

## Role of Chase Amputation in Refractory Suppuration of the Index Finger

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### Abstract

### Original Research Article

Chase's intervention expands the treatment objectives by indexing the middle finger, which will ensure the pollicidigital grip, retain strength and respect the aesthetic appearance of the hand. It is a frequently performed surgical intervention, which gives very good results for the patients concerned. This study relates our experience in the Traumatology and Orthopedics Department of the University Hospital Center Ibn Sina in Rabat in the treatment of refractory suppuration of the index finger.

**Keywords:** Chase-Index-Finger-Amputation.

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## 1. INTRODUCTION

Chase's intervention extends to the treatment objectives by indexing the middle finger which will ensure the pollicidigital grip; maintain strength and respect the aesthetic appearance of the hand.

The Chase amputation is an amputation at the base of the second metacarpal, which allows indexing of the middle finger. It has the advantage of ensuring maximum opening of the middle thumb commissure. Indexing the middle finger leads to better integration and usefulness of the finger.

We report the case of a 37-year-old patient [8], type 2 diabetic under treatment but poorly balanced, who presented with suppuration of the index finger following the penetration of a thorn. The aesthetic and functional result was very satisfactory after six months of the operation [7].

## 2. RESEARCH METHODS

This is Mr. Brahim E, a 37-year-old patient [7], type 2 diabetic on poorly balanced oral antidiabetics with a glycated hemoglobin at 9.2%, who

presented to the emergency room of the CHU Ibn Sina in Rabat for an abscessed collection of the right index consecutive to the penetration of a thorn during an agricultural activity [7]. The patient initially benefited from the flattening of the abscess, drainage and sampling with targeted antibiotic therapy as well as endocrinological management for his diabetes. Despite the fact that he had received numerous trimmings and broad-spectrum antibiotic therapy, the suppuration persisted, which prompted us to consider amputation of the index finger using the Chase technique.

## 3. RESULTS

The patient underwent amputation using the Chase technique, which consists of an amputation at the base of the second metacarpal [4] allowing indexing of the middle finger. He also benefited from early rehabilitation [5]. The control after 6 months shows a good aesthetic and functional result of the hand with a good opening of the thumb-medius commissure, indexing of the middle finger with patient satisfaction concerning the aesthetic and functional aspect of his hand.



#### 4. DISCUSSION

The index finger is the most used finger after the thumb [7]. It is an essential element of the pollicidigital grip and a stabilizing element in the overall digitopalmar grip.

The Chase amputation is an amputation at the base of the second metacarpal, which allows the indexing of the middle finger [5], it has the advantage of ensuring maximum opening of the thumb-medius commissure. The operating protocol includes two essential steps [6]:

- Cutaneous time: the incision is most often dorsal in order to avoid a potentially embarrassing palmar scar, it circumscribes the base of the index finger like a “snowshoe”;
- Tendon and bone time: by dorsal approach, the extensor apparatus is sectioned. The extensor indicis tendon is cut above the metacarpophalangeal joint, then transferred to the extensor digitorum tendon intended for the middle finger. The flexor tendons are sectioned proximally, wrist in flexion.
- Vasculonervous time: the collateral nerves, dissected proximally, are sectioned high in the palm of the hand then hemostasis is ensured.

#### 5. CONCLUSION

Surgery is the standard treatment for refractory suppurative of the index finger [4]. However, the function of the hand must also be taken into consideration; the principle is not to maintain a level that is not functionally better than that which would have been obtained by shortening the bone; to give correct hand function [3].

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