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# Acute Cresentric IgA Nephritis in a Patient with Hodgkin's Lymphoma

## *Hodgkin Lenfomalı Hastada Akut Kresentrik Ig A Nefriti*

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**ABSTRACT**

In glomerular diseases, the occurence of lymphoma is mostly observed in the form of both minimal change disease and Hodgkin's lymphoma. The coocurrence of Membranous nephropathy and membranoproliferative glomerulonephritis are generally associated with non-Hodgkin's lymphoma. While Ig A nephropathy-lymphoma association is rare, it is generally observed in the form of non-Hodgkin's lymphoma, and there are also cases proposed the cooccurence of Ig A nephropathy and cutaneous T-cell lymphoma. In this case, it is emphasized that IgA nephropathy presented with cresentric glomerulonephritis should be considered in patients with hodgkin's lymphoma who have sudden renal disorder.

**KEY WORDS:** Hodgkin's lymphoma, Ig A nephropathy, Cresentric glomerulonephritis

**ÖZ**

Glomerüler hastalıklarda, lenfoma birlikteliği en sık minimal değişiklik hastalığı ve hodgkin lenfoma birlikteliği şeklinde görülür. Membranöz nefropati ve membranoproliferatif glomerülonefrit ise sıklıkla non hodgkin lenfoma ile birlikteliği vardır. Ig A nefropatisi ve lenfoma birlikteliği daha nadir olup, sıklıkla non hodgkin lenfoma şeklindedir. Ig A nefropatisi ve kutanöz T hücreli lenfoma birlikteliği olan olgular sunulmuştur. Biz bu olguda lenfomalı hastalarda ani renal bozuklukta kresentrik glomerülonefritle prezente olan Ig A nefropatisinin de ayırıcı tanıda düşünülmesini vurguladık.

**ANAHTAR SÖZCÜKLER:** Hodgkin lenfoma, Ig A nefropatisi, Kresentrik glomerülonefrit

### INTRODUCTION

In glomerular diseases, the occurence of lymphoma is mostly observed in the form of both minimal change disease and Hodgkin's lymphoma. The coocurrence of Membranous nephropathy and membranoproliferative glomerulonephritis are generally associated with non-Hodgkin's lymphoma (1). In this case report, an unusual association involving a patient with immunoglobulin (Ig) A nephritis presented with acute cresentric glomerulonephritis, who was diagnosed with Hodgkin's lymphoma, is presented.

### CASE REPORT

A 33-year-old male was diagnosed with Hodgkin's lymphoma six months ago, and was treated with ABVD (Adriamycin, bleomycin, vincristine, decarbonize) by the Hematology Department. Apart from Hodgkin's lymphoma, the patient has been diagnosed with leukocytoclastic vasculitis by performing biopsy in the patient's skin lesions localized at lower extremity 2 months ago. The patient was started on steroid treatment for leukocytoclastic vasculitis. It was noted that the patient was started on oral-prednisone 30 mg treatment (its dosage was adjusted as 0.5-1mg/kg/day) for leukocytoclastic vasculitis and it was tapered gradually according to occurance and frequency of symptom. It was also noted that in this period, blood creatinine was normal, ANCA was negative and a renal biopsy was performed to the patient had 1 g/day proteinuria for suspected vasculitis with

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renal involvement. According to the biopsy results, findings that were compatible with Ig A (Figure 1) nepropathy were reported, but the patient did not report for the follow-up examinations. According to the physical examination of the patient who was about to begin the second cycle of ABVD treatment, the patient was conscious, blood pressure was 190/90 mmHg, heart rate was 78/minute, respiratory rate was 16/minutes and there was a swelled lesion in the lower extremity. According to the laboratory examinations; erythrocyte sedimentation rate: 60 mm/hour, white blood cell count: 4000/mm3, hemoglobin: 9.9gr/dl, thrombocyte: 75000/mm3, BUN: 98mg/dl, creatinine: 2.12mg/dl, Na: 130 mEq/l, K: 4 mEq/l, total protein: 6.8 g/dl, albumin: 2.3 g/dl, AST: 48U/L, and ALT: 35U/L. According to fully-automatic urine test, density was 1018, protein level was 300 mg/dL, white blood cells were 1/HPF (High power field), and red blood cells were 5/HPF.

