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GRANULOMATOUS TUBULO-INTERSTITIAL NEPHRITIS

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Case history
Male 55 years old with previous history of pulmonary disease with diagnostic of sarcoidosis three year before, with mediastinic and interstitial pulmonary affectation. No history of renal dysfunction was detected. The Crp was 1.3 mg/dl at that moment. Corticoid treatment was supplied with improving of lung symp toms.  
He was hospitalized because a deterioration of renal function with Crp of 3.4mg/dl, was detected in a routine analysis. The patient only report malaise without urinary symptoms since one month before. No feber, thoracic, lumbar pain or dermatologic alteration was detected. The BT was 120/80. He denied intake any antibiotic or anti-inflammatory treatment.  
Hemogramme: eritrocytes. urea 80 mg, cholesterol 182mg, trigliceridos 180 mg.  

A renal biopsy was indicated:  
Granulomatous interstitial nephritis was the main histologic feature with some calcium intratubular deposits. Important tubular cell lesion with lymfocites and plasma cells was observed.

GRANULOMATOUS TUBULO-INTERSTITIAL NEPHRITIS: SARCOIDOSIS

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An extensive list of conditions can be associated with granulomatous interstitial nephritis. The granulomas formation can be associated with variable and divers etiologic agents. The most common cause of granulomatous interstitial nephritis is an exposure to drugs, follow Wegener's granulomatosis and tuberculosis or sarcoidosis.
Sarcoidosis is a systemic chronic disorder characterized by the non-caseating epithelioid granulomas, affecting preferentially the lungs and lymph nodes in the 90% of the cases. Renal involvement manifested by renal dysfunction is uncommon about 1-2% of the all biopsied patients with sarcoidosis, but in autopsy series the renal involvement is higher between to 25%.

The clinical expression is related with tubular interstitial pathology and uncommon glomerular affection. The most common clinical presentation is acute renal failure and poliuria, but the renal dysfunction my result from different causes related with the disease: calcium deposits, or obstructive uropathy.

The presence of granulomatous inflammation in kidney interstitium is the histopathologic hallmark. The main differential diagnosis must to be done with all granulomatous disease such as: toxic granulomatous interstitial nephritis, Wegener’s granulomatosis, mycobacterial or fungal infections.

The light microscopic features consist in well-formed and sharply granulomas with many histiocytes and epithelioid cells. Calcium tubular deposits and nephrocalcinosis is another histologic finding in hypercalcemic and hypercalciuric patients with sarcoidosis.

The etiology is unclear. The presence of CD4 and macrophages cells suggest the implication of an immune mechanism. The relation between citokines, TNF alfa, and granuloma formation is discussed.

The steroid is the election treatment with good response, but an evolution to chronic renal failure is not infrequent with development to interstitial fibrosis and tubular atrophy. In our case 1mg/day of steroid was indicated with improve of the renal function since 3mg/dl to 1.6mg/dl.

The case had all diagnostic caracteristic of sarcoidosis with important tulo-interstitial affection. The clinical presentation was acute renal failure with hipercaleuria. Lung affectionation was also confirmed. The renal function improved after steroid treatment.

Selected references