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Methylphenıdate-Induced Henoch Schönleın Purpura: A Case Report

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ABSTRACT

Henoch-Schönlein Purpura (HSP) is the most common vasculitis in childhood and is characterized by a systemic leukocytoclastic angiitis involving the skin, joints, gastrointestinal tract and, less frequently, small-diameter renal vessels. The triggering agents of Henoch-Schönlein purpura are generally considered to be infectious agents, drugs, insect bites, and food. Here, we report what is to the best of our knowledge only the first case of induced HSP by methylphenidate.

Keywords: Henoch-Schönlein Purpura, vasculitis, methylphenidate.

INTRODUCTION

Henoch-Schönlein Purpura (HSP) is the most common vasculitis in childhood and is characterized by a systemic leukocytoclastic angiitis involving the skin, joints, gastrointestinal tract and, less frequently, small-diameter renal vessels [1].

The disease is characterized by the deposition of immune complexes containing IgA and complement components in the small vessel walls and often in the renal mesengium. The prognosis is generally good; however, patients with severe gastrointestinal and renal findings need to be carefully treated and monitored. In the acute phase, life-threatening massive gastrointestinal bleeding and intussusception may occur [2]. Long-term prognosis is usually directly related to the severity of renal involvement [3].

Although its exact pathophysiology remains unknown, HSP has been reported in association with various medical conditions such as cancer, blunt trauma, monoclonal IgA gammopathy, as well as in patients with Wiskott-Aldrich syndrome, chronic alcoholic liver disease, or a1-anti-trypsin deficiency [4]. HSP has also been described in association with hypersensitivity. Several drugs, such as ciprofloxacin, acetylsalicylic acid, carbidopa/levodopa, cocaine, acetylcholinesterase inhibitors, carbamazepine and streptokinase have been involved in the induction of HSP [4]. Here, we report what is to the best of our knowledge only the first case of induced HSP by methylphenidate (MPH).

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CASE PRESENTATION

7 years old male patient and his parents applied to the Child and Adolescent Psychiatry outpatient clinic with complaints of forgetfulness, hyperactivity, and impulsivity. A diagnosis of attention deficit hyperactivity disorder (ADHD) was considered based on the anamnesis, mental status examination, and information obtained from the family. ADHD was diagnosed with the Kiddie Schedule for affective disorders and schizophrenia present and lifetime version-Turkish version (K-SADS-PL-T) [5].

The first choice drug in the treatment of Attention Deficit Hyperactivity Disorder (ADHD) in children is methylphenidate, a central nervous system stimulant. In this treatment, a positive early response was obtained in 70-80% of the cases. Most of children, adolescents, and adults can benefit from MPH with minimum side effects. The most common side effects are insomnia, headache, and anorexia [6].

Methylphenidate was started at 10mg/day and the dose was increased to 20mg/day at the follow-up one month later. On the 18th day of the treatment, the patient applied to the outpatient clinic with complaints of "widespread rash, which is more common on the legs, and swelling of the hands and feet."

The rashes did not fade with pressure and there was mild pain in edema on the hands and feet.

In laboratory examinations; the white blood cell count was 10800/mm3, hemoglobin 12.1 gr/dl, platelet count 365000/mm3, and erythrocyte sedimentation rate 27 mm/hour. ASO, C-reactive protein tests, urine analysis, kidney function tests, prothrombin time (PT), activated partial thromboplastin time (aPTT), serum IgA level, complement values (C3, C4), ANA, anti-dsDNA were within normal limits. There was no reproduction in urine and throat cultures. Occult blood in stool was negative.

Skin biopsy taken from purpuric lesions was evaluated as leukocytoclastic vasculitis and found to be compatible with HSP. The patient was hospitalized in the pediatric service for 1 day and supportive treatment was started. Purpuric lesions disappeared on the 13th day. In the follow-up of the patient, no kidney and GIS involvement was observed.

DISCUSSION

In the pathogenesis of HSP, infectious agents, drugs and allergenic substances disrupt the control of T-lymphocytes on immunoglobulin synthesis by making some changes in the patient's mucosa. As a result, neutrophil, eosinophil and fibrin deposition, as a result of the activation of the coagulation system in target organs (such as skin, kidney, GIS) by stimulating the alternative pathway of the complement system by disrupting especially IgA synthesis of B-lymphocytes, creates leukocytoclastic vasculitis and reveals the clinical picture of HSP. Regardless of the etiology in the pathogenesis of HSP, emphasis is placed on IgA. IgA accumulates in target organs, either specifically (lectin binding, cross-reaction) or because of impaired clearance, due to the large adhesiveness and electrical charge. As a result, inflammatory events begin, and bleeding and fibrin deposition occur.

In our patient, the skin biopsy performed several days after the purpuric eruption, showed leucocytoclastic vasculitis and IgM deposits (by immunofluorescence). Specific leucocytoclastic vasculitis of the skin is a main symptom of HSP and it is classically associated with IgA deposits [4].

Palpable purpura without thrombocytopenia in our patient is a prerequisite for diagnosis. It is seen in 100 % of patients. It may present as a single finding in half of the cases. Rash is more common in areas that bear the weight of the body, such as the hips and lower extremities. Edema of the hands, feet, scalp, and ears are other common early findings (20-46%).

Further, purpura appeared after MPH therapy initiation and disappeared after MPH therapy withdrawal. Finally, eosinophils were found in skin biopsies.

From the literature, drugs that have already been associated with HSP are clarithromycin, carbidopa, cytarabine, enalapril/lisinopril, ciprofloxacin, acetylsalicylic acid, cocaine, acetylcholinesterase inhibitors, carbamazepine, and streptokinase [4].

Treatment in HSP is mostly supportive treatment. It includes ensuring adequate hydration and monitoring vital signs. Non-steroidal anti-inflammatory drugs reduce joint pain, and do not increase purpura or gastrointestinal haemorrhage. The most common treatment for children with HSP is the use of analgesic or non-steroidal anti-inflammatory drugs to reduce joint pain and inflammation. Steroids can also be used when painful skin edema is present [7]. Although steroids are often used in severe abdominal pain, the effectiveness of this treatment has not been proven.

CONCLUSIONS

We report the first case of methylphenidate-induced Henoch-Schönlein purpura. The diagnosis was made possible by the combination of specific clinical and histological findings and in particular the timing of events with regard to the introduction and withdrawal of drug. This is a rare, maybe underdiagnosed, but serious adverse event that needs to be considered and if suspected, should lead to prompt discontinuation of drugs.

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