

Patellofemoral Pain

Epidemiology, Pathophysiology, and Treatment Options



Marcus A. Rothermich, MD^{a,*}, Neal R. Glaviano, MEd, ATC^b,
Jiacheng Li, BS^b, Joe M. Hart, PhD^b

KEYWORDS

• Patellofemoral pain • Anterior knee pain • Treatment options

KEY POINTS

- Patellofemoral pain represents a common and debilitating disease process that is often encountered in primary care and orthopedic outpatient clinics.
- The pathophysiology of patellofemoral pain is often multifactorial.
- Because this disease process often affects a younger, more active patient population, activity level has been linked to its cause and progression.
- Supervised physical therapy is the cornerstone of nonoperative management.
- As patellofemoral pain is a heterogeneous injury with multiple contributing factors, it remains a challenge for health care providers to diagnose and treat.

Patients with anterior knee pain present a complex and common problem to health care providers. The diagnosis and treatment of these patients often involve a comprehensive evaluation that includes assessing the chronicity of the pain, the specific location of the complaint, and the previous treatment modalities attempted by the patient. This common diagnosis includes a wide variety of different pathologic abnormalities that can be present independently or concomitantly and cause a spectrum of disabilities for the patient. In the evaluation of a patient with anterior knee pain, it is critical for health care providers to appreciate the epidemiology of the problem, the differential diagnosis of multiple possible pathologic abnormalities generating anterior knee pain, and the various options regarding both operative and nonoperative treatment.

^a Department of Orthopaedic Surgery, Washington University, Campus Box 8233, St Louis, MO 63108, USA; ^b Department of Orthopaedic Surgery, University of Virginia, 400 Ray C. Hunt Drive, Suite 330, Charlottesville, VA 22903, USA

* Corresponding author.

E-mail address: rothermichm@wudosis.wustl.edu

EPIDEMIOLOGY

Incidence and Prevalence

Anterior knee pain represents one of the most common diagnoses in pediatric and adult primary care and in orthopedic outpatient clinics.^{1–3} Although the prevalence of patellofemoral pain as the primary cause of knee injury has been estimated to be as high as 40%, the annual incidence and true prevalence of patellofemoral pain are unknown.⁴ Patients with anterior knee pain range from active pediatric patients to sedentary elderly patients, but a peak of prevalence in patellofemoral pain has been observed in young, active adolescents between the ages of 12 and 17.^{4,5} This population most commonly presents in the outpatient clinic with complaints of chronic anterior knee pain with sporting activity.⁶ Additional cohorts with a high prevalence of patellofemoral pain include active adults—the so-called weekend warrior—and young military recruits.⁵ These populations represent the majority of the patients presenting with patellofemoral pain, but a high prevalence is also noted in the general population.

Gender Differences

In addition to the differences in age and activity level of patients often diagnosed with patellofemoral pain, an important variable in understanding the epidemiology of anterior knee pain is differences in the prevalence between male and female patients. Several epidemiologic studies have demonstrated a higher incidence of patellofemoral pain in female patients.^{7–12} This reported female predominance varies, but has been estimated to be as high as a 2-fold higher annual incidence in women compared with men.^{4,9} Although the true incidence of patellofemoral pain in the general population is unknown, a recent epidemiologic study in military recruits demonstrated an annual incidence of patellofemoral pain was 33 of 1000 person-years in female patients compared with 15 of 1000 person-years in male patients, demonstrating that female patients were 2.23 times more likely to develop patellofemoral pain annually during the study period.⁹ The established prevalence of patellofemoral pain in this population showed a less dramatic difference, with a reported prevalence of 15.3% in female patients and 12.3% in male patients in their cohort of military recruits.⁹ Studies have also shown a similar prevalence in athletes, with long-term follow-up typically demonstrating a longer and more refractory course in female patients.¹

Quality of Life

An important element in the treatment of patients with patellofemoral pain is an understanding of the impact that chronic anterior knee pain can have on the quality of life that a patient experiences.^{13–15} A 2013 study by Cheung and colleagues¹³ evaluated the relative relationship between patellofemoral pain and subjective quality of life in both recreational and professional athletes. This study assessed several elements of the Medical Outcomes Study 36-Item Short Form Health Survey (SF-36), including subscales of physical functioning, role limitations due to knee pain, bodily pain, general health perceptions, vitality, social functioning, role limitations due to emotional disturbances, and mental health.¹³ They demonstrated a decreased quality of life in each subscale of the SF-36 for patients with patellofemoral pain, most dramatically in bodily pain and vitality for recreational athletes and role limitations due to knee pain for professional athletes.¹³ This information is valuable to the physician or other health care provider treating patients with patellofemoral pain. The morbidity of patellofemoral pain includes both physical and mental limitations due to the chronic knee pain. This physical and mental morbidity for patients with patellofemoral pain leads

Download English Version:

<https://daneshyari.com/en/article/4051950>

Download Persian Version:

<https://daneshyari.com/article/4051950>

[Daneshyari.com](https://daneshyari.com)