

Pressure Alopecia Occuring after a Cardiac Surgery in a Twelve Year-Old Child

Ennaciri Mohamed Amine^{1*}, Baraz Salma¹, Baba Rime¹, Zemmez Youssef¹, El Amraoui Mohamed¹, Frikh Rachid¹, Hjira Naoufa¹

¹Dermatology Department, Mohammed V Military Teaching Hospital, Mohammed V University, Rabat, Morocco

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*Corresponding author: Ennaciri Mohamed Amine

Dermatology Department, Mohammed V Military Teaching Hospital, Mohammed V University, Rabat, Morocco

Abstract

Case Report

Pressure alopecia is a preventable complication of surgery and long stays in the intensive care unit. Although reversible in most cases, it may result in a scarring alopecia. It classically manifests as a skin-colored alopecic patch on the occipital area. Trichoscopy shows black dots, comedone-like black dots and areas of scarring. Histopathology is not specific, it may show fibrosis, chronic inflammation, granulomatous foreign body reaction or catagen hair follicles with apoptotic bodies. Herein we report a case of a scarring pressure alopecia happening in a twelve year-old child occurring after a cardiac surgery. Trichoscopy showed areas of white fibrosis with no black dots or comedone-like black dots. The approach was to suggest a possible graft surgery when the child will be of age.

Keywords: Pression Alopecia, Cardiac Surgery, Prevention.

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INTRODUCTION

Surgery and long stays in the intensive care unit require special care and attention to avoid complications such as pressure alopecia, which, although reversible in most cases, can lead to cosmetic damage and scarring alopecia, particularly in children during adolescence, which can result in psychological distress. We report here the case of a 12-year-old child with pressure alopecia.

CASE REPORT

A 12-year-old child presented with his mother for an occipital alopecic plaque evolving since the age of 2 following cardiac surgery. The child had benefited from several treatments, including topical steroids and rubefacient gels, with no improvement. On examination, the child had a polygonal occipital alopecic plaque measuring 4cm/2cm (figure 1). Trichoscopy showed large areas of white fibrosis topped in places by a honeycomb appearance; there were no black dots nor comedone-like black dots (figure 2).



Figure 1: Polygonal occipital alopecic plaque measuring 4cm/2cm

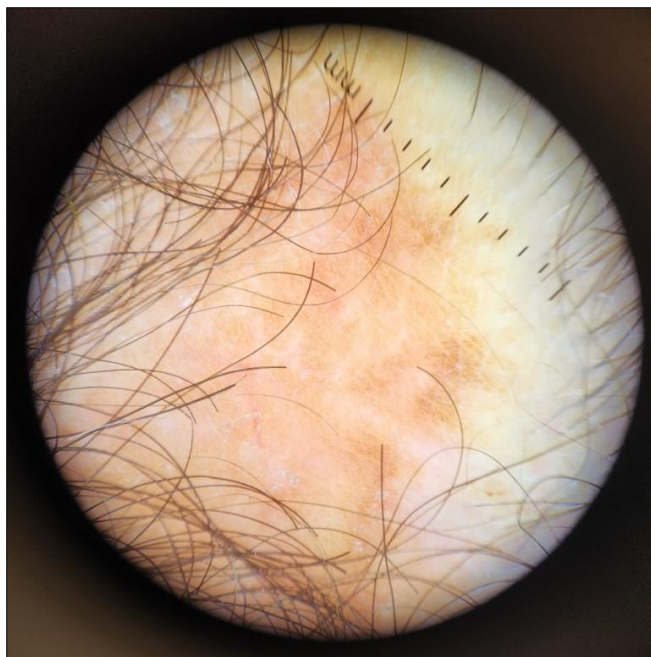


Figure 2: Trichoscopy showing large areas of white fibrosis topped in places by a honeycomb appearance

The therapeutic approach was abstention and the suggestion of a possible graft surgery when the child will be of age.

DISCUSSION

Pressure alopecia is a group of scarring or non-scarring alopecias following prolonged immobilization of the scalp (Davies *et al.*, 2012). Capillary loss is due to ischemia induced by scalp pressure (Domínguez-Auñón *et al.*, 2004). It most often occurs in the occiput, and presents as a discrete alopecic patch of normal skin color. It is a rare and avoidable complication, occurring some time after surgery under general anaesthesia, or after a long stay in intensive care in the dorsal decubitus position. (Loh *et al.*, 2015)

In most cases, pressure alopecia resolves spontaneously within a few months, but cases of permanent scarring alopecia have been reported: severe hypoxia results in an inflammatory reaction giving rise to scalp fibrosis progressing to permanent alopecia.

The only significant factor associated with scarring is the duration of the operation. Age, time to onset of alopecia after pressure, duration of rest are not predictive of permanent alopecia. (Loh *et al.*, 2015)

Pressure alopecia may initially present as erythema, edema and tenderness, or simply as alopecia. Crusts and ulceration are associated with a higher risk of scarring alopecia. (Corona-Rodarte *et al.*, 2024)

On trichoscopy, pressure alopecia can manifest as comedone-like black dots, black dots and areas of scarring. (Neema *et al.*, 2022)

There is no pathognomonic clinical aspect of pressure alopecia. In scarring pressure alopecia, fibrosis with loss of hair follicles may be found, but other aspects may be present, such as chronic inflammation, granulomatous foreign body reaction, or multiple hair follicles in catagenic phase with apoptotic bodies without inflammation. Recently, another type of pressure alopecia has been described and is linked to cosmetic procedures and particularly large volumes of injectables that exert high pressure on the scalp vessels. (Corona-Rodarte *et al.*, 2024)

CONCLUSION

Knowing that pressure alopecia is a post-operative complication is important because its prevention is simple and relies on repositioning the patient during long surgeries, or protecting the scalp with soft padding.

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