD, Yin Y, Yang HY	
6664	Complete response of metastatic <i>BRAF</i> V600-mutant anaplastic thyroid cancer following adjuvant dabrafenib and trametinib treatment: A case report	
	Lee SJ, Song SY, Kim MK, Na HG, Bae CH, Kim YD, Choi YS	



### Contents

Thrice Monthly Volume 11 Number 27 September 26, 2023

#### **ABOUT COVER**

Editorial Board Member of World Journal of Clinical Cases, Alexandru Corlateanu, MD, PhD, Reader (Associate Professor), Department of Respiratory Medicine, Nicolae Testemitanu State University of Medicine and Pharmacy, Chisinau 2001, Moldova. alexandru\_corlateanu@yahoo.com

#### **AIMS AND SCOPE**

The primary aim of World Journal of Clinical Cases (WJCC, World J Clin Cases) is to provide scholars and readers from various fields of clinical medicine with a platform to publish high-quality clinical research articles and communicate their research findings online.

WJCC mainly publishes articles reporting research results and findings obtained in the field of clinical medicine and covering a wide range of topics, including case control studies, retrospective cohort studies, retrospective studies, clinical trials studies, observational studies, prospective studies, randomized controlled trials, randomized clinical trials, systematic reviews, meta-analysis, and case reports.

#### **INDEXING/ABSTRACTING**

The WJCC is now abstracted and indexed in Science Citation Index Expanded (SCIE, also known as SciSearch®), Journal Citation Reports/Science Edition, Current Contents®/Clinical Medicine, PubMed, PubMed Central, Reference Citation Analysis, China National Knowledge Infrastructure, China Science and Technology Journal Database, and Superstar Journals Database. The 2023 Edition of Journal Citation Reports® cites the 2022 impact factor (IF) for WJCC as 1.1; IF without journal self cites: 1.1; 5-year IF: 1.3; Journal Citation Indicator: 0.26; Ranking: 133 among 167 journals in medicine, general and internal; and Quartile category: Q4.

#### **RESPONSIBLE EDITORS FOR THIS ISSUE**

Production Editor: Ying-Yi Yuan, Production Department Director: Xiang Li; Editorial Office Director: Jin-Lei Wang.

NAME OF JOURNAL	INSTRUCTIONS TO AUTHORS
World Journal of Clinical Cases	https://www.wjgnet.com/bpg/gerinfo/204
<b>ISSN</b>	GUIDELINES FOR ETHICS DOCUMENTS
ISSN 2307-8960 (online)	https://www.wjgnet.com/bpg/GerInfo/287
LAUNCH DATE	GUIDELINES FOR NON-NATIVE SPEAKERS OF ENGLISH
April 16, 2013	https://www.wjgnet.com/bpg/gerinfo/240
FREQUENCY	PUBLICATION ETHICS
Thrice Monthly	https://www.wjgnet.com/bpg/GerInfo/288
<b>EDITORS-IN-CHIEF</b> Bao-Gan Peng, Jerzy Tadeusz Chudek, George Kontogeorgos, Maurizio Serati, Ja Hyeon Ku	PUBLICATION MISCONDUCT https://www.wjgnet.com/bpg/gerinfo/208
EDITORIAL BOARD MEMBERS	ARTICLE PROCESSING CHARGE
https://www.wjgnet.com/2307-8960/editorialboard.htm	https://www.wjgnet.com/bpg/gerinfo/242
PUBLICATION DATE	STEPS FOR SUBMITTING MANUSCRIPTS
September 26, 2023	https://www.wjgnet.com/bpg/GerInfo/239
COPYRIGHT	ONLINE SUBMISSION
© 2023 Baishideng Publishing Group Inc	https://www.f6publishing.com

© 2023 Baishideng Publishing Group Inc. All rights reserved. 7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA E-mail: bpgoffice@wjgnet.com https://www.wjgnet.com



W J C C World Journal of Clinical Cases

Submit a Manuscript: https://www.f6publishing.com

World J Clin Cases 2023 September 26; 11(27): 6537-6542

DOI: 10.12998/wjcc.v11.i27.6537

ISSN 2307-8960 (online)

CASE REPORT

# Successful treatment of eyebrow intradermal nevi by shearing combined with electrocautery and curettage: Two case reports

Cheng Liu, Jia-Li Liang, Jia-Lin Yu, Qun Hu, Chang-Xing Li

Specialty type: Medicine, research and experimental

Provenance and peer review: Unsolicited article; Externally peer reviewed.

