

Incessant crying: Think about hair tourniquet syndrome

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Abstract

Tourniquet syndrome, also known as hair-thread tourniquet syndrome, is a rare but potentially serious condition. It is defined as the strangulation of a body part (toe, finger, penis, clitoris, nipple) by a thread-like object, most often a hair or textile thread. This phenomenon causes progressive circulatory obstruction, first venous and lymphatic, then arterial, which can progress to irreversible ischemia and tissue necrosis if diagnosis and treatment are delayed. First described by Quinn in 1971, this syndrome occurs primarily in infants and young children, a period when postpartum maternal hair loss is common and promotes the presence of loose hair in the child's environment. The most commonly reported locations are the toes (particularly the 2nd and 3rd), followed by the fingers and, more rarely, the genitals.

In our paper, we describe two cases of this syndrome with an isolated and non-specific clinical presentation that could be the cause of a diagnostic delay.

Keywords: Hair-thread tourniquet syndrome; pain; Incessant crying.

Authorship:

The corresponding author contributed to the diagnosis and management of the patient.

The other authors contributed to the writing and editing of the manuscript..

All authors read and approved the final manuscript.

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Introduction

Hair tourniquet syndrome is a rare but potentially serious pediatric emergency. It occurs when a hair or thread wraps around a finger, toe, penis, or other part of the body, causing progressive strangulation. Diagnosis is often delayed because the injury is subtle and masked by edema,

which can compromise the viability of the affected segment.

Although rare, tourniquet syndrome is probably widely underdiagnosed because its initial clinical signs can be subtle and confused with other conditions such as local infection, trauma, or inflammatory reaction. In infants, it often manifests as incessant crying, unexplained irritability, or refusal to feed, making a thorough clinical examination essential. Its importance lies in the fact that it is a medical and surgical emergency: rapid recognition and complete removal of the foreign body restore blood flow and prevent irreversible sequelae, including amputation. Therefore, raising awareness among parents and healthcare professionals is essential to improve early diagnosis and prevent complications.

Clinical Observation:

Case 1:

Our clinical case concerns a 2-month-old infant brought in for incessant crying, agitation, and refusal to feed. The initial examination was inconclusive, but upon closer inspection, a hair was found wrapped around a toe, causing distal edema and painful erythema. Treatment was based on removing the hair, and the outcome was marked by the gradual disappearance of pain and clinical improvement.



Figure 1

Case 2:

A 3-month-old infant with no particular medical history was admitted for incessant crying that could not be comforted. Clinical examination revealed a circular inflammatory groove on

65 the third toe of the right foot, secondary to strangulation by a wrapped hair, suggestive of
66 digital tourniquet syndrome.
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71 **Figure 2**
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77 **Figure 3**
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78 In both cases, the evolution was favorable after the removal of the hair fragment without
79 complications during follow-up.
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84 **Discussion:**

85 Tourniquet syndrome is widely documented in the literature through case series and isolated

86 reports, but it remains a little-known condition. According to Quinn (1971), who first
87 described it, the most common locations are the toes, particularly the second and third toes.
88 Several subsequent studies, notably those by Barton and Sloan (1993) and Golshevsky et al.
89 (2005), confirm this predominance in the feet, followed by the fingers and, more rarely, the
90 genitals. In our observation, the location was on the toe, which is consistent with these data.

91 Clinically, the authors describe initially nonspecific symptoms, dominated by unexplained
92 crying or unusual irritability in infants. This often leads to a delay in diagnosis, with some
93 cases only being identified after several hours or even several days. In our case, the delay in
94 consultation was four hours, which is consistent with that reported in most series.

95 With regard to management, the literature emphasizes the importance of immediate release.
96 Most of the cases described benefited from simple mechanical extraction, sometimes assisted by a
97 magnifying glass, while complex situations required surgical incision to release the buried
98 hair. Golshevsky et al. also mentioned the use of thioglycolate-based depilatory creams, but
99 with reservations due to the risk to the skin. In our observation, treatment consisted of
100 immediate release by mechanical extraction, which is in line with standard recommendations
101 and led to a favorable outcome.

102 The literature emphasizes the predominance of toe involvement, but atypical locations exist
103 and should be known to clinicians. Management is based on immediate and complete removal
104 of the foreign body, sometimes requiring surgical incision. The prognosis is generally favorable
105 if the diagnosis is made early, whereas delay exposes the patient to the risk of irreversible
106 ischemia, necrosis, and amputation. Our observation illustrates the importance of increased
107 vigilance in the face of any unusual clinical
108 picture in children. Finally, prevention, through raising awareness among parents and training
109 healthcare professionals, remains the best weapon for reducing the incidence and
110 complications of this syndrome.

111 Finally, the prognosis reported in the literature depends on the time to diagnosis. Cases
112 treated quickly have a favorable outcome, while delays are responsible for necrosis and
113 amputations, as reported by Pomeranz (2000). In our case, the outcome was favorable,
114 illustrating the importance of early recognition of this syndrome.

115 **Conclusion**

116 Tourniquet syndrome is a rare but serious condition characterized by the strangulation of a
117 body part by a hair or thread. Its significance lies in the severity of potential complications,
118 contrasting with the simplicity of treatment when performed early. The clinical presentation is
119 often misleading and can delay diagnosis, especially in infants where symptoms are
120 nonspecific. Careful inspection of any painful and unexplained swelling therefore remains the
121 key step in quickly identifying this condition.

122 This case should be kept in mind as an etiology in infants with incessant crying with normal
123 examination. These babies should be examined undressed to prevent any irreversible
124 complication including appendage loss.

125 **Figures:**

126 Figure 1: Swelling and redness of the toe surrounded by hair fragments

127 Figure 2: Strangulation of the 4th Toe with hair fragment

128 Figure 3: Hair fragment after removal

129

130 **Conflict of Interest:**

131 The authors declare that they have no competing interests.

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