

Therapy of common acquired melanocytic nevi by shaving followed by touch with diathermy

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Abstract

Background: The ordinary surgery of common acquired melanocytic nevi (CAMN) is excision and suturing when nevi are small, but when large, excision is followed by graft or flap.

Objective: To find simple alternative modes of treatment like shaving and simple touch with diathermy for small nevi especially when are multiple or numerous. **Patients and Methods:**

This is a prospective interventional study where seventeen patients were enrolled in the study, 13(76.47%) females and 4(23.52%) males, their ages ranged between 12-36 years with a mean 22years with a total of 52 ordinary common acquired melanocytic nevi on their faces which

were removed. The area was cleaned with spirit and povidone-iodine and under local anesthesia, a number 15 surgical blade was utilized to carry out the shave excision, followed by simple touch cautery with diathermy. All patients were seen after 2 weeks and then every two months for four months. Oral antibiotics were used for five days. Topical mild corticosteroid cream was used for one month to prevent pigmentation. **Results:** Two weeks after surgery, post-surgical erythema was noticed and this gradually gone leaving no scar or pigmentation during follow up period 2 - 4 months following excision. No complications or relapse were observed in any case treated.

Full satisfaction with the result outcome was achieved in all patients. Conclusion: Shaving of ordinary nevi followed by touch with diathermy

Introduction

Common acquired melanocytic nevi (CAMN) is a common ordinary type, largely acquired, disorder resulting from benign proliferation of nevus cells. This disorder, also referred to as "signature nevi" (1), has been variably categorized depending on the architectural, anatomic, and cellular histological pattern (2).

CAMN appear after 6 months of age. They enlarge in size and increase in number through the third and fourth decades and then slowly vanish. They are mostly less than 5 mm in diameter.

Based on the location of the nevus cells in the skin, CAMN are subdivided into: junctional, compound, and dermal. The three types represent sequential developmental stages in the life history of a nevus. During childhood, nevi begin as flat junction nevi in which the nevus cells are localized at the dermoepidermal junction. They progress into compound nevi when some of the cells migrate into the dermis. Migration of all of the nevus cells into the dermis results in a dermal nevus and these are commonly seen in adults (3).

The junctional nevus is a macular lesion with slight accentuation of skin markings. Compound nevi have a lighter shade of brown

Patients and Methods

This is a prospective interventional surgical study where seventeen patients were seen during the period from April 2014 to August 2020, 13 (76.47%) females and 4 (23.52%) males, while their ages ranged between 12-36 years with a

needle is an excellent surgical technique without complications or repigmentation.

and show variable degrees of elevation than do junctional nevi. Dermal nevi are a lighter shade of brown or even skin-colored and are usually more elevated compared with compound nevi (3). The treatment of CAMN is in most scenarios dictated by cosmetic necessity (4). Surgical excision is the oldest and involves various techniques like shave excision, razor-blade excision, deep excision, and round excision (5-9). Shave excision is a simple and easy to perform procedure that is commonly used for the removal of ordinary nevi by cutting its base parallel to the skin, using scissors or scalpel (8, 9).

A novel and safe procedures using a needle of diathermy has been introduced by Sharquie KE in the treatment of different types of acne scarring and nose volumeplasty for bulky nose under local anesthesia in one session with minimal or no adverse effects (10-14). The lasers used for CAMN range from pigment-selective lasers to ablative lasers (15, 16).

The aim of the present work to find simple alternative modes of treatment like shave excision followed by simple touch with diathermy for small nevi especially when are multiple or numerous.

mean 22years.They had single or multiple nevi, junctional and compound type of CAMN on their face with a total of 52 nevi. By utilizing naked eye examination, we excluded any nevus with atypical clinical features such as asymmetry,

border irregularity, and color variability. Also, patients who underwent clearance of nevus by any type of intervention were also excluded.

The study followed the Declaration of Helsinki Principles and formal written consent was taken from each patient or his/her parents before starting the therapy, after full explaining about the nature of the disorder, course, and the method of management, complications, follow-up, and prognosis. Close-up photographs were taken before the treatment session, at the end of the session, and each visit during the follow-up period. A proper history was taken including, sex, age, duration, age of onset, associated symptoms, and past medical and drug history. A full clinical examination was performed to identify the site, size, border regularity, color, and associated signs.

