SUMMARY AND CONCLUSION

This study was carried on 20 patients (14 male and 6 female) with chronic renal failure treated by hemodialysis, to all subjects the following weredone :-

- Full clinical examination.
- Blood urea before and after dialysis.
- Serum creatinine before and after dialysis.
- Hematocrite value before and after dialysis.
- Serum sodiu, potassium and calcium before, two hours after begining and just immediately after hemodialysis.
- Electrocardiograph before, two hours after begining and just immediately after hemodialysis.

The results of this work show that:-

(1) There is a significant decrease in serum creatinine after hemodialysis ($P < 0.001$).

(2) There is a significant decrease in blood urea after hemodialysis ($P < 0.05$).

(3) There is a non significant increase in hematocrite value after hemodialysis ($P > 0.05$).

(4) There is a significant decrease in serum K^+ from the period just before hemodialysis to two hours after

begining of hemodialysis ($P < 0.001$), there is also a significant decrease from the period just immediately before hemodialysis to just immediately after hemodialysis ($P < 0.001$), there is a nonsignificant decrease in serum potassium from the period two hours after begining to the end of hemodialysis ($P > 0.05$).

5- There is a significant increase in serum sodium level from before to two hours after begining of hemodialysis. ($P < 0.01$), there is also a significant increase in serum sodium level from just before to immediately just after hemodialysis ($P < 0.001$), again there is asignificant increase in serum sodium level from two hours after begining to just immediately after hemodialysis ($P < 0.01$).

6- There is a nonsignificant increase in serum calcium level from just before to two hours after begining of hemodialysis ($P > 0.05$), there is a significant increase in serum calcium level from just before to just immediately after hemodialysis ($P < 0.01$), again there is a significant increase in serum calcium level from two hours after begining to immediately just after hemodialysis ($P < 0.05$).

(7) P-R interval: There is insignificant increase in P-R interval from just before to two hours after begining, from two hours after begining to just immediately after hemodialysis and from just before to just immediately after hemodialysis ($P > 0.05$).

(8) QRS Duration:- There is insignificant increase from just before to two hours after begining of hemodialysis, from just before to just immediately after hemodialysis and from two hours after begining of hemodialysis to just immediately after hemodialysis ($P > 0.05$).

(9) Corrected Q-T interval duration: There is a significant increase in duration of corrected Q-T interval from just before to two hours after begining of hemodialysis ($P < 0.05$), from just before to just immediately afterhemodialysis and from two hours after beginning to just immediately after hemodialysis ($P < 0.05$).

(10) S-T segment duration: There is a non significant shortening from just before to two hours after begining, from just before to just immediately after and from two hours after begining to just immediately after hemodialysis ($P > 0.05$).

(11)There is a non significant relation between duration of corrected Q-T interval in second and serum creatinine in mg/100 ml and blood urea in mg/100 ml both before and after hemodialysis ($P > 0.05$).

(12)There is also a non statistically significant relation between duration of corrected Q-T interval and serum potassium, sodium and calcium before, during and after hemodialysis ($P > 0.05$).

Conclusion:

Changes in serum sodium, potassium and calcium before, during "two hours after begining" and just immediately after hemodialysis are not the only causes of changes in duration of P-R interval, QRS complex, corrected Q-T interval and S-T segment just before, during "two hours after begining" and just immediately after hemodialysis. But there may be unidentified uremic toxins or cardiomyopathies that may be the main factors in causation of these electroctroconductive heart changes in patients with chronic renal failure under regular hemodialysis.