Peer-review model: Single blind

#### Peer-review report's scientific quality classification

Grade A (Excellent): 0 Grade B (Very good): B Grade C (Good): 0 Grade D (Fair): 0 Grade E (Poor): 0

P-Reviewer: Venugopal V, India

Received: May 30, 2023 Peer-review started: May 30, 2023 First decision: August 8, 2023 Revised: August 18, 2023 Accepted: August 31, 2023 Article in press: August 31, 2023 Published online: September 26, 2023



Cheng Liu, Department of Dermatology, Guangdong Provincial Armed Police Corps Hospital, Guangzhou 510507, Guangdong Province, China

Jia-Li Liang, Chang-Xing Li, Department of Dermatology, Nanfang Hospital, Southern Medical University, Guangzhou 510515, Guangdong Province, China

Jia-Lin Yu, Department of Dermatology, Dalang Hospital, Dongguan 523770, Guangdong Province, China

Qun Hu, Department of Dermatology, Southern Theater Command General Hospital, Guangzhou 510010, Guangdong Province, China

Corresponding author: Cheng Liu, MD, Professor, Department of Dermatology, Guangdong Provincial Armed Police Corps Hospital, No. 268 Yanling Road, Tianhe District, Guangzhou 510507, Guangdong Province, China. liucheng19740227@163.com

## Abstract

#### BACKGROUND

An intradermal nevus is a common skin tumour, and the classical method of removal has a risk of recurrence and scarring. It is a challenge for dermatologists to treat eyebrow intradermal nevi quickly and efficiently. This study focused on investigating the efficacy and safety of shearing combined with electrocautery and curettage in the treatment of eyebrow intradermal nevi.

#### CASE SUMMARY

We describe two adult patients with eyebrow intradermal nevi treated by shearing combined with electrocautery and curettage. Both patients were followed up regularly after surgery. At follow-up, no recurrence of eyebrow intradermal nevus and no obvious scars or hypopigmentation were found in either patient. The results indicated that shearing combined with electrocautery and curettage could remove eyebrow intradermal nevus without side effects and confirmed the efficacy and safety of this modality for treating these skin lesions.

#### **CONCLUSION**

Shearing combined with electrocautery and curettage has superior merits, including simple operation, good cosmetic effects, and high patient satisfaction, presenting great application potential for treating intracutaneous nevus.

Key Words: Eyebrow; Intradermal nevus; Combined treatment; Thermal diffusion;



Aesthetic surgery; Case report

©The Author(s) 2023. Published by Baishideng Publishing Group Inc. All rights reserved.

Core Tip: An intradermal nevus is a common skin tumour. This study aimed to evaluate the efficacy and safety of using shear combined with electrocautery and curettage for removing eyebrow intradermal nevi. In this work, we present two cases of eyebrow intradermal nevi that were treated by shearing combined with electrocautery and curettage and followed up regularly. The results showed no recurrence of the eyebrow intradermal nevus, no obvious scars or hypopigmentation, and high patient satisfaction. The study indicates that shearing combined with electrocautery and curettage is a safe and effective treatment option for intracutaneous nevus removal, presenting great potential for wider application.

Citation: Liu C, Liang JL, Yu JL, Hu Q, Li CX. Successful treatment of eyebrow intradermal nevi by shearing combined with electrocautery and curettage: Two case reports. World J Clin Cases 2023; 11(27): 6537-6542 URL: https://www.wjgnet.com/2307-8960/full/v11/i27/6537.htm DOI: https://dx.doi.org/10.12998/wjcc.v11.i27.6537

