Summary
&
Conclusions
SUMMARY AND CONCLUSIONS

1. The study was undertaken on forty adult patients of CKD with anemia coming to OPD and wards of Department of Medicine, MLB Medical College, Jhansi. All the patients who were enrolled in the study were advised necessary base line investigations to look for renal and hematological parameter.

2. On the basis of hematological parameters, type of anemia was established.

3. The patients were randomly put into two groups A and B each consisting of 20 patients. Patients of Group A were given oral Iron in the form of one capsule of 300mg of Ferrous fumerate (containing 100mg of elemental iron) twice daily. The patients of group B were given 100mg of elemental iron in the form of Iron sucrose as I.V preperation per week.

4. Patients of both the groups were given recombinant human erythropoietin in the dosage of 2000 units subcutaneously twice weekly.

5. The patients were followed for a period of 3 months and at the end of 3 months of therapy the patients were reassessed for hematological parameters. The response to iron therapy was judged in terms of improvement in hematological parameters and the two groups were compared with each other.

6. The age range of patients in Group A was 23-66 years and in Group B was 24-68 years. In Group A 85% of the patients were in
age group 20-49 years where as in Group B 80% of the patients were in age group 20-49 years.

7. In Group A, 13 patients were male and 7 were female, where as in Group B, 15 were male and 5 were female. Thus male : female ratio in Group A was 1.85:1 and in Group B was 3:1.

8. Out of all the 40 patients studied, 47.5% had normocytic-normochromic anemia and 32.5% had microcytic hypochromic anemia. Megaloblastic anemia was observed in 5% cases whereas remaining 15% had a mixed type of blood picture. Out of all cases of microcytic hypochronic anemia 70% were females.

9. Mean baseline serum creatinine value was 4.78±1.89 in Group A and 4.27±1.62 in Group B.

10. In group A, mean baseline Hb was 6.20±1.10 and Hct was 18.55±3.28 and in Group B, Hb was 5.64±0.83 and Hct was 17.0±1.96.

11. In patients of Group A who were put on oral iron therapy, the mean Hb level increased from the baseline value of 6.20±1.10 to 8.70±1.20 and Hct increased from 18.55±3.28 to 28.05±2.07 with 3 months of therapy. Rise in both these value was statistically significant (p<0.001).

12. In patients of Group B, treated with I/V Iron, the rise in mean Hb level was from baseline value of 5.64±0.83 to 10.42±1.20 and in Hct from 17.0±1.96 to 33.05±2.3. This was also statistically significant (p<0.001).
13. Thus, in comparison, the rise in Hb as well as in Hct was much more in patients of Group B who received I/V iron therapy and the difference between the two groups was also statistically significant (p<0.001).

14. The increase in serum Iron was observed in patients of Group B who had a mean baseline level of 99.35±20.22 µg/dl and at 3 month 113.7±21.57 µg/dl and this was statistically significant (p<0.01). Contrary to this patients of Group A showed a statistically significant (p<0.001) fall in serum iron from a baseline level of 103.6±19.0 to 79.85±21.72 µg/dl at 3 months.

15. In patients of Group A, Se. ferritin value decreased significantly (p<0.001) from mean baseline value of 156.8±33.20 to 95.9±29.52 ng/ml at 3 months, whereas in patients of Group B, it increased significantly (p<0.001) from 153.85±29.70 to 216.55±32.46 ng/ml at 3 months.

16. TIBC in Group A decreased from 253.55±27.12 at baseline to 242.75±29.0 at 3 months and in Group B, from 256.80±31.75 at baseline to 238.7±28.70 at 3 months and both of these were statistically significant (p>0.05).

17. A statistically significant (p<0.001) fall was observed in TSAT in patients of Group A from baseline value of 42.64±10.8 to 34.70±12.96 at 3 months of therapy. Contrary to this a statistically significant (p<0.01) increase was observed in patients of Group B from baseline of 40.90±9.46 to 50.30±7.69 at 3 months.
Thus, it can be concluded from our study that –

1. Anaemia in majority of CKD patients in although of normocytic normochronic type, a reasonably high number of patients also have a microcytic hypochronic type.

2. I/V iron therapy is far better than oral Iron in management of anemia in CKD patients receiving erythropoietin.