

## Hair-thread tourniquet syndrome originating from a haemangioma in an adult patient

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### Abstract

Hair-thread tourniquet syndrome is an emergency condition rarely encountered since its first description, and it may be potentially dangerous unless treated. The potential hazard of the condition stems from hair strands wrapping around and strangulating various body processes such as fingers, penis, or clitoris. In this paper we aimed to report the first case of hair-thread tourniquet syndrome affecting a haemangioma of an adult patient.

A 68-year-old woman presented to emergency department for pain in the mass on her back. On physical examination, a haemangioma with a size of about 3x3 cm was noted on the right scapula. When inspected closely, it appeared edematous and strangulated, and there were hair strands wrapped to the bottom of the wound. The hair strands were removed and the strangulated haemangioma was excised.

**Keywords:** Hair-thread, haemangioma, strangulation

### Introduction

Hair-thread tourniquet syndrome is an emergency condition rarely encountered since its first description in *Lancet* in 1832, and it may be potentially dangerous unless treated.<sup>1,2</sup> The potential hazard of the condition stems from hair strands wrapping around and strangulating various body processes such as fingers, penis, or clitoris. Strangulation leads to ischaemia, which in turn may cause serious injury potentially resulting in amputation of the affected tissue.<sup>3</sup>

Hair-thread tourniquet syndrome is usually known to affect paediatric age group, predominantly in an accidental manner. Trichomania or certain traditions of some societies have been implicated in its etiology although child abuse may also cause this condition.<sup>3,4</sup>

This condition is rare in adults but Sallami et al reported a case of hair-thread tourniquet syndrome involving the penis of a 37-year-old man.<sup>5</sup>

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In this paper we aimed to report the first case of hair-thread tourniquet syndrome affecting a haemangioma of an adult patient.

### Case Report

A 68-year-old woman presented to emergency department with pain on a mass in the back region for 3 days in April 2015. She stated that she had had that mass for 8 years but denied to have such a pain on it before. She had hypertension and diabetes mellitus as co morbidities. On physical examination she had a haemangioma of 3x3 cm on the right scapula. On inspection, the tissue was oedematous and appeared strangulated. Additionally, hair strands were noted to have become tied around the root of the mass (Figure-1). Her other systemic



**Figure-1:** The oedematous and strangulated haemangioma was noted on the right scapula, and there were hair strands wrapped to the bottom of the wound.



**Figure-2:** Excised haemangioma.

examinations were normal. The hair strands around the lesion were removed and the strangulated haemangioma was excised (Figure-2). The patient was discharged without any further complication.

### Discussion

In a review of the relevant literature, Mat Saad et al reported that the rare, albeit potentially hazardous, hair-thread tourniquet syndrome was usually observed in penis (44.2%), toes (40%), and fingers (8.57%).<sup>6</sup> In addition to these regions, hair-thread tourniquet syndrome may also involve highly unusual regions such as uvula.<sup>7</sup> In our patient the syndrome spontaneously developed in a haemangioma, a presentation that was previously unknown. As the syndrome is diagnosed by inspection, a careful physical examination is essential for its diagnosis. Hence, our case was diagnosed by observing hair strands wrapped around the haemangioma in a careful inspection. The robust break-resistant structure of hair strands serve as an effective tourniquet to block venous circulation and lymphatic flow in a strangulated tissue. This in turn causes tissue oedema, impairs arterial circulation, and ultimately results in ischaemia within hours to weeks.<sup>8</sup> Our patient also presented with pain 3 days after the onset of her complaints. Her haemangioma was highly oedematous and strangulated, as shown in

Figure-1. Hair-thread tourniquet syndrome is preferentially treated by cutting hair strands strangulating the tissue to re-establish tissue perfusion. One alternative treatment method in cases that allow some time is to use depilatory creams. Nevertheless, surgical therapy is inevitable in cases where oedema and reepithelization make the above methods unfeasible, as in our case.<sup>9</sup>

In hair-thread tourniquet syndrome involving fingers a dorsal longitudinal incision over the region of strangulation is recommended.<sup>10</sup> In the present case we preferred to perform excision since the strangulated tissue was suitable for excision and ischaemia showed progression over time.

### Conclusion

Hair-thread tourniquet syndrome is a rare syndrome but it should be kept in mind since it may result in the loss of affected tissue. It should be included in the differential diagnoses especially in babies with restlessness of unknown origin.

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