### INTRODUCTION

Melanocytic nevi are common benign skin tumours that arise from the proliferation of melanocytes<sup>[1]</sup>. According to the position of nevi cells in the skin, melanocytic nevi can be classified into three types: Junctional, compound, and intradermal nevi. Intra-dermal nevus is the most prevalent type and is characterized by the presence of nevocytes in the deep layers of the dermis. These nevi are characterized by skin-coloured, brown, or black papules, nodules, and domes that protrude from the skin surface; some of these lesions have hair growth on the surface[2]. Most melanocytic nevi are benign and safe. How to remove an intradermal nevus is a matter of controversy and depends on several factors, including the size, location, risk of degeneration, psychological burden, and anticipated postoperative aesthetic effects. Currently, there are numerous treatment methods for removing facial pigmented nevi, such as cryotherapy, chemical etching, electrodesiccation, carbon dioxide laser, or Erb:YAG laser therapy[3]. Notwithstanding, it is noteworthy that intradermal nevi are commonly situated in the upper dermis, and the conventional methods of removal can result in postoperative scarring, alterations in skin texture, and frequent pigmentary changes or recurrence[4]. In some cases, such changes may even lead to malignant transformation. Excision is currently the standard therapy for intradermal nevi, and while this treatment can completely remove them, it can also leave scars[5-7]. Furthermore, removing an intradermal nevus from the eyebrows is not only challenging to perform but also carries a chance of changing the shape of the eyebrows. As a result, there is a need for new and effective methods for treating these skin conditions. In this paper, we report two cases of intradermal nevi located in the eyebrow region that were successfully treated by shearing combined with electrocautery and curettage. Additionally, we investigated the mechanism by which this method removes intradermal nevi.

#### CASE PRESENTATION

#### Chief complaints

Case 1: A 35-year-old Chinese male presented with a slowly increasing grey-brown papule that had been located on the brow arch for 15 years.

Case 2: A 43-year-old female patient complained of the presence of hemispherical papules that were located on the right eyebrow and had persisted for 30 years.

#### History of present illness

Case 1: At the age of 17, the patient developed a greyish-brown papule on the left eyebrow arch, with multiple hairs growing above it. The papule gradually increased in size over time. In November 2020, the presence of a hemispherical grey-brown circular tubercle on the left eyebrow arch, measuring 13 mm × 10 mm in size and concomitant with several hairs, was observed.

Case 2: The onset of a small skin papule on the right side of the patient's brow was observed at the age of 13, and the papule gradually increased in size over time. By May 2019, the papules were hemispheric and measured approximately 8 mm in diameter.

#### History of past illness

The past medical history was not remarkable for these two patients.



#### Personal and family history

The two patients had no relevant family history of cancer or chronic disease.

#### Physical examination

Case 1: Systemic examination revealed no obvious abnormalities. The patient had a hemispherical grey-brown circular nodule on the left eyebrow arch, approximately 13 mm × 10 mm in size, exhibiting the growth of eyebrow hair (Figure 1A).

Case 2: Systemic examination revealed no obvious abnormalities. By May 2019, the papules on the patient's right eyebrow had a hemispherical skin tone with a few black spots and a diameter of approximately 8 mm (Figure 2A).

#### Laboratory examinations

Laboratory examination of both patients revealed no abnormalities.

#### Imaging examinations

These two patients had not undergone an imaging examination.

#### **FINAL DIAGNOSIS**

Intramucosal nevus of the eyebrow.

#### TREATMENT

Both patients underwent shearing combined with electrocautery and curettage. Routine disinfection of the operative field was performed with complex iodine, followed by a local injection of 2% lidocaine to the base of the lesion. The surgeon's left middle finger and thumb pressed both ends of the intradermal nevus close to the patient's bone surface, and curvedtip ophthalmic scissors were used to remove the shin mass at the base of the lesion, parallel to the surrounding normal skin. Patient A underwent removal of a skin mass with a diameter of 10 mm, and the excised tissue was biopsied. Patient B had a skin mass with a diameter of 8 mm removed. After shearing, a small amount of blood oozed from the exposed surface, which had a flesh-white surface resembling the residue of the intradermal nevus. The surgeon then used sterile gauze to compress the wound to stop the bleeding. Once the bleeding had stopped, the surgeon used electric cautery microneedles and medium-sized curettes alternately for multiple stratified gasification and curettage to remove residual intradermal nevus lesions. Cotton swabs dampened with 30% ferric chloride tincture were applied to the wound for approximately 30 s to stop the bleeding. Subsequently, a depressed, brown, dry wound formed on the eyebrows of both patients. After the operation, the topical medical healing biofilm (Velvetfeeling) was applied to the wound 3 to 5 times a day for one week. Both patients were followed for more than 1 year to determine their prognosis.

