Letter to the Editor

Nephrotic Syndrome associated with Non Hodgkin's Lymphoma

Sir,

Associations between Nephrotic Syndrome & extra renal malignancy was described by Galloway in 1922.[1] Since that time, a number of case reports have appeared in literature linking nephrotic syndrome with Hodgkin's disease, leukemia and various carcinomas, but its association with Non Hodgkin's Lymphoma (NHL) is uncommon especially in children.[2, 3]

Case: A 11 year old boy presented with 3 months history of progressive swelling of the body, bilateral inguinal swellings and low grade fever. There was no history of dysuria, hematuria or oliguria. On admission, he appeared ill. He had pallor, bilateral pedal oedema, mild facial puffiness and generalized lymphadenopathy. A large lymph node mass was present in the left inguinal area (5cm X 5cm), which was firm and matted. He was normotensive.

Initial investigations revealed: Hb – 11.2 gm%, TLC – 7,200, PS: Normocytic normochromic RBCs, N63, L25, E7 M5 with few abnormal cells & atypical cells and normal platelet count.Urine showed traces of protein. Renal function tests, uric acid and LDH were normal. Liver function tests were normal except total protein 4g/dl, albumin – 2.1 g/dl, globulin 1.9 g/dl. Ultrasound abdomen showed borderline hepatomegaly, para aortic and iliac lymphadenopathy and minimal ascites. FNAC and biopsy of lymphnode was suggestive of lymphoblastic lymphoma. Bone marrow examination showed infiltration into marrow (>70% blasts). Tumour cells were +ve for LCA, Tdt,Mic 2, CD_{34}, $CD_{3,}$ CD_7 and were negative for MPO and $CD_{20,}$ CD_{19}.

He was started on MCP -841 protocol along with other supportive measures. Two days later, while the inguinal swelling slightly reduced in size, he developed increasing oedema along with oliguria and nephrotic range proteinuria (24 hr urine protein - 42 mg/m^2/hr). Blood urea and serum creatinine became significantly abnormal and hence a diagnosis of nephrotic syndrome with acute renal failure was made. Serum C3 level was normal but repeat ultrasonogram showed Grade I parenchymal changes in kidneys. Subsequently urea and creatinine gradually continued to increase upto 98 & 2.6 mg/dl respectively with significant oliguria (urine output of < 0.3 ml/Kg/hr). He developed electrolyte imbalance in the form of hyponatremia (Sodium -118 mEq /L). Based on these indications, chemotherapy was discontinued and he was treated with peritoneal dialysis for 90 hours along with prednisolone (60 mg/m^2/day) and other supportive measures. His renal function recovered with improvement in clinical status and he achieved remission of nephrotic syndrome by the third week of steroid therapy. Subsequently, the boy was restarted on MCP – 841 protocol and hematological remission (D28 marrow) was achieved after 4 weeks of therapy. Presently he has completed therapy (30 months). He is well and is in clinical as well as hematological remission and is on follow up.There is no evidence of recurrence of nephrotic syndrome.

COMMENTS:

The most common subtype of lymphoma associated with nephrotic syndrome is Hodgkin's disease. NHL has been associated with nephrotic syndrome but mainly in adults and is often characterized by impaired renal function. A majority of such cases have occurred as a result of direct infiltration of lymphoma cells into the kidney. However, there is correlation between

albuminuria and the inflammatory cytokines produced by malignant cells which cause an inflammatory leakage of albumin from the glomerulus.[4] Never theless, in most cases, the exact nature of the renal lesion and its etiologic relationship to the tumour is not well defined. It has been suggested that though the association is infrequent it is clinically reasonable to screen all patients with nephrotic syndrome for underlying malignancy and conversely to examine 24 hour urinary protein in all patients with malignancy.[5] Our patient, a case of lymphoblastic lymphoma with nephrotic syndrome developed renal insufficiency which required initial peritoneal dialysis to tide over the critical situation till gradual resolution began under the effect of steroid therapy. A renal biopsy was ruled out owing to improving renal functions after the critical phase was over. We are presenting this case for its rarity and unusual presentation. Such an association may support the hypothesis of a pathogenetic link between acquired T-cell abnormalities and glomerular diseases with minimal histologic injury.[6]

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