

Disability Evaluation in Posttraumatic Chronic Joint Pain Patients

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Abstract : A 37-year-old single female, working as a laboratory technician at a rural public hospital, was presented at Siriraj Hospital with the complaint of chronic knee joint pain for about a year and a half. She had a history of injury by falling down on both knees in her bathroom and suffered significant aggravation to her knee joint. Her pain was constant regardless of her activities except that it was worse with knee bending. Seeking several medical doctors' treatments did not cure the pain at all. Upon a thorough physical examination and investigation, the objective data did not seem to correlate the severe subjective complaint or any definite diseases. After being treated with several methods, including medication, surgery, and rehabilitation for 6 months, she quit her job and personally asked for a permanent disability certificate. The formal request was submitted to the hospital's director for a disability evaluation and the issuing the certificate 6 months later. She was then scheduled for a disability assessment and consideration of her legal fitness.

Key words : chronic joint pain, disability, disability assessment, disability certificate

เรื่องย่อ : การประเมินความพิการในผู้ป่วยที่มีภาวะปวดเข่าเรื้อรังภายหลังการได้รับบาดเจ็บ
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หญิงไทยโสด อายุ 37 ปี รับราชการเป็นเจ้าหน้าที่ห้องปฏิบัติการที่โรงพยาบาลของรัฐแห่งหนึ่งใน
ต่างจังหวัด เข้ารับการตรวจรักษาที่โรงพยาบาลศิริราชด้วยภาวะปวดเข่าเรื้อรังมานานประมาณ 1 ปีครึ่ง ผู้ป่วยมีประวัติ
การหกล้ม โดยเข้าทั้งสองข้างกระแทกกับพื้นห้องน้ำและมีอาการปวดเข่าทั้งสองข้างตั้งแต่นั้นมา โดยอาการปวดจะไม่
สัมพันธ์กับกิจกรรมยกเว้นการงอเข่าจะทำให้ปวดมากขึ้น ภายหลังได้รับการตรวจรักษาจากแพทย์หลายท่านในพื้นที่
อาการปวดเข่าก็ไม่ดีขึ้น จากการตรวจร่างกายและการสืบค้นทางห้องปฏิบัติการอย่างละเอียดก็ไม่พบลักษณะที่

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สอดคล้องกับอาการปวดที่รุนแรงหรือเข้าได้กับโรคใดโรคหนึ่งอย่างชัดเจน ผู้ป่วยได้รับการรักษาหลายอย่างร่วมกัน ทั้งโดยทางยา การผ่าตัด และการฟื้นฟูสมรรถภาพของเข่า เป็นเวลานาน 6 เดือน ผู้ป่วยได้ลาออกจากงานและขอให้แพทย์ออกใบรับรองความพิการโดยร้องขอเป็นการส่วนตัว และในอีก 6 เดือนต่อมาจึงได้ทำหนังสือขอให้แพทย์ออกใบรับรองความพิการอย่างเป็นทางการต่อผู้อำนวยการโรงพยาบาล ผู้ป่วยจึงได้รับการนัดมาตรวจเพื่อการประเมินความพิการและความเหมาะสมทางด้านกฎหมาย

คำสำคัญ : การปวดเข่าเรื้อรัง, ความพิการ, การประเมินความพิการ, ใบรับรองความพิการ

INTRODUCTION

During working periods, disability evaluation for Social Security applicants and Workers' Compensation patients is commonplace in the musculoskeletal system. Chronic joint pain is one of the causes of long term disability. Physical impairment from chronic joint pain leads to work restriction or modification as well as daily life activity restriction. Severely disabled chronic-joint-pain patients will qualify for total work incapacity. In alleged injury cases such as worker's compensation or personal injury, treating physicians should identify its relationship to trauma, either episodic or continuous, and any basis for apportionment between the present impairment and normal progression of a preexisting condition, such as osteoarthritis or osteoporosis. When a subjective complaint (illness) is in excess of apparent organic pathology (disease), the assessment of the physicians will help sort out the dilemma and develop an appropriate treatment plan which will bring the illness more in line with the disease, thus reducing the disability.