#### OUTCOME AND FOLLOW-UP

Case 1: Patient A presented a hemispherical grey-brown round nodule with a size of approximately 13 mm × 10 mm that was located on the left brow arch and had several hairs. During the postoperative period and up to the 1-year follow-up, the patient's wounds gradually crusted and healed. Thirteen months after surgery, there was no hyperpigmentation or depigmentation, no depressed or hyperplastic scars, and normal eyebrow hair growth in the original lesion (Figures 1B and C). The postoperative pathology was consistent with an intradermal nevus (Figure 1D). The patient was very satisfied with the results of the treatment.

Case 2: Patient B was a 43-year-old female with a hemispherical papule on the right eyebrow for 30 years. After the patient gave informed consent, shearing combined with electrocautery and curettage was performed under local anaesthesia, which took approximately 5 min. Similar to patient A, nearly four years after the operation, the skin of the original lesion was almost indistinguishable from the surrounding normal skin, and no obvious scars were visible (Figures 2B-D).

#### DISCUSSION

Intradermal nevus is a type of melanocytic nevus with nevus cell nests located in the dermis. According to Lea and Pawlowski[8-10], intradermal nevi can be defined as epidermal structures surrounded by basement membrane bands located outside the nevus cell nests. At present, there are two popular methods to remove nevus cell nests, including ultrawide surgical resection of nevus cell nests, electrocauterization and use of a  $CO_2$ /erbium laser. On the one hand, the latter method uses high-temperature gasification to eliminate nevus cell nests[3]. However, it is a challenge for dermato-





DOI: 10.12998/wjcc.v11.i27.6537 Copyright ©The Author(s) 2023.

Figure 1 35-year-old male with an eyebrow intradermal nevus. A: Before treatment, the lesion, which was located on the left brow arch, was a 13 mm round nodule with hair growth and a grey-brown appearance; B: Immediately after the surgery, there was a depressed wound on the left eyebrow arch with a dark brown scab attached, measuring approximately 10 mm; C: Thirteen months after the surgery, a light red macule measuring approximately 3 mm was observed at the site of the original skin lesion. There were no signs of depression or hypertrophic scarring, and the eyebrow was still intact; D: Under the microscope, the nevus cells in the dermis were arranged in a solid mass structure and were round, polygonal, spindle-shaped, or dendritic. The nuclei were vesicular and contained a few melanin granules.



DOI: 10.12998/wjcc.v11.i27.6537 Copyright ©The Author(s) 2023.

Figure 2 43-year-old female with an eyebrow intradermal nevus. A: Before treatment, there was a skin-coloured hemispherical papule with a few black spots and hair growth on the right brow, measuring approximately 8 mm in diameter; B: Immediately after the surgery, there was a depressed, dark brown, crusted wound on the right evebrow, measuring approximately 9 mm; C: Approximately 5 mo after surgery, an inconspicuous 2 mm circular, light-coloured rash, without depressed scars, was seen at the site of the original lesion; D: Nearly 4 years post-surgery, the skin at the site of the operation exhibited similar characteristics to the surrounding normal skin, with no signs of pigmentated or depigmented spots, as well as no evidence of sagging or hypertrophic scarring.

logists to completely remove the mole cells and not cause excessive damage to the surrounding normal tissue. On the other hand, the cosmetic effects of this method vary from person to person, and in some cases, patients might even experience disfigurement. This paper reports two cases of successful treatment of eyebrow intradermal nevi by shearing combined with electrocautery and curettage. Neither of the two patients showed any clear recurrence or scar formations, and such an outcome can further enhance patient satisfaction. This formula is effective in eradicating the lesion and the method requires less equipment, which makes it easier to be widely disseminated.

An interesting phenomenon that seems to contradict the current consensus emerged in the present study. Immediately after surgery, both patients presented obvious depressed wounds, but the depressions became shallower and eventually resembled the surrounding skin, with no obvious remaining depressions. Normal skin dermal tissue contains elastic



Baishideng® WJCC | https://www.wjgnet.com

fibres, which have spring-like properties[11]. Intradermal nevi are epidermal structures located in the dermis, with cell nests surrounded by a basement membrane. During the proliferation of melanocytes, the expanding cell nests exert pressure on the surrounding tissues, causing deformation and shortening of elastic fibres. Within a certain deformation space, if the diseased tissue can be completely removed without harming the surrounding normal tissue, the surrounding connective tissue can fill the space occupied by the diseased tissue due to the retraction of the elastic fibres. The lack of visible scarring observed in the patients after surgery may have been due to the minimal damage to elastic fibres and the subsequent regeneration and backfilling of surrounding connective tissue.

