



Miscible Two Diseases in Old Age: Hypopituitarism and Pseudogout

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İleri Yaşta Karışabilen İki Hastalık: Panhipopitüitarizm ve Psödogut

ABSTRACT

Calcium pyrophosphate dihydrate deposition disease is a disease characterized by collecting of crystals in hyaline cartilage, fibrocartilage and soft tissues, related to many endocrine and metabolic conditions, and seen more commonly in old age. Hypopituitarism may occur in old age with fatigue, decrease in libido, weight loss and musculoskeletal symptoms as a major cause of the overall condition impairment. As one gets older, the signs of these two diseases may progress even without any significant disease. The natural process which comes with old age, and pseudogout and hypopituitarism can mask one to another clinically and the symptoms of three situation may be overlapping. This can lead to difficulty and delay in diagnosis. Our case was an elderly female patient diagnosed with hypopituitarism and pseudogout.

Key words: Pseudogout, empty sella, old age.

ÖZET

Kalsiyum pirofosfat depo hastalığı, çoğunlukla ileri yaşta görülen, birçok endokrin ve metabolik durumla ilişkili, hiyalin kıkırdak, fibrokartilaj ve yumuşak dokularda kristal birikimiyle karakterize bir hastalıktır. Hipopitüitarizm, ileri yaşta yorgunluk, libido azalması, kilo kaybı ve kas iskelet sistemi semptomları gibi semptomlarla ortaya çıkabilir. İleri yaşa bağlı bu iki hastalığın semptomlarına benzer semptomlar hiç hastalık olmadan da görülebilir. Yaşlılığa bağlı semptomlar, psödogut ve hipopitüitarizm birbirini maskeleyebilir ve üç hastalığın semptomları üst üste binebilir. Bu durum tanıda zorluğa ve gecikmeye neden olabilir. Biz bu vakamızda psödogut ve hipopitüitarizmi olan yaşlı bir kadın hastayı ele aldık.

Anahtar kelimeler: Psödogut, empty sella, ileri yaş

INTRODUCTION

While calcium pyrophosphate dihydrate deposition disease (CPDD), also known as pseudogout is known to be coexistent with trauma, surgical operations, hemochromatosis, Wilson's disease, hypophosphatasia, it is also related to endocrine diseases, including hyperparathyroidism and hypothyroidism(1-2). Pseudogout can represent with various clinical manifestations such as acute, asymptomatic and pseudo-rheumatoid arthritis (pseudo-RA). In acute pseudogout, various joints, particularly the knees, are involved in a mono- or oligo-articular manner, and patients remain asymptomatic between attacks (3). Like pseudogout, one of the diseases, which can be seen in old age, is hypopituitarism. Particularly, when hypopi-

tuitarism occurs with nonspecific signs such as fatigue, decrease in appetite, nausea and weight loss, which are normally seen in old age, it may cause misdiagnosis and/or delay in diagnosis (4). Additionally, with the diseases like polymyalgia rheumatica and rheumatoid arthritis (RA), which become more common in this age group, the differential diagnosis between these diseases and pseudogout becomes difficult. The natural process which comes with old age, and pseudogout and hypopituitarism can mask one to another clinically. We want to share a 69-year old patient, whom we diagnosed with pseudogout accompanied with hypopituitarism and arthritis at intervals.

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CASE

The 69-year-old female patient applied to our hospital with complaints of being unable to do her chores, and with stiffness and widespread pain in all her joints. It was learned from her medical history that she had occasional fever and joint swelling, and she became menopausal prematurely. Her physical examination showed that her face was pale, and increased wrinkling around her mouth and her cheeks, her hair was rough and fragile. The patient had typical Sheehan's facial appearance. (Figure 1). She had pain with movement and crepitation in both her knees. Her laboratory results were erythrocyte sedimentation rate (ESR): 27 mm/h, c-reactive protein(CRP): 12mg/L(Normal range:0-5mg/L), hemoglobin: 10 g/dl, leukocytes: 5700/mm³, thrombocytes: 321000/ mm³, glucose: 112 mg/dl, urea: 47 mg/dl, alkaline phosphatase(ALP): 131 IU/l, creatinine: 0.82 mg/dL, alanine aminotransferase(ALT): 15U/L, sodium: 142 mEq/L, potassium: 4.4 mEq/L, calcium: 8.87 mg/dl, rheumatoid factor negative. She also had TSH: 0.08 mIU/ml, fT4: 0.43 ng/dl. The co-existence of low TSH and low fT4 made us consider panhypopituitarism. Therefore, the patient was asked pre-hypophysis hormones. Cortisol: 7.48 mcg/dl, growth hormone (GH): 0.01 ng/ml, prolactin: 6,1 ng/ml, follicle-stimulating hormone (FSH): 1.28 mIU/ml, luteinizing hormone (LH): 0.72 mIU/ml, estradiol (E2): 23 pg/ml. The patient was unwell, and as her cortisol value was 6.97 mcg/dl. As the patient's basal cortisol value was low, we performed an adrenocorticotrophic hormone (ACTH) stimulation test. Her minute 30 cortisol level was 15.8 mcg/dl, and minute 60 cortisol level was 13.41 mcg/dl. The cortisol response was inadequate. With these findings, the patient was considered to have panhypopituitarism. Her hypophysis magnetic resonance imaging (MRI) (Figure 2) showed empty sella. Her hypophysis gland was quite small. The patient's joint imaging revealed chondrocalcinosis (Figure 3). In our case, the RF was negative, and erosion was not seen in direct radiographies. However, we could not perform synovial fluid analysis. Therefore, our patient was diagnosed with probable pseudogout (5). She was given colchicine, levotroxin and methylprednisolone, and she responded well to the treatment.

