

proteins and although there are no exact statistics, colleagues who concentrate on private practice have reported up to 40% coronary heart disease among their patients.

#### Discussion and Conclusion

This survey has covered a population with habits which contain large quantities of carbohydrates. The major form of disease appears to be rheumatic endocarditis with rather low incidence of coronary heart disease. The number of chronic forms of rheumatic heart disease and congenital heart disease may appear excessive but the excess we consider to be due to the better equipment and modern facilities for investigation and treatment, especially surgical treatment at the University Department of Cardiology, and treatment takes place in the general hospitals.

From the Registrar General's death records in Teheran, it appears that as a whole the death rate from heart disease is on the increase with the introduction. Regrettably the Registrar General's records do not give accurate information regarding the form of heart that has caused the death.

We can however to some extent conclude the number of rheumatic heart disease cases, although large, has not increased over the years as shown by the graph demonstrating the cases admitted and deaths from the disease in the Children's Department.

Taking this into consideration we would like to end by stating that the increase in cardiac deaths is due to ischemic heart disease.

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## HISTOLOGICAL CHANGES OF THE KIDNEYS IN IRON DEFICIENCY ANEMIA

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The Association of anemia in chronic renal diseases is known for many years,<sup>(1)</sup> but as I know there is no study in literature to show the changes of kidney in anemia specially iron deficiency anemia (4,8,5,6).

I had opportunity to study the kidney biopsy of 6 patients with iron deficiency anemia in the Razi university Hospital. The purpose of this article is to describe the findings in these patients.

#### MATERIALS AND METHODS

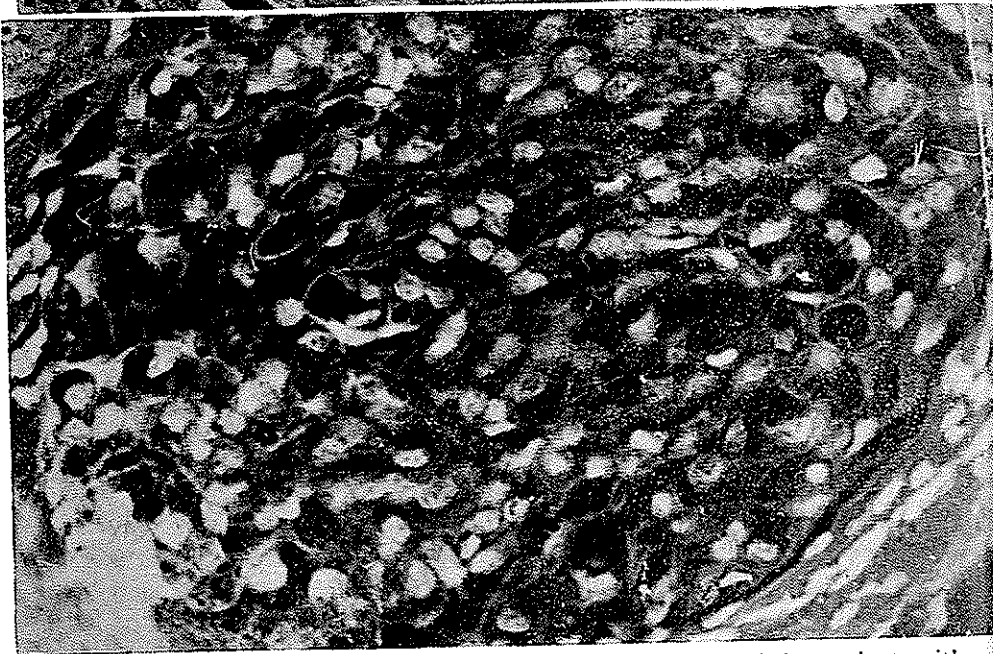
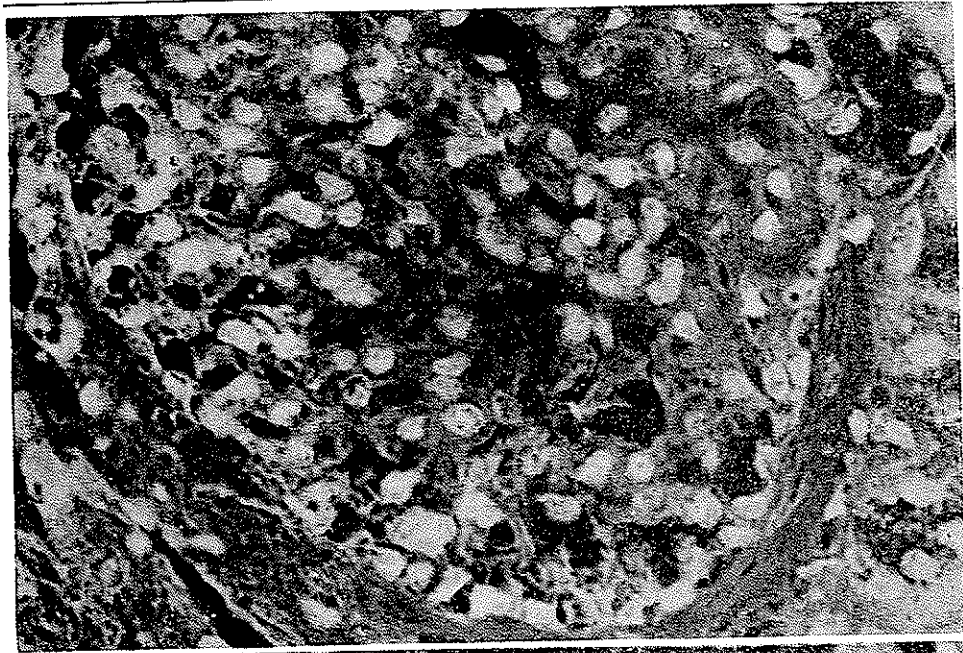
There were 17 patients with iron deficiency anemia among 27 patients with anemia of the different etiology.