Currently, the optimal therapeutic goal for nonsurgical excision of intradermal nevi is believed to be the complete removal of nevus nests located in the invaginated dermis, along with the surrounding basement membrane, while preserving the integrity of surrounding normal tissue. Due to thermal diffusion, it is almost impossible to precisely remove the diseased tissue by thermal effects and avoid thermal damage to the surrounding normal tissue[12]. However, by combining mechanical energy (which has zero thermal diffusion or heat transfer) with other methods, damage to the surrounding tissue can be effectively reduced. In this study, we first used shears to remove the lesions protruding from the skin's surface. The remaining nevus cells, surrounded by a basement membrane, formed an epidermis-like structure. In the second step of the procedure, a curette was used to apply mechanical force and scrape away the remaining mole tissue by taking advantage of the differential adhesion between the intradermal nevus cells and the surrounding fibrous tissue. By applying a greater mechanical traction force than the connection force between nevus cells and the basement membrane surrounding them and the fibrous tissues, the basement membrane and nevus cell nests could be removed gradually, while the surrounding fibrous tissue remained unaffected by thermal relaxation. However, too much traction or too sharp edges of the scraping spoon can also cause mechanical lacerations to the surrounding fibrous tissue. In cases where the tight connection between the cells of the lesion is difficult to scrape away, electrocautery can be used to induce thermal relaxation, causing protein denaturation and disruption of the connection, allowing for the target tissue to be scraped away. Therefore, shearing combined with electrocautery and curettage can effectively remove the intradermal nevus without damaging the normal tissue. Bleeding from wounds can be stopped with 30% ferric chloride tincture. Postoperatively, the use of Velvetfeeling prevents extravasation of tissue fluid as well as bacterial adhesion and colonization.

There are some limitations to this study: (1) This article only reports two cases involving patients who were successfully treated with this method. Although these two patients did not have clear adverse events, relevant studies are still less reported, and a larger sample of studies is still needed to verify the long-term efficacy and potential adverse events; and (2) The efficacy of this method for giant intradermal nevus is still subject to further research.

In summary, the results of two patients who showed no residual disease, no recurrence, and no obvious scars after the procedure corroborate that shearing combined with electrocautery and curettage can produce satisfactory cosmetic results. When using this method to remove the lesion tissue in the dermis of an intradermal nevus, there is no extensive damage of the normal tissue around the lesion, so the patient can achieve satisfactory results of mole removal. However, use of this procedure does not guarantee the complete removal of mole cells, and there is still a risk of scar formation. Nonetheless, the method is simple, efficient, inexpensive, and easy to learn and master. Moreover, the technique can be utilized to treat other benign lesions in specific areas.

#### CONCLUSION

In this study, we report the successful removal of intradermal nevi from the eyebrow area of two patients by using shearing combined with electrocautery and curettage. The procedure resulted in the absence of any postoperative residue, significant scarring, or recurrence of the nevus. The use of shearing combined with electrocautery and curettage is deemed to be a safe and effective technique for the treatment of intradermal nevi. Furthermore, this method is comparatively simple, efficient, low-cost, and easily learnable compared to other conventional nevus removal approaches. In summary, shearing combined with electrocautery and curettage presents good application prospects for the treatment of eyebrow intradermal nevi.

#### FOOTNOTES

Author contributions: Liu C and Li CX designed the research; Liang JL and Yu JL wrote the majority of the manuscript; Liu C, Liang JL, Yu JL, and Hu Q gathered and analysed the data; Hu Q wrote part of the manuscript; Li CX reviewed and revised the manuscript; and all authors have read and approved the submitted version of the manuscript.

Informed consent statement: The informed consent of the patients was obtained for the cases reported in this article.

Conflict-of-interest statement: All the authors report no relevant conflicts of interest for this article.

CARE Checklist (2016) statement: The authors have read the CARE Checklist (2016), and the manuscript was prepared and revised according to the CARE Checklist (2016).

