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Ekstaziye Bağlı Toksik Hepatit ve Minimal Değişiklik Hastalığı

Minimal Change Disease and Toxic Hepatitis Due to Ecstasy

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ÖZ

Minimal değişiklik hastalığı(MDH), NIL hastalığı, çocuklarda nefrotik sendromun en sık nedeni iken erişkinlerde de nefrotik sendromun en önemli nedenlerindendir. Elektron mikroskopta ayaksı çıkıntılarda yaygın yapışıklık olması; immünfloresan mikroskopta depolanma olmaması; glomerüllerin seçici geçirgenliğinde şiddetli fonksiyon kaybı karakteristik bulgularıdır. MDH, sıklıkla idiopatiktir. MDH ile ilişkili sekonder nedenler ise ilaçlar, tümörler, allerji, enfeksiyonlar ve diğer glomerüler hastalıklardır. Ekstazi (3,4 metilendioksi - N-metilamfetamin, MDMA) C11H15NO2 formülüne sahip psikoaktif bir maddedir. Kullanımına bağlı ortaya çıkan etkiler arasında malign hipertansiyon, taşikardi, hipertermi, akut böbrek yetmezliği, hiponatremi, rabdomyoliz, ajitasyon, anksiyete, hepatotoksisite yer almaktadır. Olgumuzda, MDH'nın atipik klinik bulgularının olabileceğini ve benzer bulgularla gelen olgularda sekonder nedenler arasında ekstazi kullanımının da akılda tutulması gerektiğini vurgulamayı amaçladık.

Anahtar Kelimeler: *ekstazi, toksik hepatit, MDH*

ABSTRACT

Minimal change disease (NIL (Nothing In Light microscope) disease) is the most common cause of nephrotic syndrome in childhood; and one of the most common causes of nephrotic syndrome in adults. Characteristic findings are: diffuse foot process effacement in electrone microscopy, no complement or immunoglobulin deposits on immunofluorescence microscopy , severe functional defect in glomerular permselectivity. Most cases of MCD are idiopathic or primary. Secondary MCD is associated with the following: drugs, tumors, allergy, infections and other glomerular diseases. Ecstasy (3,4-methylenedioxymethamphetamine, MDMA) is a synthetic psychoactive compound with C11H15NO2 formula. Malign hypertension, tachycardia, hyperthermia, acute kidney failure, hyponatremia, rhabdomyolisis, neurologic symptoms like agitation, anxiety, hepatotoxicity can be seen due to ecstasy abuse. In our case, we wanted to mention that MCD cases can come with atypical clinical findings and we should keep ecstasy abuse in mind as secondary reason at these types of cases.

Key words: *ecstasy, toxic hepatitis, MCD*

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INTRODUCTION

Minimal change disease (MCD) is the most common cause of nephrotic syndrome in children and is one of the most common causes of nephrotic syndrome in adults(1). Although MCD in adults is a cause of nephrotic syndrome by 10-15%, there has been a recent decline in the frequency of MCD due to an increase in the frequency of Focal Segmental Glomerulosclerosis(FSGS)(2).MCD and FSGS together are frequently evaluated as podocytopathies under the title of idiopathic nephrotic syndrome.Whether they are variants of the same disease or are they different diseases is still a matter of debate(3).MCD is characterized by diffuse adhesions in the protruding legs in electron microscopy, lack of storage in the immunofluorescence microscope, and severe loss of function in the selective permeability of the glomeruli(4). MCD is often idiopathic. Secondary causes of MCD are drugs, tumors, allergies, infections and other glomerular diseases. Lithium, D-penicillamine, thiopronin, pamidronate and other bisphosphonates, sulfosalazine and 5-aminosalicylic acid derivatives, trimethadione, INF gamma vaccines, non-steroidal anti-inflammatory drugs and selective COX-2 inhibitors and anti-microbial drugs such as ampicillin, rifampicin, cephalosporins are the drug causes of MCD(5-7).MDH-associated malignancies are often hematologic malignancies such as Hodgkin's lymphoma, non-hodgkin's lymphoma and acute leukemia(9). Solid tumors are often associated with immunocomplex-mediated glomerulonephritis, such as membranous nephropathy(10). Thymoma, renal cell carcinoma, mesothelioma, lung, colon, bladder, liver, breast, pancreas, duodenum, prostate cancers rarely have also been shown to be associated with MCD(6-11). Some of the MCD-related infections are syphilis, tuberculosis, mycoplasma, hepatitis C, echinococcal infection, borreliosis (Lyme disease)(6,8,12).Human immunodeficiency virus (HIV) infection is often associated with collapsing type focal segmental glomerulosclerosis, but its association with MCD has been previously described(13).Approximately 30% of all MDH cases have an allergy history(3,14). MCD may show moderate mesangial depolarization suggesting the presence of mesangial IgA and IgA nephropathy(13,15).MDH-related renal or glomerular diseases include systemic lupus erythematosus, type 1 diabetes mellitus, polycystic kidney disease, and HIV nephropathy(6,16).Other diseases associated with MCD are chronic graft versus host disease, sclerosing cholangitis, sarcoidosis, Graves' disease, thyroiditis, vasculitis, myasthenia gravis, Guillain Barré syndrome, dermatitis herpetiformis, primary balloon cholangitis, and antiphospholipid syndrome and underlying mechanism is unknown(6,17).Ekstasy (3,4 methylenedioxy-N-methylamphetamine, MDMA) is a psychoactive substance having the formula C11H15NO2(18). MCD frequently refers to nephrotic syndrome findings (edema, hypoalbuminemia, proteinuria at nephrotic level (3.5 gr / 24 h)).Renal function is often preserved in MCD, unless there are tables such as concomitant acute tubular necrosis, tubulointerstitial nephritis, and undiagnosed FSGS.Treatment is started with steroids and steroids respond very well, especially in children.Cyclophosphamide treatment is often given in relapses and steroid-dependent cases, and cyclosporine treatment may be given in cases of relapses despite 2 cycles of cyclophosphamide treatment.We aimed to emphasize that the use of ecstasy should be kept in mind because of the atypical clinical course accompanied by toxic hepatitis during the follow-up of patients presenting with nephrotic syndrome.

