A Case of Hodgkin Lymphoma Presenting as Nephrotic Syndrome

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Abstract

Nephrotic changes as part of the paraneoplastic syndrome are rare in lymphoid malignancies. One percent of cases of Hodgkin's Lymphoma cases may present with nephritic syndrome. We are reporting a case which initially presented as nephritic syndrome and later was diagnosed to have of Hodgkin's Lymphoma and managed accordingly.

Key words: Nephrotic Syndrome, Hodgkin's Lymphoma, Retroperitonial lymphadenopathy

Introduction

Paraneoplastic glomerulopathy has been reported in patients with malignancy[1]. Nephrotic changes as part of the paraneoplastic syndrome are rare in lymphoid malignancies[2]. In particular, the association of nephrotic syndrome (NS) with Hodgkin's Lymphoma (HL) is rare and there are few reports in the literature[3,4,5]. In the paediatric population an incidence of 1% has been described in France (5 patients out of 483 children with HL)[6]. Minimal change nephropathy is the most frequently observed renal lesion whereas this association appears, either simultaneously or within several months of each other[2,3,5,6,7].

The Case

A 12-year-old, boy was admitted with complaints of periorbital and lower-extremities oedema, weight gain. There was no history of fever or night sweats. There was no lymphadenopathy or hepatosplenomegaly. His serum albumin was 1.6 gm/dl and serum cholesterol was 268mg/dl. Urine protein was 3+ and urine protein creatinine ratio was 2.2.

With the diagnosis of NS, the initial treatment consisted of prednisolone. He achieved remission in 2 weeks. After 6 weeks of daily steriods he was put on alternate day prednisolone. Two months later while on alternate day prednisolone, in an ultrasound examinationon he was found to have had retroperitonial mesentric Lymphadenopathy (Fig 1). Lab parameters were Hb-8.5gm%, TLC-11700 /cm, Urine: protein 4 + , A/G: 3.0/2.0, Serum cholesterol: 198, Blood urea/ S Cr: 35/0.7 mg/dl, Na/K: 141/3.8 mmol/l, HBV/HCV/HIV:

Neg, LDH: 370U/L, CXR: NAD, CECT Chest+Abdomen was suggestive of Retroperitoneal Lymphadenopathy (Fig 2). Laproscopic Lymph Node biopsy done under GA which showed charactrestic of Hodgkin lymphoma of nodular sclerosis subtype (Fig 3). He was started on chemotherapy (ABVD). Presently he is in complete remission with no signs of NS found during the follow-up evaluations.

