SUMMARY

Microalbuminuria is defined as elevation of urinary albumin excretion rate in absence of clinical proteinuria, as measured by standard laboratory methods *(Mogensen et al., 1988)*.

Microalbuminuria is an indicators of early renal impairment in RA patients due to direct effect of disease pathology or nephrotoxic effect of drug therapy *(Mogensen et al., 1988)*.

Forty patients fulfilled the criteria of outpatient clinic of Benha University and Mansoura General Hospital.

They were 29 females (72.5%) and 11 males (27.5%) with ages ranging between 20-50 years (mean 33.7 $\pm$ 8.6).

Thirty-four persons matching our cases as regard sex and age, served as control group.

All patients were subjected to full clinical examination, laboratory investigation and X-rays studies.

Twenty-four hour urine sample is taken and A/C ratio is detected for studied patients.

The results of this study demonstrated that; studied patients are divided into 2 groups according to (Albumin/Creatinine ratio) = A/C into :

Group I : They are 40 RA patients, having A/C ratio ranging between 0.7-23 mg/mmol (mean 5.62 ± 5.2). They subdivided into :

Group IA : They are 14 RA patients, without microalbuminuria having A/C ratio < 3mg/mmol (Mean 1.9 ± 8.7).

Group IB : They are 26 RA patients, with microalbuminuria having A/C ratio 3 - 30 mg/mmol (mean 7.6±5.5).

Group II : Thirty four person as a control group, having A/C ratio between 0.5-2.8 mg/mmol (mean 1.7±0.82).

- Duration of RA disease regard between 2-13 years in group IA (mean 5.6±3.4) and ranged 2-15 years in group IB.

- Duration of morning stiffness in group IA ranged between 0.10-0.50 hour (mean 0.34±0.15) and in group IB it ranged between 1.0-3.0 hour (mean 0.93±0.56).

- Seven patients (66.6%) out of 12 patients under non-steroidal anti-inflammatory drugs (NSAIDs) show microalbuminuria, 6 patients (85%) out of 7 patients under pencillamine therapy show microalbuminuria, and 8 patients (80%) out of 10 under gold show microalbuminuria.

- ESR in group IA ranged between 20-100 mm/h (mean 65.35±20.2) and in group IB it ranged between 10-30 mm/h (mean 58.8±28.75).

- CRP in group IA ranged between 0.5-6 mg% (mean 1.87±1.8) and in group IB ranged between 0.6-16 mg% (mean 7±4.8).

- HB values ranged between 10-13.5g% in group IA (mean 11.89±1.0) and in group IB it ranged 2.5-14g% (mean 11.67±2.1).

- In group IA, RF was positive (+ve) in 8 patients (57.1%), negative (-ve) in 6 patients, and in group IB, RF was +ve in 8 patients (30.8%) and -ve in 18 patients (69.2%).

Statistical evaluation revealed that :

(1) There was a significant correlation ($P<0.05$) between duration of RA disease and microalbuminuria.

(2) There was a highly significant correlation ($P<0.01$) between duration of morning stiffness and microalbuminuria.

(3) There was a highly significant correlation ($P<0.01$) between CRP and microalbuminuria.

(4) There was no significant correlation ($P>0.05$) between ESR, HB, RF each with microalbuminuria.

CONCLUSION

In conclusion, microalbuminuria and subclinical renal damage are frequent in RA, particularly in those with long standing disease. A subclinical renal involvement may not be revealed by routine laboratory tests such as serum creatinine. Our results suggest that microalbuminuria is a more sensitive predictor of renal dysfunction in patients at risk, its measurement may serve as a useful tool for the mangment of patients with RA, but without clinical nephropathy. The effect of many antirheumatic drugs on glomerular and tubular function can be of clinical importance and should be monitored with sensitive method. We recommend immunological methods measuring urinary excretion of albumin as a routine procedure to detect glomerular involvement in its initial phase in order to devise the most appropriate treatment in patients with RA.