The area was cleaned with spirit and povidone-iodine. Under local anesthesia with sub-lesional 2% lidocaine, a number 15 surgical blade was utilized to carry out the shave excision

Results

The location of nevi in all cases was the face with variable sizes (2-10mm) and different types. Ten patients with multiple pigmented nevi while seven patients had single pigmented nevus. All treated nevi exhibited clinically full clearance of pigmentation. Transient crusting and erythema immediately after the treatment session were observed in all treated patients.

Two weeks after surgery post-surgical erythema was noticed and this gradually gone leaving

at a mid-dermal level, followed by simple touch cautery with diathermy to stop bleeding and to remove any residual melanocytes. All nevi were treated with one session. All patients were seen after 2 weeks and then every two months for four months. Oral antibiotics were used for five days. Topical mild corticosteroid cream was used for one month to prevent pigmentation. Any complications or occurrence of adverse effects were recorded at each post-session visit.

Patient's satisfaction in response to the treatment was assessed as follow:

- 1) Full satisfaction.
- 2) Partial satisfaction.
- 3) No satisfaction.

All statistical calculations were carried out using statistical package for the social science (SPSS) version 19. Data were statistically described in terms of range, mean, frequencies (no.of cases), percentage (%), and male to female ratio.

no scar or pigmentation during the follow-up period 2-4 months following excision. No complications or relapse were observed in any case treated. Photos of patients before and during follow-up period are shown in Fig. 1-3. There was no difference regarding response to therapy, complications, or relapse between different types of treated nevi. Full satisfaction with the result outcome was achieved in all patients.



Fig. 1. Twenty-one-year-old female with multiple ordinary nevi on the both sides of the face. Right side before treatment (a); 4 months after treatment session (b); left side before treatment (c); 4 months after treatment session (d).