DISCUSSION

Pseudogout is a disease characterized by acute, sub-acute or chronic inflammation as a result of accumula-

tion of calcium pyrophosphate dehydrate crystals in the articular and periarticular structures (6). It affects elder people more. It is known that CPPD disease is seen more in old age in overall population, and reported up to 45% in people older than 85 years old (7). Pseudogout occurs in primarily 6 clinical forms, which are acute, asymptomatic, pseudo-osteoarthritis (pseudo-OA), pseudo-RA, pseudo-polymyalgia rheumatica (pseudo-PMR), pseudo-neuropathic arthropathy. In acute pseudogout, various joints, particularly the knees, are involved in a mono- or oligo-articular manner, and patients remain asymptomatic between attacks. This form can be seen in 25% of patients (3). In our case, patient had described arthritis attacks in mono- and both knees in intervals. The patient felt better with non-steroid anti-inflammatory treatment between these attacks. Her knee graphy revealed calcification. Pseudo-RA, which is another form of pseudogout, is seen in 5% of CPDD, and may be misdiagnosed as RA due to morning stiffness, synovial hypertrophy, symmetric involvement, flexion contractures, and increased acute phase response. Erosion, anticyclic citrullinated peptide (anti-CCP) and rheumatoid factor (RF) positivity makes one consider classic RA. Furthermore, these two conditions usually coexist (3). In our case, the RF was negative, and erosion was not seen in direct radiographies. However, we could not perform a synovial fluid analysis. Therefore, our patient was diagnosed with probable pseudogout (5).

Pseudogout is known to be related to endocrine and metabolic diseases. These include hyperparathyroidism, hypothyroidism, Wilson's, hypophosphatasia, gout and rheumatoidarthritis particularly. It is also reported to be



Figure 1. Sheehan's facial appearance

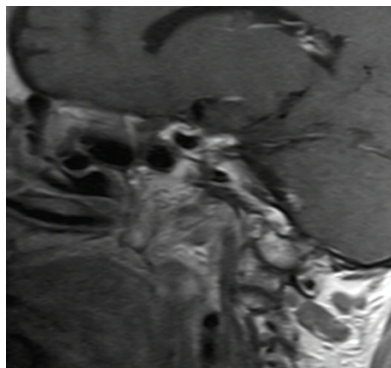


Figure 2. Magnetic resonance imaging showed empty sella



Figure 3. The patient's joint imaging revealed chondrocalcinosis

related to trauma, surgery, ischemic heart disease and pregnancy (1,2, 8). Post-parathyroidectomy acute pseudogout cases have also been reported (9). Our patient had none of the above-listed diseases, which may be related. However, as the patient had early menopause, her face was pale and wrinkled (especially around her mouth and on her cheeks), slowing movements, decreased performance, and she also had generalized joint and muscle pains, decreased libido, and 6 kg of weight loss in the past 3 weeks, and typical Sheehan's facial appearance, we performed an evaluation of endocrine pathologies. The co-existence of low TSH and low FT4 made us consider panhypopituitarism. With laboratory findings and test, the patient was considered to have panhypopituitarism. Her hypophysis MRI was reported as empty sella. Our case is the first case which was reported co-existence of panhypopituitarism and pseudogout.

Sheehan's syndrome (SS) usually occurs due to ischemic hypophysary insufficiency due to postpartum hemorrhage (10). However, diagnosis of SS can take time for the patient and the clinician. In a retrospective study(11), although it was reported that definitive diagnosis took 16.35 years in average, it was reported in the evaluation by Sanyal D. et. al (10) that the diagnosis took 15.35 years in average. Furthermore, it has been stated the delay in diagnosis could be related to the asymptomatic course of the initial stage. The disease may occur with non-classic signs such as hyponatremia, hypoglycemia, shock, lethargy, or with hypothyroidism, hypoglycemia, coma due to hyponatremia or shock due to adrenal insufficiency (9). However, the disease may also manifest with even rarer signs. These include neuropsychiatric signs with acute onset (12), acute renal insufficiency (13), pancytopenia (14), and central diabetes mellitus (15). SS may

also have clinical signs with symptoms of the musculoskeletal system. Signs of musculoskeletal system are usually associated with hypoadrenalism and hypothyroidism seen in SS(16-18). Non-specific symptoms such as fatigue and feeling weak may be observed in both hypothyroidism and in adrenal insufficiency(19-20). Our patient had musculoskeletal system symptoms such as being unable to perform her daily routine, stiffness in all her joints and generalized pain. Endocrinology tests supported adrenal insufficiency and hypopituitarism associated with empty sella.

Most symptoms of hypopituitarism are nonspecific. These include fatigue, decrease in muscular strength and libido. These symptoms also occur in old age. This means that the symptoms of these two conditions can overlap. This can lead to difficulty and delay in diagnosis(4).

To sum up, our case is the first case which was reported co-existence of panhypopituitarism and pseudogout. The symptoms of pseudogout and hypopituitarism in old age, and the symptoms of natural aging may be overlapping. Although rare, pseudogout may also occur with attacks and patients remain asymptomatic between attacks. On the other hand, empty sella, which is a rare cause of hypopituitarism, may present with musculoskeletal signs. This situation is a "difficult case" for clinicians. So we must examine patients carefully which have faint musculoskeletal system signs.

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