Clinical and morphological features of kidney involvement in primary Sjögren's syndrome: 50 cases

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Introduction

Primary Sjögren's syndrome (pSS) is a connectivite tissue disorder affecting primarily the lacrimal and salivary glands, resulting in xerophtalmia and xerostomia.

Extraglandular manifestations are frequent and may include kidney involvement.

Methods

We studied the frequency and nature of renal involvement in 50 Tunisian patients with pSS, studied during the period of 1975 to 2011. SSp is diagnosed according to the 2002 European classification criteria.

Results

Fifty patients (26.73%) had laboratory evidence of tubular and/or glomerular dysfunction. There were 45 women (90.4%) and 5 men (9.6%), with a mean age of 50.81+15.95 years (range 25-78 yr). Dry eyes (96%) and dry mouth (80%) were the predominant clinical symptoms. Twenty three patients (46%) tested for ocular signs of pSS using a Rose Bengal score dye test, Schirmer test or Break up time test, 21 of 23 were consistent with keratoconjuntivitis sicca. In five of our patients, renal disease antedated by an average of 6 years the onset of ocular and oral symptoms.

Twenty one patients (42%) had tubular acidosis. Creatinine clearance reduction was found in 36 patients (72%) and hypokalaemia in 3 patients. Pathological proteinuria was found in 23 patients (46%).

Hypergammaglobulinaemia was present in 30 patients (60%), six patients had positive serologies to SSA and SSB, five patients had positive rheumatoid factor, and three patients had cryoglobulinemia. Salivary gland biopsy was practized in 47 cases (94%) and showed class 3 in16 cases (30%) and class 4 in 9 cases (18%).

Kidney biopsy (KB) was undergone for 13 patients (26%).

In five patients (38.46%), the primary lesion seen on KB was chronic tubulo-interstitial nephritis (TIN). Mild TIN was noted in the context of a primary glomerular lesion in three other patients. Five patients (10%) had a primary glomerular lesion on KB, with proliferative glomerulonephritis (two cases), focal segmental nephritis (one case), and IgA nephropathy (two cases) are the most common pathologic findings. Six patients (3.2%) had renal stones. 25 patients were treated by corticosteroids, and two patients were treated by cyclophosphamide (for renal and neurological features). 16 patients were achieved the end stage of renal disease (ESRD) and treated by hemodialysis.

Discussion

Renal disease in pSS patients, unlike the dominant Glomerulonephritis (GMN) of other autoimmune diseases, is mostly interstitial tubular nephritis with or without renal tubular acidosis. The renal injury in pSS is due to lymphocyte infiltration of the interstitial space. Several serum markers correlate with renal injury in SS including hyper-gamma-globulinemia, increased serum protein and serum beta2-microglobulin.

Of the 13 patients with SS with documented renal biopsy, 5 patients showed tubulointerstitial nephritis, 5 glomerulonephritis, and 3 had both entities. two finally developed chronic renal failure requiring haemodialysis.

These two types of SS related renal disease (tubular and glomerular) have important pathogenic, clinical, and prognostic implications. TIN is considered to be a specific tubular epithelitis and is characterised by an indolent subclinical course without development of renal failure. In contrast, GMN should be considered a severe extraepithelial manifestation closely associated with cryoglobulinaemia and hypocomplementaemia, appearing late in the course of primary SS and associated with higher morbidity and mortality. A renal biopsy is probably unnecessary in patients with a suspected TIN, while those with GMN require early diagnosis and therapeutic management.

Conclusion

Renal involvement in Sjögren's syndrome may be frequently latent. Thirty two percent of our patients had achieved the ESRD, the renal involvement is rarely overt, and more often follows a subclinical course. In same cases it may precede the onset of subjective sicca syndrome.