CASE REPORT

A 37-year-old single female, who worked as a medical technician at a rural public hospital, came to Siriraj hospital because of chronic knee joint pain for 1 year and a half, secondary to a fall on both knees in a bathroom in January 2001. She reported that the pain was constant after the accident and not related to any activity although she experienced more pain with knee bending. No locking or giving way was felt. The patient denied antecedent symptoms and

demonstrated an excellent work history. She then went to see several doctors and was treated with non-steroidal anti-inflammatory medications (NSAIDs), muscle relaxants, and physiotherapy. None of them seemed to relieve her symptoms. Her knee roentgenograms demonstrated no abnormal findings. She underwent an arthroscopic examination on her right knee in March 2001 and the finding indicated no detectable pathology in her knee. She continued taking the medications and avoided knee bending positions by changing the type of chair at work but the symptoms just kept getting worse.

At Siriraj Hospital the physical examination revealed that she was a short and slightly chubby woman. She spoke slowly with a worried-look on her face during the conversation. She walked with a normal gait. Both lower limbs showed a normal alignment. No deformity of her feet was detected. Both of her knees had no swelling, effusion, or redness. No point of tenderness was felt. She had full range of motion with no crepitations on both knees. However, she reported mild pain on deep "flexing" and reluctantly agreed to be re-examined. Other tests, including Lachman, Drawer, McMurray, Apley, or varus and valgus stress tests were all negative. The patella showed a normal tracking on both knees. Both hips were unremarkable. X-ray radiographs of both knees demonstrated mild tibial subchondral sclerosis without joint space narrowing or osteolysis (shown in Figure 1), but MRI's result, performed 1 month earlier, showed no detectable pathology. Blood tests were all normal except for a positive anti-nuclear antibody (ANA) at 1:640.

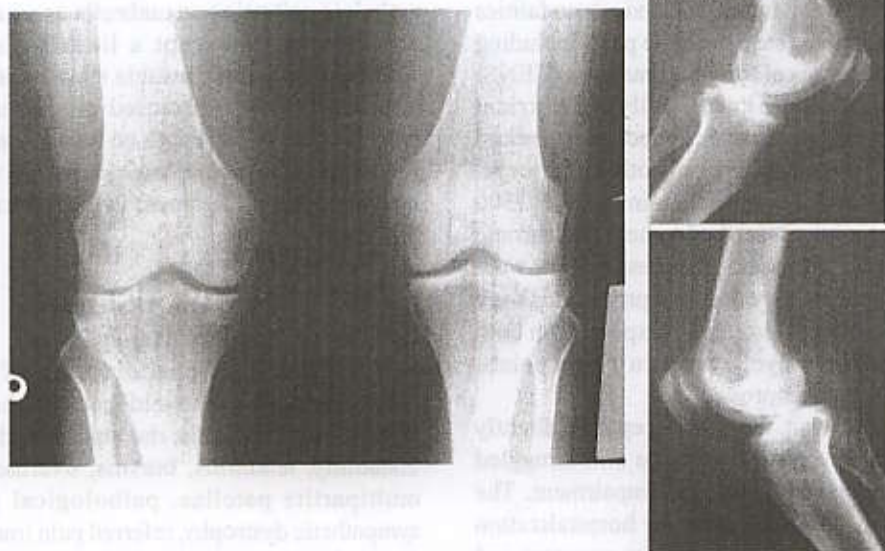


Figure 1. X-ray radiograph of both knees show mild tibial subchondral sclerosis without joint space narrowing or osteolysis.

