

Discoid Meniscus in the Pediatric Population: Emphasis on MR Imaging Signs of Instability



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KEYWORDS

- Knee • Discoid meniscus • Child • Adolescent • MR imaging • Instability • Parameniscal edema • Megahorn

KEY POINTS

- Discoid meniscus is a spectrum of disorders of meniscal shape and stability that have been classified as complete or incomplete, stable or unstable.
- In addition to the existing MR imaging criteria of diagnosing tears in nondiscoid meniscus, the presence of increased intrameniscal signal in discoid meniscus along with shape deformation may represent a tear.
- All tear types can be seen with discoid meniscus. However, the presence of a horizontal cleavage tear, especially in a child younger than 10 years, should raise the suspicion of a discoid meniscus.
- Shape deformation in discoid meniscus is an early sign of instability and may include surface changes, meniscal shift, and meniscal megahorn.
- “Pseudo–bucket-handle tear,” “crimped meniscus sign,” and parameniscal edema are all crucial imaging signs of meniscal instability.

INTRODUCTION

Discoid meniscus (DM) is a broad term used to describe a spectrum of disorders of meniscal shape and stability that can affect both men and women.¹ Several theories have been proposed regarding the possible cause of DM. Initially, the abnormal shape of DM was thought to result

from a failure of central resorption of its intermediate form during fetal development. However, a discoid shape was never found in embryologic specimens.^{2–5} Although associations that suggest familial predisposition, such as twin studies, have been recognized, no scientifically proven inherited risk of DM has been found.⁶ To date, the exact cause of DM remains unclear.

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