Case Report

Received: January 1, 1997

Accepted: March 24, 1997

Urol Int 1997;59:55-56

Dorsal Penile Frenulum

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Key Words

Frenulum, dorsal

Abstract

A dorsal frenulum with a normal penis lacks description in the available English literature. We report 1 such case and its genesis is also postulated.

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Introduction

Dorsal frenulum due to torsion of penis is a rare developmental anomaly. But dorsal frenulum without associated penile torsion has not been described in the literature. We report 1 such case and postulate a new hypothesis for its genesis.

Case Report

A 20-year-old male attended an outpatient clinic due to pain in the penis during sexual intercourse. There was no past history of bal-anoposthitis. On examination, the size of the penis, scrotum and testes and external urethral orifice was normal. On retraction of the prepuce, the frenulum was found on the dorsal aspect instead of the ventral surface (fig. 1). The frenulum was small in size and complete retraction of the prepuce caused pain. Frenuloplasty was done and he is now symptom free.

Fig. 1. Retracted prepuce showing dorsal frenulum.

Discussion

The embryologic development of the penile frenulum is related to the development of the prepuce [1]. The prepuce is formed by reduplication of the ectoderm covering the distal part of the phallus in the 3rd month of fetal life. The prepuce separates from the glans to form the preputial sac, and the residual adhesion of ectoderm to the glans penis on the ventral aspect persists and is called the frenulum. This development is independent of the development of the distal urethra [1]. Congenital torsion of the penis (a cork-screw twist counterclockwise through 90-

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120°, or a clockwise rotation up to 270°) [2] may result in shifting of the frenulum and external meatus dorsally or laterally. In the present case, the external meatus is normally placed as is also the corpus spongiosum on the ventral aspect. Hence a dorsal frenulum resulting from penile torsion can be safely ruled out in the present case. We could not find a similar report in the literature, e.g. a dorsal frenulum with normal penile structure(s).

We postulate that probably during embryological development of the preputial sac, the latter separated from glans on all sides except on the dorsal side and these residual adhesions on dorsal side formed the dorsal frenulum. Only developmental alteration at this stage of preputial sac formation can explain the occurrence of a dorsal frenulum in the absence of penile torsion. The treatment of dorsal frenulum due to torsion of penis varies from circumcision to a thorough dissection of Buck's fascia and even removal of segments of the tunica albuginea to correct corporeal disproportion. When there is no associated anomaly as in our case, the authors feel that a simple frenuloplasty is sufficient to relieve the symptoms.

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Urol Int 1997;59:55-56

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