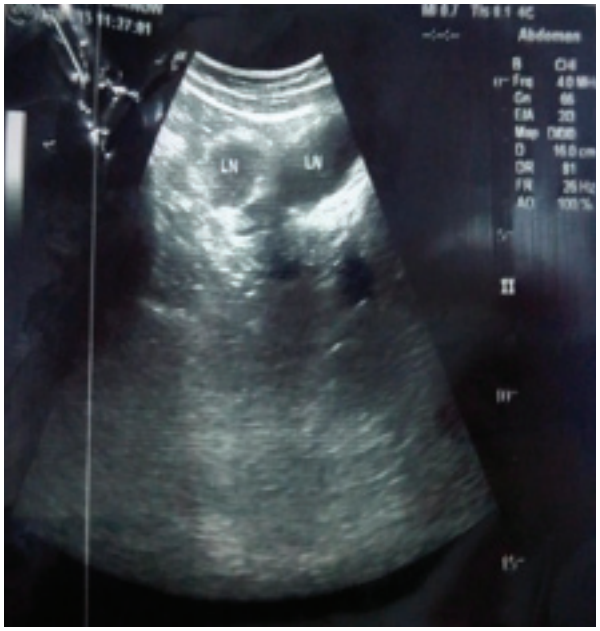

Fig 1: USG abdomen showing retro peritoneal lymphadenopathy

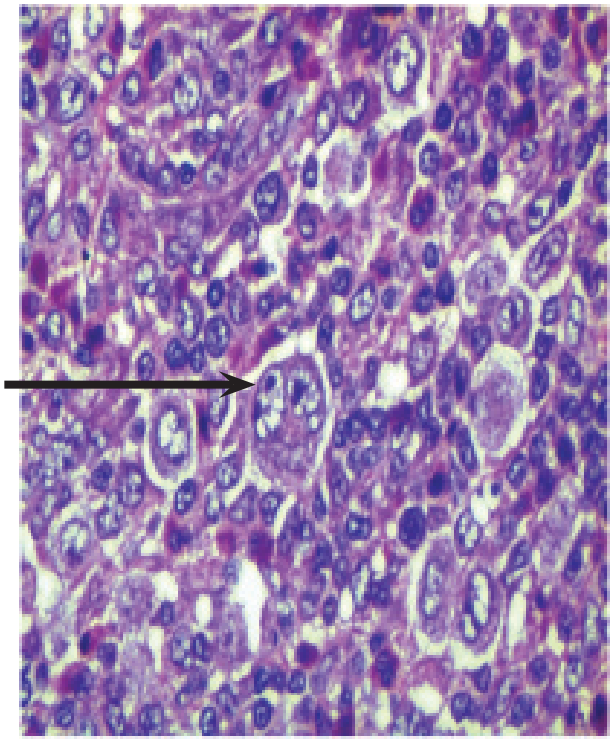

Fig 3: Histopathology of abdominal lymph node biopsy showing showing Reed Sternberg Cell

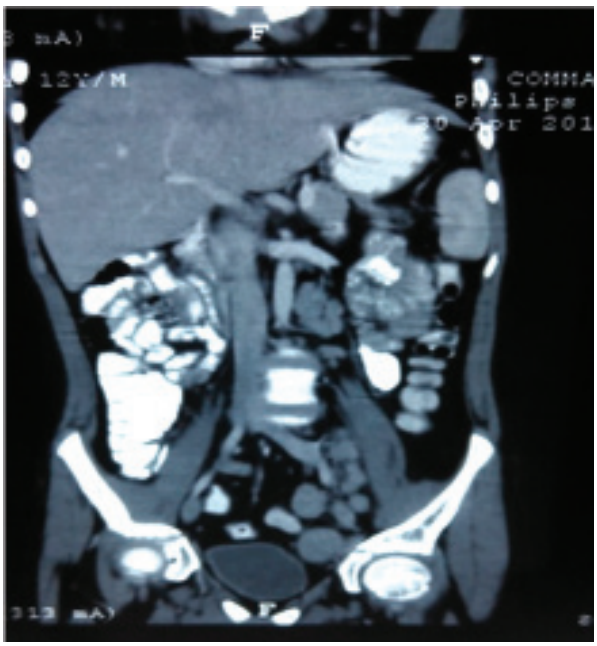

Fig 2: CECT abdomen showing para aortic & iliac lymphadenopathy

Discussion

NS is a rare complication of Hodgkin's disease. Minimal change is most common NS seen with Hodgkin's disease. In 90% cases, NS is idiopathic. Approximately 10% cases of idiopathic NS are associated with different neoplastic disorders including solid tumours, carcinomas, lymphoma. Amongst lymphoma, nephrotic syndrome is ten times more common in patients with Hodgkin's disease.

The kidney can be involved in neoplastic diseases in many ways: direct infiltration, renal vein thrombosis, renal artery or ureter compression, biochemical abnormalities (hypercalcemia, hyperuricemia), amyloidosis and paraneoplastic disease. NS is well known as a paraneoplastic manifestation of HD and there are several cases in which the recurrence of lymphoma is reported in conjunction with a recurrent episode of NS[8]. The association of NS and HD having an incidence of 0.4% has been published in a large study on more than 1700 cases of HD and a similar percentage (0.6%), without sex predominance, has been reported in a more recent paper on 661 children affected by HD[9,10]. It shows that the most common morphological subtype of HD (71.4%) is nodular sclerosis[11] and MCNS is a predominant kidney disease with some rare cases of HD associated to Focal Segmental Glomerulosclerosis (FSGS), IgA nephropathy, membranous glomerulopathy (which is a type of NS predominating in solid tumours) or membranoproliferative glomerulonephritis[10,11,12,13]. Until now a clear pathophysiologic link between malignancy

and renal disease has not been established, even though it is postulated that the cause of MCNS could be T cell dysfunction with abnormal secretion of cytokines, altering the permeability of the glomerular basement membrane, whereas, in case of other kidney diseases, such as membranous glomerulopathy, the pathogenesis could be mediated by immunocomplexes[12]. In the majority of HD cases associated with NS, selective serious albuminuria with normal renal function is the typical manifestation, with nodular sclerosis being predominant histological variety and almost ever, reversal of the renal disease is reported when the treatment against HD (chemotherapy and/or radiotherapy) results in complete remission. On the contrary, steroids, especially in NS predating lymphoma, are often, more or less ineffective[11]. However our patient responded well to prednisolone. Finally, it is our opinion that in the case of nephritic syndrome that does not respond or responds very poorly to steroid therapy or has atypical features, nephrologists should suspect an occult lymphoma.

Conclusion

Nephrotic syndrome is a common renal disease seen by paediatricians. Most of the cases are because of Minimal change disease and are managed empirically with prednisolone. However as shown in our case, the adolescents presenting with nephritic syndrome should be investigated for secondary aetiology.

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