The discoid medial meniscus: Pitfalls and review of the literature

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Abstract

The discoid meniscus is a rare meniscal abnormality. Through this case of a patient with internal discoid meniscus, we propose to study that malformation, clinical and radiological presentation and therapeutic modalities. We report the case of the child 5 years old, who visited emergency with a pain in left knee following a trauma. The clinical examination showed a meniscal Syndrome. MRI showed a lesion bucket handle medial meniscus without any morphological abnormality of the meniscus. The exploration of the knee joint by arthroscopy showed an incomplete discoid medial meniscus with the presence of a wide bucket handle injury dislocated in intercondylar space. The patient underwent resection of the dislocated part with adjustment of the axial edge of the medial meniscus realizing an arciform shape similar to the normal meniscal form. The functional result after five years was excellent.

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Introduction

Discoid Meniscus (MD) is a rare meniscal abnormality. Although it is usually located in the lateral side compartment, it may be more rarely medial. Etiopathogenesis is not known but congenital etiology is most likely. The MD is usually asymptomatic. Magnetic resonance imaging (MRI) can provide accurate diagnosis and help preoperative planning. We report the case of a patient who presented a discoid medial meniscus of perioperative Fortuitous discovery during arthroscopy for cure of a dislocated bucket loop injury in the notch. This malformation was not visualized by MRI done preoperatively. The bucket handle injury resulted in a kind of natural saucer which returned to the meniscus its normal arciform shape.

Case report

We report the case of the 5 years old boy with no significant pathological history who consulted our emergencies for a painful stiffness of the left knee following a 15 days after trauma. The child was apyretic, the knee was swollen with the presence of a patellar shock. The palpation of internal articular interlining is painful. There was a knee reducible flessum of 30 °. The standard radiography showed a discreet enlargement of the internal articular interlining (Figure 1). MRI showed a bucket handle injury of the internal meniscus (Figure 2). A partial meniscectomy under arthroscopy was performed. In peroperative we discovered an incomplete discoid medial meniscus (type II Watanabe), with presence of an extended lesion of the medial meniscus. The patient had a resection of the dislocated part with regularization of the axial edge of the internal meniscus, thus producing an arched shape similar to the normal shape. The operative sequences were simple. The patient is asymptomatic until now at 5 years of follow-up. The functional result was excellent with complete knee mobility and normal sports activity.

Discussion

Discoid Meniscus is a rare anatomical variant where the normal fibrocartilage is replaced by a thickening which can sometimes occur up to the median line of the knee in its complete form [1]. Although it is usually located in the side compartment, it may be rarely medial. The lateral discoidal meniscus was described for the first time by Young in 1889, and the first medial discoid meniscus was reported by Watson-Jones in 1930 [2,3]. The prevalence of the discoid lateral meniscus is 1.5-15.5% , while the highest prevalence of a medial discoid meniscus is 0.3% [3,4]. Watanabe performed the first arthroscopic surgery for discoid meniscus in 1962, he classified the discoid meniscus into three forms: complete, incomplete, and shape with a Wrisberg ligament [4].

Figure 1. Radiography of the knee of the face: enlargement of the articular space internally

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The discoid medial meniscus is an extremely rare anomaly. Clinical signs and symptoms of internal discoidal meniscal lesions are similar to those of any other meniscal lesion. No Wisberg ligament was found in the medial discoidal meniscus. Meniscectomy is the main method of treatment of medial meniscal lesions. The evolution towards osteoarthritis of the knee remains the main complication of this technique.

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