

## The Finger Ring: Need for Regular Removal and Replacement

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### ABSTRACT

We present two cases of finger ring impaction. Both patients tried to remove it in rural hospitals before presenting to the burns and plastic unit of the University of Calabar Teaching Hospital. The male had the ring on the left index finger while the female had it on the left ring finger. The rings were removed by the use of circumferential cutaneous tissue infiltration (ring block) with plain lignocaine, strip of esmarch bandage exanguination of the finger, lubrication with K-Y jelly and then extraction.

### Aim:

These case reports add a voice to the danger of digit ring impaction and proposes a method for extrication of such maligned rings.

### Keywords:

Finger rings, Impaction, Removal

### Introduction

over the years, in many countries, races and cultures the finger ring has represented many things; it is a sign of engagement or marriage, a sign of an exclusive group, a show of wealth or high social class, it is believed to confer special powers et cetera. Indeed, the fourth digit of the hand has been named the ring finger but rings may be place in any of the digits of the hand and sometimes the digits of the foot. There is a danger of the ring being impacted when the individual becomes fatter over the years or in acute situations such as burns injury with the resultant edema (Figure 1). Although there are ring cutters [1], these may inflict more damage on the already tight tissues around the ring. The removal of these rings require a special technique; but more importantly, finger rings require regular removal and replacement to be sure that there is no danger of imminent impaction. Many methods have been used to extract impacted rings but some of these are only suitable for mild impaction<sup>2</sup>. When a ring is severely embedded and sometimes develops ulceration around the digit, a good technique with administration of a local anaesthetic agent and observation of asepsis is necessary for removal.

### Case 1:

This was a 28 year old female law student of the university of Calabar. A ring was placed on her left index finger three years before presentation and no attempt was made to remove it before the warning symptoms of impaction- tightness, pain and swelling. Her attempts to remove the ring failed even after lubrication with oil. She presented to the Accident and Emergency department of the University of Calabar Teaching Hospital but the ring could not be removed for two days. This attempt at removal gave her abrasions around the ring. She was then referred to the Burns and Plastic Unit.



Figure 1: Impacted ring with ulceration.



Figure 2: Finger after ring removal.

On examination her general conditions were satisfactory. The vital signs were stable; the full blood count was done to determine the heamoglobin level and urinalysis was done to rule out diabetes mellitus.

## Case 2:

This is the case of a 24 year old man with psychiatric illness who resides with his father in a rural community. He saw his father's ring, took it and placed it on his left index finger. In six months he felt tightness in the finger and his attempts to remove the ring failed. He present to a general hospital in the rural area but the ring could not be removed. By the time he presented to the Burns and Plastic Surgery Unit of the University of Calabar Teaching Hospital, there was a full thickness circumferential ulcer at the site of the ring and extensive swelling of the finger.

On examination his general conditions were satisfactory and the vital signs were stable. His urinalysis and full blood count were unremarkable.

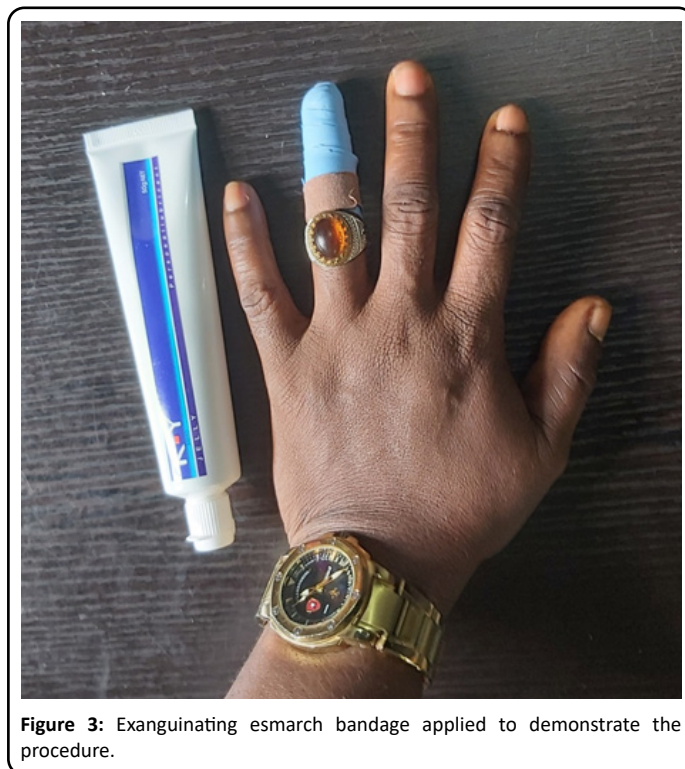


Figure 3: Exanguinating esmarch bandage applied to demonstrate the procedure.

## Technique of ring removal

This is an aseptic procedure in ulcerated cases. The patient lies supine on the operating table with the upper limb abducted on an arms rest and intravenous antibiotics are administered in ulcerated cases (antibiotic administration is not necessary in non ulcerated cases). The surgeon wears a mask, scrubs, gowns and wears surgical gloves. The hand with the impacted ring is cleaned with antiseptics such as cetrimide and povidone iodine. Ten milliliters of 1% plain lignocain is given as a ring block (circumferential infiltration of the cutaneous tissues of the finger) at the level of the metacarpophalangeal joint of the digit with the impacted ring. A narrow strip of esmarch bandage is firmly wound from the tip of the finger up to the edge of the ring.

## Discussion

The finger ring has come to stay in most races and cultures

of the world and therefore the people should be educated on the safe use of the ring [3,4]. The fact that a lost engagement or marriage ring may be seen by the spouse as foul play with serious consequences makes regular removal and replacement of the ring unattractive [5]. In some societies the ring is expected to be on the digit all the time to give the wearer protection and special powers. Proper education can dispel most of these superstitious believes. One of our index patients, the lawyer, was wearing a wedding ring and would not remove it for fear that it may be lost. In William Shakespeare's *The Merchant of Vernice*– the story is told of how a husband gave out his wedding ring to a lawyer that treated his case fairly only to discover that the lawyer was his wife in disguise; what a great embarrassment.

## Conclusion

The consequences of an impacted ring may be great indeed [4,6,7]. Our second patient had a full thickness circumferential wound at the site of the ring. This can lead to local or systemic infection, gangrene and auto-amputation. After the removal of the ring, we advised the patient to have reconstruction with a flap to recreate the cutaneous tissues but he refused – leaving the hospital on the same day of ring removal. Without flap reconstruction the wound would heal and leave a constricting scar that will impair venous return and lymphatic drainage from the part distal to the scar [8]. This distal part of the finger will swell and give symptoms such as pain and abnormal sensation which could be a permanent life disability.

**Conflict of Interest:** The authors have no conflict of interest.

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