She was then diagnosed as having chondromalacia patellae based on the history, the physical examination and all available investigated data. She was treated with a knee sleeve, another group of NSAIDs, a muscle relaxant, and the intraarticular injection of hyaluronic acid in the left knee. After 3 months of treatment, she showed no improvement and an arthroscopic examination on the left knee, which was a more symptomatic one, was performed to find the intraarticular pathology. The arthroscopic findings revealed a normal-looking articular cartilage on both the femur and tibia without synovial hypertrophy. The anterior and posterior cruciate ligaments were intact as well as the medial and lateral menisci. However, the articular cartilage fissuring (Outerbridge grade 2) at the distal pole of a patella was found and it was thoroughly shaved during the procedure. A synovial biopsy was also performed and the pathologist reported mild chronic synovitis.

We believed that the arthroscopic findings did not completely explain the patient's symptoms because the distal pole of the patella did not receive much of a load during the deep knee bending and this type of articular cartilage change could be found in many asymptomatic adults. After surgery, the patient reported no improvement but no signs of significant pathology or complications (e.g. infection, hemarthrosis, reflex sympathetic dystrophy) were detected. She also asked to be admitted on several occasions during the follow-up visits. At the 1-month follow-up, the patient was advised to seek another opinion from a physical medicine and rehabilitation (PMR) doctor for pain treatment.

At PMR, physical findings indicated moderate disused atrophy in both leg muscles and limitation of both knees for active or passive range of motion without any signs of inflammation or swelling. The degree of subjective pain on active

movement with isometric contraction was modest but not quite appropriate with the negative finding of signs of inflammation. However, a few myofascial pain trigger points were found along the middle of belly of calf muscles bilaterally. Physical modalities were prescribed to decrease the knee pain, including Transcutaneous Electrical Nerve Stimulation (TENS) and deep heat on both knees daily. Electrical stimulation to reeducate muscle contraction and retard muscle atrophy was applied on both quadriceps. Standard oral NSAIDs and gabapentin capsules (300 mg at bed time) were prescribed to help her chronic pain for a duration of 2 weeks; the prescriptions were refilled on the 2nd visit. Dry needling procedures were done with a few muscle-twitching responses on both calf muscles to relieve myofascial pain trigger points. The calf muscle pain improved.

On the 3rd visit, the patient reported slightly less painful knee symptoms, but she still struggled with joint limitation and ambulatory impairment. The patient was, therefore, scheduled for hospitalization to undergo an intensive rehabilitation program and to compensate traveling difficulty to the OPD program. Physical modalities for pain and muscle reeducation, therapeutic exercise under supervision, medications, and psychological consultation were provided during the hospital stay. She also met a rheumatologist to evaluate likely connective tissue diseases; still there was not enough evidence and criteria for constituting a certain disease diagnosis. The pain and range of motion on both knees were better to a certain degree. However, after 14 days of admission, the patient asked to be discharged due to the expiration of her office leave and the need to report back to her office according to government regulation.

A month later, the patient had sent a personal letter to request a medical certificate indicating that she was permanently disabled. The patient informed us that she had quit her job, but she was still obligated under the contract of her master degree education funded by the hospital. If she retired prior to the agreement period, she had to pay back the monetary difference to the government. A medical certificate of permanent disability is one of the exceptions to be excused from any payment. Six months afterwards, the patient's formal request had been submitted to the hospital director for an official opinion and further

review. The case was then forwarded to the Department of Forensic Medicine for evaluation and consideration for disability. At the scheduled time for disability assessment she walked with a mild left antalgic gait using an umbrella as a gait aid, had no pain complaint except a little on long-distance walking, and gained muscle mass in both legs. The physical findings disclosed mild unused atrophic muscles with full strength on both lower extremities, full range of motion in knee joints, but mild laxity of medial collateral ligament in the left knee.

DISCUSSION

Orthopedic Surgery Management

The differential diagnosis of knee pain in patients under 40-years-old included chondromalacia patellae, osteoarthritis, rheumatoid arthritis, patellar instability, tendinitis, bursitis, overused syndrome, multipartite patellae, pathological plica, reflex sympathetic dystrophy, referred pain (most commonly from the hip), tumor, infection, metabolic or connective tissue disease, and finally psychogenic origins. A detailed history and a careful physical examination often lead to a correct diagnosis. In this patient, the history, physical examination, and investigation results were not all correlated. The investigation was normal except for a positive ANA and the mild cartilage fissuring at the distal pole of the patellae.

