THE OUTCOME OF CHRONIC INTERSTITIAL NEPHRITIS

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INTRODUCTION AND AIMS

Chronic Interstitial Nephritis (CIN) is a histologic entity characterized by progressive scaring of the renal interstitium, with consequent fibrosis and tubular atrophy. It is of clinical relevance because is a solid predictor of present and future renal function.

The aims of this study were to characterize our CIN patients: causes for the disease and progression of renal dysfunction, during a 10 years period, from 2004 to 2013.

POPULATION AND METHODS

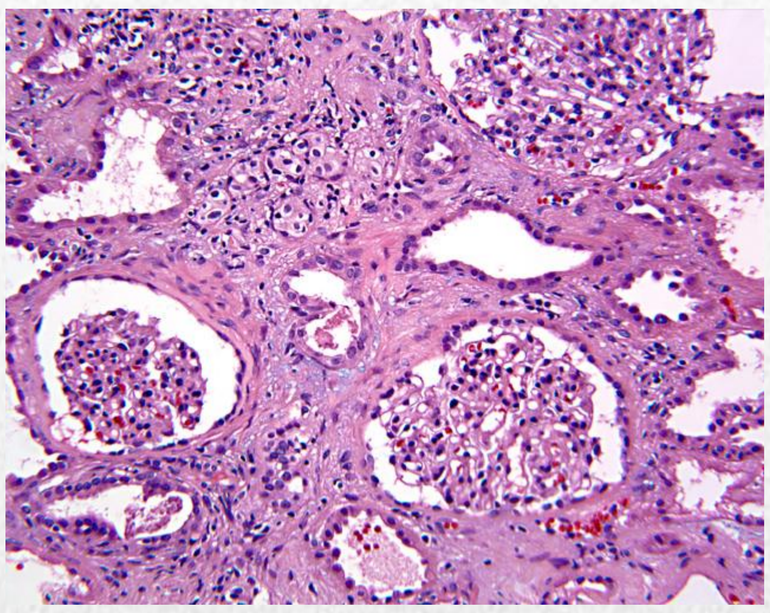
We performed a retrospective, observational study, based on clinical records of patients whose renal biopsies were classified as CIN by our renal morphology unit.

Clinical data analysed: age at biopsy, gender, clinical presentation of CIN, serum creatinine (Scr) at biopsy time, 24h proteinuria at biopsy time, urinary sediment, aetiology of disease, follow-up period, Scr at end of follow-up, renal function status at end of follow-up.

RESULTS

83 CIN DIAGNOSIS

REASONS FOR RENAL BIOPSY		
Chronic Kidney Disease	39.8%	n=33
Proteinuria	30.1%	n=25
Acute Kidney Injury	24.1%	n=20
Hematoproteinuria	6%	n=5



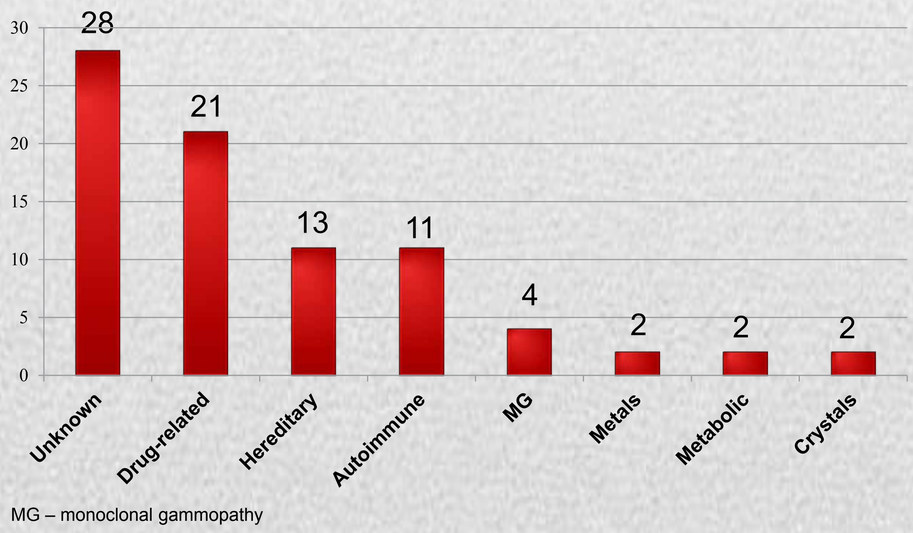
CIN in renal biopsy: the interstitium is expanded by fibrosis, with distortion of tubules. No pathologic changes in glomeruli (HE x200).

- 17 with auto-immune disease (20.5%)
- 10 with neoplasic /para-neoplasic lesion (12%)
- 8 with a viral infection - HIV or HCV (9.6%)

- 43 males (51.8%)
- Mean age of 52.7±17 years

- Mean Scr at time of biopsy 2.8±2.2 mg/dl
- Mean Proteinuria of 1.7±9 g/24h

AETIOLOGY OF CIN



MG – monoclonal gammopathy

CLINICAL CHARACTERISTICS OF PATIENTS			
Aetiology	**Age (years)**	**Proteinuria (g/24h)**	**Scr (mg/dl)**
Unknown	58.2	2.5	3.6
Drugs	53.2	1.1	3.2
Hereditary	39.3	1.3	1.7
Autoimmune	48.1	1.3	2.2

Hereditary CIN patients were younger, with lower Scr mean values (p=0.02).
Drug-related CIN patients had higher Scr mean values (p=0.008).
CIN in patients with viral infections was associated with drug-related CIN (7/8 patients; p<0.001)

FOLLOW-UP PERIOD: 33 patients

DIFFERENCES BETWEEN FOLLOW-UP			
Aetiology	**Need HD**	**Fup (months)**	**Scr (mg/dl)**
Unknown (n=7)	4	30.6	1.9
Drugs (n=9)	2	39.9	2.1
Hereditary [1] (n=7)	0	47.9	1.8
Autoimmune (n=6)	2	27.6	1.6
MG (n=2)	1	5.7	2.3
Metals (n=1)	0	10	5.2
Metabolic (n=1)	0	23	0.8

HD – Hemodialysis; Fup – Follow-up; Scr – Serum creatinine at end of Fup; MG – Monoclonal gammopathy
[1] – Presumptive diagnosis based on family history

Unknown causes for CIN are associated with dialysis need (p=0.04)
Hereditary causes for CIN tended to stable renal function, avoiding the need for dialysis

There were no deaths nor renal transplants in this population.

24 (72.7%) are maintained in consult evaluation

- ✓ Median follow up of 40.9 months
- ✓ Mean Scr of 2.1±0.9 mg/dl

CONCLUSIONS

Hereditary CIN had better renal function, probably related to increased vigilance, and earlier detection in their course.

Despite having worse renal function on diagnosis, progression towards to ESRD was not frequent in drug related CIN. This may be reflect of the increased choice of less nephrotoxic alternatives.

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