According to the examinations for differential diagnosis of renal function disorder, spot urine protein/creatinine level was 13 gr/gr. There was no growth in the bacterial culture. Anti-HIV was negative, Anti-HCV was negative and HbsAg was negative. IgG, IgA, IgM, C3, and C4 levels were normal, ANA, anti-ds-DNA, anti-GBM, and p and c ANCA were negative. One red blood cell cast and 2-3 dysmorphic red blood cells were deteceted in per field of urinary sediment. According to the urinary tract USG, bilateral kidney sizes and paranchyma thickness were considered normal. Massive proteinuria was detected in the follow-ups, the patient's urine amount decreased (50-100 cc/day), hypervolemia developed, and the patient's creatinine level rapidly increased to 2.12-3.2-4.5-6 mg/dl. The patient was started on hemodialysis. On the day the patient was received dialysis treatment, was diagnosed with rapidly progressive glomerulonephritis diagnosis with the existing findings, started on 500 mg methylprednisolone IV treatment, and a renal biopsy was performed. According to the biopsy results, findings that were compatible with cresentric Ig A nephritis (Figure 2) were reported. The patient was started on steroid (three day - 500 mg IV Methylprednisolone) and cyclophosphamide treatment (0,75 g/m2 dosage 750 mg IV). After pulse steroid treatment, 40 mg/day prednisolone treatment was continued. In the follow-ups, the patient did not require dialysis, the patient's renal functions continued to decline, and the creatinine level was 1.6 mg/dl. The patient is currently being monitored in the nephrology polyclinic. The patient which had 1.5 g/day proteinuria is currently taking oral-steroid treatment for Ig A nepropathy. While the renal treatment is continued, the patient whose second cycle of ABVD treatment is postponed due to his general medical condition is taking treatment chemotherapy.

## DISCUSSION

IgA nephropathy is frequently observed together with solid tumors such as respiratory system tumors, nasopharyngeal tumors and renal cell tumors (2). While Ig A nephropathy-lymphoma association is rare, it is generally observed as non-Hodgkin's lymphoma, and there are also cases with cutaneous T-cell lymphoma (3, 4). In Hodgkin's lymphoma, pressure due to para-aortic lymph node enlargement and post-renal kidney failure is frequently observed. In addition, renal problems, urate nephropathy, tumor lysis syndrome, and treatment-associated side effects are among the other observed problems (5). Glomerular diseases are rare in Hodgkin's lymphoma, and usually associated with minimal change disease. T-helper 2-associated IL-13, which is responsible for the inflammatory response in Hodgkin's lymphoma, was demonstrated to be responsible for proteinuria, hypoalbuminemia, and hypercholesterolemia in rats. T cell dysregulation is believed to be responsible for Hodgkin's lymphoma and minimal change disease association