Chondromalacia patellae was an arthroscopic diagnosis of the patellar articular cartilage pathology. This condition was characterized by poorly localized anterior knee pain and discomfort after prolonged sitting or activities that required knee bending. Diagnostic efforts had to first rule out other specific causes of pain before this diagnosis was given because chondromalacia patellae could also be found in asymptomatic adults. On physical examination, knee joint-line tenderness is usually located anteriorly. Efforts should also be made to identify factors remote from the knee that can affect the patellofemoral articulation, including excessive tibial rotation and abnormal foot and ankle mechanics, particularly excessive foot pronation.

In most reported studies, non surgical treatment was successful in 75 - 90% of patients.¹⁻³ Treatment modalities include activity modification,

weight reduction, medications (e.g. NSAIDs, glucosamine and chondroitin sulfate, intraarticular hyaluronic acid), physiotherapy (e.g. flexibility and strengthening exercise, contrast therapy, knee sleeve, shoe insert, TENS), and reassurance. Participation in sports is also encouraged. Restoration of quadriceps and hamstring strength and flexibility with exercises specific for these muscles is an essential part of management. If a patient is unresponsive to a well-monitored program of treatment, one must begin to question the accuracy of the diagnosis and begin to search for other causes, including psychiatric as well as non-orthopaedic origins.

Surgery has a limited role for this condition and options include arthroscopic debridement and joint replacement. Lateral retinacular release, performed in an attempt to improve minor tracking abnormalities, has not been shown to change the patellar location, tilt, or translation.^{4,5} Arthroscopic procedure about the patellofemoral joint should be done only for documented, objective, preoperative findings and not for pain alone. Of all arthroscopic procedures of the knee, those involving the patella have the highest complication rate.^{6,7} In this patient the main reason for using the arthroscope was to identify the intraarticular pathology and not the treatment. She was also definitely not a candidate for knee replacement because of a very minimal knee pathology and her relatively young age.

Rehabilitation Medicine Management^{8,9}

The chronic posttraumatic anterior knee pain in this patient is a complex problem both in physical and psychological components. The chondromalacia patella condition usually responds well, if properly diagnosed, to rehabilitation treatments which includes medications, physical modality, exercises, and biomechanical correction of the patellar gliding track. Reflex sympathetic dystrophy (RSD), recently called complex regional pain syndrome (CRPS), is another condition that should be included in the possible cause of this patient's chronicity. However, the RSD is more commonly involved in the upper rather than the lower extremity and somewhat self-limited when the noxious stimuli were treated. The radiological findings of certain degrees of localized osteoporosis, diffuse swelling, and burning pain sensation are usually found when the condition is actively present.

However, because the intensive rehabilitation treatments in the hospital were shortly terminated without any follow-up visit, her disability status was hardly determined at that time. Given the nature of CRPS, this patient's condition should be subsided or at least well controlled with proper treatment along the course of the disease. Apparently, it had been revealed that the patient's condition was better after six months of the same regimen of medical treatments in other hospitals when she came for the disability evaluation.

Forensic Medicine Approach

Disability is the yield of various factors including physical impairment, education, mental status, job training, work experience, age, pain tolerance, and motivation.¹⁰ The definition of disability may vary depending on the meaning of the word specified in certain contracts and legal documents but mostly it is the same. There are two types of disability: permanent or temporary. Permanent disability is the most complex one and requires special attention. It includes the inability to engage in any substantial gainful activity permanently or for at least 6 months after the end of the correct and appropriate treatments. Generally, the disability is based on loss of use or loss of anatomic parts and medical impairment. The causes of the disability may be either a disease or an injury, both in working hours or in person, and its course can not be cured any further. Once pronounced permanently disabled, individuals will receive some benefits from the contracts or the laws. Correct disability assessment, therefore, is in the best interest of all concerned, especially when a subjective complaint (illness) is in excess of apparent organic pathology (disease) as in this case, namely, as a "disease-illness paradigm".