CASE REPORT

A 25-year-old male patient was admitted to the hospital with a complaint of swelling in his body, which has increased over the past week..The general condition of the patient was good, conscious open, full orientation and co-operative.The patient's body temperature was 380C, pulse rate was 88 beats / min, blood pressure was 135/75 mmHg. Anasarca, edema was detected on physical examination. The laboratory values on the patient's admission, at the follow-up in the clinic and on the discharge are presented on the **table 1.** The laboratory values on the patient's admission, low density lipoprotein(LDL) was 335 mg/dl, albümin was 1,6 g/dl, alanin aminotransferase (ALT) was 67 U/L, aspart aminotransferase(AST) was 65 U/L, blood ure nitrogen and creatinin were normal and proteinuria at 24h was 8,6 g/day.

Table1. The laboratory values on the patient's admission, at follow-up in the clinic and at discharge

	Admission	Clinical follow-up	Discharge
BUN(mg/dl)	32	112	28
Creatinine(mg/dl)	0.69	8,4	0,79
Na(meq/L)	131	117	142
K(meq/L)	4,25	4,48	3,98
Ca(mg/dl)	8,72	8,97	9,8
Hb(g/dl)	13,9	10,5	13,9
Hct(%)	42,8	33,5	40,1
Erythrocyte($10^{6/ul}$)	6,45	4,06	4,21
Leukocyte($10^{3/ul}$)	10,7	7,3	6,6
Plt($10^{3/ul}$)	323	238	401
AST(U/L)	65	55	17
ALT (U/L)	67	49	22
Albumin (g/dl)	1,6	1,9	3,9
Ph: Density: Glucose: Protein: Blood: Leukocyte/HPF): Erythrocyte(/HPF): :	5,5 1,012 Normal - ++++ 4 1	6,0 1,010 Normal - ++++ 1 3	6,2 1,011 Normal - normal 1 2
Proteinuria/ 24h	8,6 gr/day	7,4 gr/day	132 mg/day

BUN, Blood Urea Nitrogen; **Na,** Sodium; **K,** Potassium; **Ca,** Calcium; **Hb,** Hemoglobin; **Hct,** Hematocrit; **Plt,** Platelet; **AST,** Aspartat aminotransferase; **ALT,** Alanin aminotransferase

Viral hepatitis serologic markers were negative in the patient who had a history of ecstasy during the last 2 months. Abdominal ultrasonography revealed normal renal and liver size and parenchyma echogenicity. Serologic studies have shown that C3 (complex 3), C4 (complex 4), anti nuclear antibody (ANA), Anti-neutrophil cytoplasmic antibodies (ANCAs), IgG (immunoglobulin G), IgA (immunoglobulin A), IgM (immunoglobulin M), protein electrophoresis, kappa and lambda values and immunoelectrophoresis were normal. Kidney biopsy was performed in a patient with a nephrotic syndrome clinic and accompanying toxic hepatitis.Biopsy results were reported consistent with minimal change disease.1 mg / kg / day oral methylprednisolone therapy was started.During the clinical follow-up, fluid restriction and diuretic therapy did not provide adequate diuresis and a total of 4 sessions of hemodialysis were performed on deterioration in renal function tests.Liver and kidney function tests returned to normal, diuresis increased and the patient who was not required to have hemodialysis was discharged and control visit recommended. At the 6th week of follow-up, a complete remission was achieved and steroid therapy was cut off.Finally, the patient who came to the our clinic 1 month ago is on full remission.

DISCUSSION

Ecstasy is a psychostimulated substance that is increasingly used in the last period.The use of ecstasy has negative effects on many organs, especially the kidneys, liver and heart.The effects of ecstasy use include malignant hypertension, tachycardia, hyperthermia, acute renal failure, hypotonic hyponatremia, rhabdomyolysis, hepatotoxicity and neurological findings such as agitation, anxiety(19-25).In our patient with isolated nephrotic syndrome clinic, glomerular pathologies such as minimal change syndrome, primary focal segmantal glomerulosclerosis, amylodosis, membranous nephropathy were considered. Because of the lack of a chronic disease story, secondary amyloidosis was not considered and so kidney biopsy was performed in the patient just to make a clinically clear distinction.The biopsy result was reported as minimal change disease because no light microscopic finding of any pathological findings, no immune depositing in the immunofluorescence microscopy was detected. Electron microscopy could not be done due to technical reasons and and the fusion of burrows with typical electron microscopic findings could not be shown.

It is thought that ecstasy may cause atypical clinical syndrome which is not seen frequently in MCD, such as the need for hemodialysis during the follow-up and the development of hepatotoxicity.Hepatic enzyme elevation was assessed as toxic hepatitis due to spontaneous

regression of hepatic enzymes without drug exposure, hepatitis markers and imaging modalities being normal.Minimal change disease is the most common primary, ie idiopathic, cause of secondary causes include drugs, tumors, allergies, infections, other glomerular diseases(9-24). No laboratory or clinical findings were found in the patient's history suggesting any drug-taking history, allergy history and / or infection. It may be useful to keep in mind the increasing use of ecstasy for etiology in patients with clinical findings similar to our case.

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