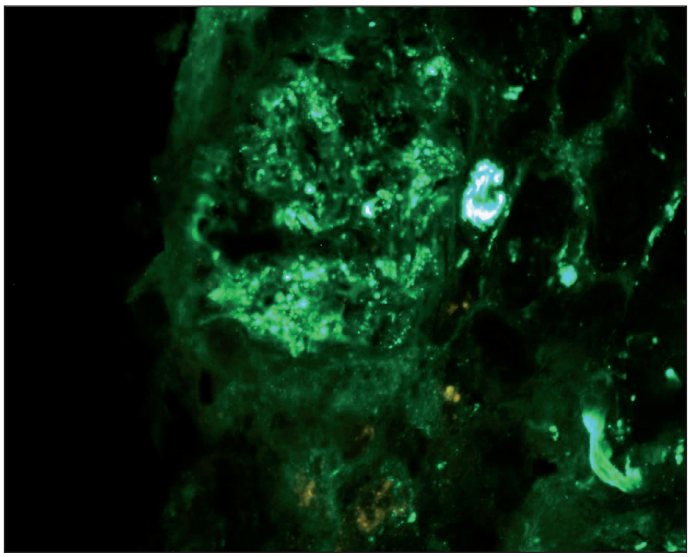

***Figure 1:*** *Renal biopsy demonstrating mesangial Ig A deposits. (Immunoflourescence microscopy).*

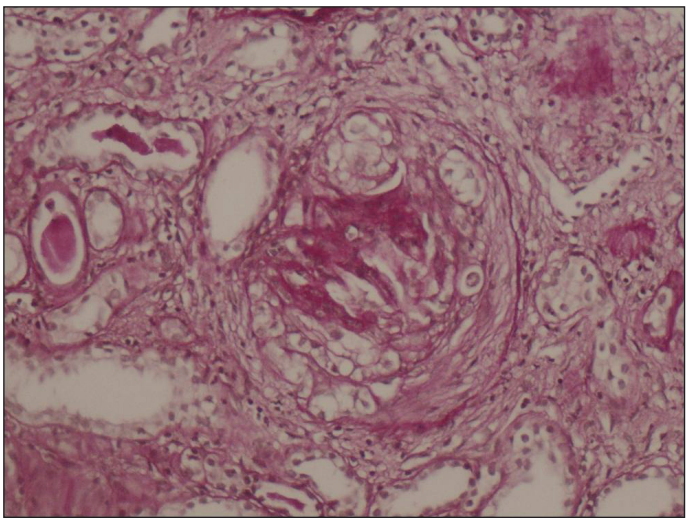

***Figure 2:*** *Light microscopy showing glomeruli with fibrocellular crescent.*

hypothesis (6). According to the literature knowledge, the association between IgA nephropathy and Hodgkin's lymphoma is rare and there are only two case reports. According to the first case presented by Cherubini et al., a 44-year-old patient with a mediastinal mass and nephrotic syndrome, was diagnosed with IgA nephropathy one year after being diagnosed with Hodgkin's lymphoma. The patient was started on eight cycles of ABVD (Adriamycin, bleomycin, vincristine, decarbonize) treatment for lymphoma. Diffuse extracapillary glomerulonephritis was detected in the renal biopsy, and the patient was started on pulse steroid treatment, followed by oral steroids for IgA nephropathy. The patient required dialysis in the beginning, but the patient's renal functions were completely restored later (7). In our case, the patient is diagnosed with Ig A nepropathy according to result of proteinuria dependent renal biopsy 4 months after being diagnosed with Hodgkin's lymphoma. However, the patient doesn't admit nephrology polyclinic because of Ig A nepropathy. In the second case presented by Bergmann et al., a 60-year-old patient was diagnosed with Hodgkin's lymphoma and IgA nephropathy after a concurrent biopsy. The patient's renal biopsy was consistent with extracapillary proliferation, and the patient was put on pulse steroid treatment, followed by eight cycles of cyclophosphamide-containing BEACOPP (cyclophosphamide, etoposide, bleomycin, doxorubicin, vincristine, procarbazine, and prednisolone) lymphoma treatment. One year after treatment, the patient's renal functions were restored (8). In our case, the patient was diagnosed with rapidly progressive glomerulonephritis diagnosis, six months after has been diagnosed with lymphoma and two months after being diagnosed with Ig A nepropathy. According to the repeated renal biopsy results, findings were compatible with cresentric Ig A nepropathy. With the help of treatment, the patient did not require dialysis within one month, however, after two months, the patient's renal functions didn't get better completely and the creatinine level dropped behind 1.6 mg/dl.

## CONCLUSION

In conclusion, the association between Hodgkin's lymphoma and IgA nephropathy is rare. In this case, it is emphasized that IgA nephropathy presented with cresentric glomerulonephritis should be considered in patients with lymphoma who have sudden renal disorder. It is possible to treat both diseases using lymphoma treatment regimes including steroids and cyclophosphamide.

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