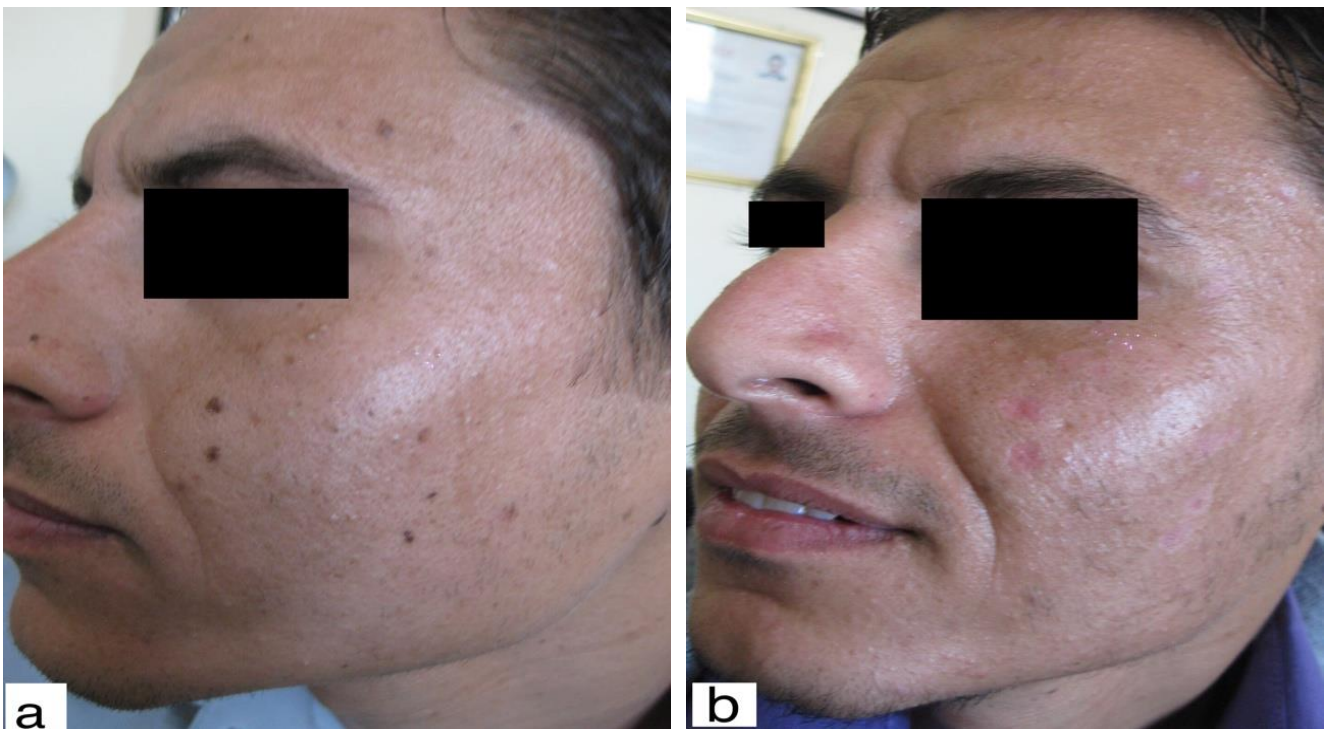


Fig. 2. Nineteen years old male with mixed types of ordinary nevi (junctional and compound) on the left side of the face. Before treatment (a); 2 weeks after treatment session (b).



Fig. 3. Eighteen-year-old female with multiple ordinary nevi on the chin. Before treatment (a); 2 weeks after treatment session (b).

Discussion

To the best of our knowledge, this is the first study of shave excision followed by touch with diathermy needle for the treatment of ordinary common acquired melanocytic nevi. It is postulated that heat diathermy used to get hemostasis and to destroy residual melanocytic cells and thus an important component of successful shave excision. There are many methods for removal of ordinary nevi. However, surgical excision by classical fusiform excision is one of the methods used in the treatment of ordinary nevi (17). But this method needs resuturing after excision and surgical scars may be unpredictable even in the hands of experienced surgeons.

Different kinds of laser such as ablative or pigment lasers have been used for the treatment of the melanocytic nevi. However, there is a high incidence of repigmentation following

laser therapy of melanocytic nevi especially with CO₂ laser (18). Q switched NdYAG laser and Q-switched Ruby laser, as a pigment-specific laser, can cause an incomplete clearance of the nevus cells (19-21). Theoretically, laser may induce malignant transformation of nevus cells (22). Finally, cost implications of laser therapy should also be considered when choosing management options for the removal of melanocytic nevi as it may need many sessions to achieve the final cosmetically acceptable outcome.

Shave excision of the nevi followed by simple touch cautery with diathermy provides certain advantages in the form of no scar, no recurrence or complications, minimal expertise in performing this simple procedure, done in outpatient basis under local anesthesia with only one session and cost-effectiveness of the

procedure as compared to fusiform excision or repeated laser treatments.

This study was also confirmed by other studies in which shave excision of acquired nevi was done, but these studies were associated with variable results of recurrence or scar formation (8, 9, 23, 24). While in the present work, neither scar nor repigmentation was recorded in any treated patient during the follow up period. This difference between our results and the results in the previous studies could be due to the use of heat diathermy after shave excision in present study as this diathermy cause destruction of residual melanocytic tissue and prevent a recurrence, while previous studies either used shave excision

Conclusion

Shaving of ordinary common acquired melanocytic nevi by scalpel followed by touch with diathermy needle is an excellent surgical technique without complications or repigmentation, cost-effective

alone or by electrocautery.

All patients were fully satisfied with the result outcome to the extent that patients with multiple nevi requested for the removal of other nevi located on the face or other sites of the body by the same procedure. Limitation of this study is the lack of pathologic study of the ordinary nevi before and after shave excision. Another limitation of this study is a short of follow-up period of 4 months after shave excision. Nevertheless, pathologic study can be performed in the shaved material. In fact, the histological evaluation of pigmentary skin lesions is a must in the daily practice (25-48).

surgery and gave very satisfactory outcome with good cosmetic results, thus avoiding excision and suturing. Histology can be performed in the shaved tissue.

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