Open-Access: This article is an open-access article that was selected by an in-house editor and fully peer-reviewed by external reviewers. It is distributed in accordance with the Creative Commons Attribution NonCommercial (CC BY-NC 4.0) license, which permits others to



distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: https://creativecommons.org/Licenses/by-nc/4.0/

#### Country/Territory of origin: China

ORCID number: Cheng Liu 0009-0002-3418-5042.

S-Editor: Wang JJ L-Editor: A P-Editor: Wang JJ

#### REFERENCES

- Hauschild A, Egberts F, Garbe C, Bauer J, Grabbe S, Hamm H, Kerl H, Reusch M, Rompel R, Schlaeger M; expert group "Melanocytic nevi". 1 Melanocytic nevi. J Dtsch Dermatol Ges 2011; 9: 723-734 [PMID: 21762380 DOI: 10.1111/j.1610-0387.2011.07741.x]
- Greco V, Cappello M, Megna M, Costa C, Villani A, Fabbrocini G, Marino V, Scalvenzi M. Dermoscopic patterns of intradermal naevi. 2 Australas J Dermatol 2020; 61: 337-341 [PMID: 32715462 DOI: 10.1111/ajd.13366]
- Ibrahimi OA, Alikhan A, Eisen DB. Congenital melanocytic nevi: where are we now? Part II. Treatment options and approach to treatment. J 3 Am Acad Dermatol 2012; 67: 515.e1-13; quiz 528 [PMID: 22980259 DOI: 10.1016/j.jaad.2012.06.022]
- 4 Guida S, Bencini PL, Manganoni AM, Gianotti R, Lospalluti L, Greco P, Pellacani G, Farnetani F. Recurrence of melanocytic lesions after laser treatment: benign vs. malignant upon dermoscopy. J Eur Acad Dermatol Venereol 2017; 31: e526-e528 [PMID: 28602022 DOI: 10.1111/idv.143941
- Camini L, Manzoni APD, Weber MB, Luzzato L, Soares AS, Bonamigo RR. Shave Excision Versus Elliptical Excision of Nonpigmented 5 Intradermal Melanocytic Nevi: Comparative Assessment of Recurrence and Cosmetic Outcomes. Dermatol Surg 2021; 47: e21-e25 [PMID: 32932273 DOI: 10.1097/DSS.000000000002666]
- Tursen U, Kaya TI, Ikizoglu G. Round excision of small, benign, papular and dome-shaped melanocytic nevi on the face. Int J Dermatol 2004; 6 **43**: 844-846 [PMID: 15533071 DOI: 10.1111/j.1365-4632.2004.02136.x]
- 7 Fraser L, Smith WK. Excisional technique for intradermal nevi of the external auditory canal. J Otolaryngol Head Neck Surg 2009; 38: 501-503 [PMID: 19755092]
- 8 Lea PJ, Pawlowski A. Human melanocytic naevi. I. Electron microscopy and 3-dimensional computer reconstruction of naevi and basement membrane zone from ultrathin serial sections. Acta Derm Venereol Suppl (Stockh) 1986; 127: 5-15 [PMID: 3468728]
- Lea PJ, Pawlowski A. Human melanocytic naevi. II. Depth of dermal protrusion: comparative measurements of the basement membrane zone 9 and diameters of intracellular microfibrils using a microcomputer analysis system. Acta Derm Venereol Suppl (Stockh) 1986; 127: 17-21 [PMID: 3468727]
- Lea PJ, Pawlowski A. Human melanocytic naevi. III. Immunofluorescence and immunoelectron microscopy of the basement membrane zone. 10 Acta Derm Venereol Suppl (Stockh) 1986; 127: 23-30 [PMID: 3544630]
- Jo H, Brito S, Kwak BM, Park S, Lee MG, Bin BH. Applications of Mesenchymal Stem Cells in Skin Regeneration and Rejuvenation. Int J 11 Mol Sci 2021; 22 [PMID: 33673711 DOI: 10.3390/ijms22052410]
- 12 Anderson RR. Lasers in dermatology--a critical update. J Dermatol 2000; 27: 700-705 [PMID: 11138535 DOI: 10.1111/j.1346-8138.2000.tb02262.x





## Published by Baishideng Publishing Group Inc 7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA Telephone: +1-925-3991568 E-mail: bpgoffice@wjgnet.com Help Desk: https://www.f6publishing.com/helpdesk https://www.wjgnet.com