Obviously, individual reactions to a disease are highly variable and are dependent on many cultural, environmental, emotional, and motivational factors. When illness is in excess of the average reaction to apparent disease, three possibilities exist: there is a significant emotional component augmenting the symptoms, the actual disease is more extensive than is apparent, or the patient is malingering. Though the last possibility is quite rare, it leaves a problem of medical evaluation, both physical and psychological.¹² In fact, this is in the

realm of the treating physician rather than an independent evaluator and should be completed before the patient is declared to have a permanent and stationary disability and is rated. However, the assessment of the psychological component is beyond the scope of the orthopedic surgeon or PMR physician and requires a team approach or at least a consultation. The patient, therefore, cannot be evaluated for permanent disability status until all these factors are understood and appropriate treatment has been rendered.

Even though the final determination of disability is an administrative decision and the treating physician's role varies based on which disability program is involved, the physician should know the established criteria for each type of disability. As always, apart from providing optimal care for the patient, the physician plays a crucial role in assessing the degree of physical impairment and in recommending appropriate work modification or restriction and then submitting documentation about the patient's condition to the administrator. A consideration of disability should be corroborated by objective evidence of impairment on the basis of a physical examination, roentgenographic evidence, and laboratory data. The individual is not judged to be disabled on the basis of the physician's opinion but rather by meeting impairments that are judicially specified. The administrator will determine disability based mostly on the medical information. Unfortunately, many physicians have limited knowledge of these matters and consider disability evaluation a frustration. Also, most physicians consider it a necessary evil with burdensome reports when patients whose motivation to get well may be impaired by the quest for financial remuneration, legal benefits, or avoidance of work. Since the matter involves legal obligations, the physician or the administrator may end up referring the patient to another physician for evaluation.

The patient in this case was sponsored for her study by the hospital she worked for; therefore, her permanent disability status would not only involve the relevant laws but the contract of her educational scholarship as well. The contract states that in the case of retiring from work as a government official prior to completion of a certain working duration, she has to pay the monetary difference back as

compensation for her salary, allowance and other financial assistance given to her during her accomplished study course. There are, however, some excuses for not paying money back, which include death, retiring, being fired, or quitting the job due to illness, disability, incompetence, insanity, or a mental defect in a certain degree that makes her unable to work permanently. Such a condition, also, makes her unable to do significant activities in her daily living. The permanent disability may be caused by personal injury and appropriate treatment can not return her to pre-injury status or at least a certain degree of any working capacity, which was apparently not true in this case at all.

CONCLUSION

Asking for consideration of impairment of individuals claiming disability for the purpose of obtaining benefits under a contract or a law is common. The treating physician plays a major role in assessing the degree of physical impairment and in recommending appropriate work modification or restrictions. Disability consideration requires not only a thorough and careful description of physical and emotional impairments which present all of the medical factors but also a study of psychological, vocational and social factors which are not in the domain of the physician.

Comment

By Clinical Professor Amnaj Kussalanant
Chairman, Department of Forensic Medicine

The emphasis in determining disability relies on the need for careful evaluation by the physician of all medical factors over and above the obvious illness or disorder. In all fairness to the claimant as well as to the decision-making agency which has the responsibility for disbursing great sums of public funds, the medical information must be comprehensive, specific, and accurately descriptive of the claimant's limitations. Such information will provide one of the important bases for the administrative decision on allowance or denial of disability. The treating physicians should thus assess disability criteria accurately and precisely, based on specific medical criteria in accordance with legal criteria, so as to ensure the patients' benefit, the family's benefit and the nation's benefit as a whole.

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