Patellofemoral Pain Syndrome in Young Adults

Essay

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BY

Mohamed Ahmed Abas Mounir El-Bishbishi
(M.B.B.Ch.)
Faculty of Medicine
Ain-Shams University

Supervised By:

Prof. Dr. Ayman Hussein Gouda
Assistant Professor of Orthopaedic surgery
Ain-Shams University

Dr. Ahmed Hany khater
Lecturer of Orthopaedic surgery
Ain-Shams University

Faculty of Medicine
Ain-Shams University
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قَالُوا سُبْحَانَكَ
لاَ عِلْمَ لَنَا
إِلاَّ مَا عَلَّمْتَنَا
إِنَّكَ أَنتَ
الْعَلِيمُ الْحَكِيمُ
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Before all thank GOD

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List of Contents

List of Abbreviations

CT	: Computed tomography
FSE	: Fast spin-echo.
ITB	: Iliotibial band.
JRF	: Joint reactive force.
MPFL	: Medial Patellofemoral ligament.
MRI	: Magnetic resonance imaging.
OCD	: Osteochondritis dissicans.
PF	: Patellofemoral.
PFJ	: Patellofemoral joint.
PFP	: Patellofemoral pain.
PFPS	: Patellofemoral pain syndrome.
RSD	: Reflex sympathetic dystrophy.
SPGE	: Spoiled gradient-echo.
TG	: Trochlear groove.
TT	: Tibial tubercle.
VL	**:** Vastus lateralis.
VM	: Vastus medialis.
VMO	: Vastus medialis obliquus.

List of Figures

List of Figures

List of Figures

Introduction

INTRODUCTION

Patellofemoral pain is a descriptive term which means pain coming from the area of patellofemoral joint. The patellofemoral joint is composed of the patella, the femur and other supporting structures. In fact, the pain usually originates from these supporting structures, and for these reasons the anterior knee pain is often used interchangeably with patellofemoral pain.[1]

The term "patellofemoral pain syndrome (PFPS)" seems appropriate, as no distinction can be made which specific structure of the femur or patella is affected. Pain is the symptom that all patients experience, while instability is another symptom. However, PFPS patients may also report symptoms other than pain or instability. Thus, it seems appropriate using the word "syndrome" defining a group of symptoms and signs occuring in a combination and characterizing a particular abnormality.[2]

It is one of the most common knee problems, especially in adolescents and young adults.[3] It is an extremely common diagnosis in female athlete.[4]

PFPS should be distinguished from chondromalacia patella.[5] The term chondromalacia patella, although it was used as a term for anterior knee pain, is now widely accepted to

describe lesions of the patellar articular cartilage found on arthroscopy or arthrotomy.[6]

PFPS results from imbalance of forces which act on the patellofemoral joint, leading to increased strain on the peripatellar soft tissues, increased patellofemoral joint stress, or both. The most important risk factors are overuse, soft tissue tightness and quadriceps weakness. In most cases, the etiology is multifactorial.[7, 1]

The evaluation of hypomobile or hypermobile patella, generalized ligamentous laxity, patellar tilt or mediolateral displacement, tenderness of the lateral patellar retinaculum, decrease the flexibility of the quadriceps muscle or the illiotibial band (ITB) and weakness of the quadriceps, external rotators and hip abductors are recommended to identify factors contributing to PFPS and patellofemoral malalignment.[8]

In most cases, radiographs are not helpful at the initial evaluation, but may be helpful if the patient fails to improve after six weeks of non-operative treatment.[1]

Standard radiographs are often normal when soft tissue changes are relatively advanced, hence the importance of MRI and arthroscopy.[9]

When non operative measures fail to relieve pain and disability, surgical intervention can be chosen to specifically eliminate lesions or patellofemoral imbalance (tilt or

subluxation). Only surgery that is designed to control specific defined problems is justified.

Before operating, the origin of pain must be understood.[10]

Aim of the Work

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The aim of this essay is to review patellofemoral pain syndrome in young adults regarding different causes, evaluation and treatment protocols.

Chapter (1):
Anatomy of Patellofemoral Joint (PFJ)