The iron deficiency anemia was diagnosed on the basis of lack of iron in the bone marrow, and microcytic hypochromic appearance of the peripheral blood (?). Hemoglobine was below 8 gm% in all patients and the mean MCH was less than 20 micromicrogram, MCV less than 50 microcubic, MCHC between 18-23% the mean serum iron was 40 mg % in 11 patients (five patients had nutritional iron deficiency anemia and 4 patients iron deficiency anemia of chronic blood loss.) Kidney biopsy was performed with Vim Silverman Franklin needle. Totaly 8 biopsies were obtained from 11 patients.

#### RESULT

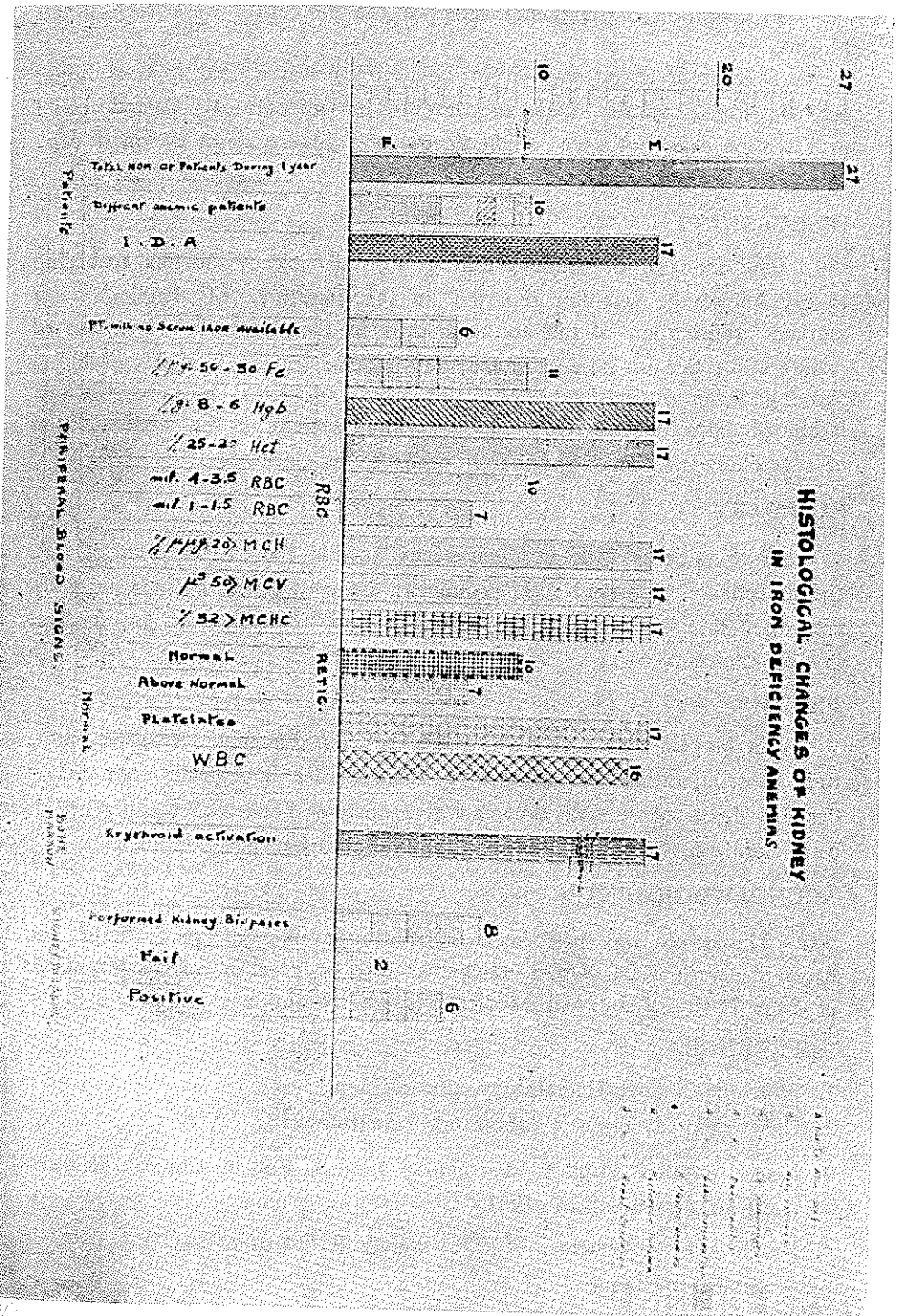
The light microscopic appearance was remarkable in 6 patients. Three patients had iron deficiency anemia of chronic blood loss (ulcerative colitis, gastritis and unknown chronic rectorrhagia). Three patients had nutritional iron deficiency anemia. There were no changes in the tubules of all and the most visible changes were seen in the glomeruli and Bowman capsules.

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The light microscopic appearance of the glomeruli in patient with iron deficiency anemia, (highpower).

Proliferation of the glomerular tuft which is more pronounced in the epithelial cells with edema and adherence of Bowman capsule.



Proliferation of epithelial cells of the glomeruli were seen in all biopsis.

This proliferation was so pronounced in places that it was filling the Bowman capsules and appeared to be adherent to it endothelial proliferation was not seen. slight edema and adherence of Bowman capsule were noticed.

#### DISCUSSION

The changes of kidneys during iron defficiency anemia according to my knowledge was not reported in the literature. My findings show marked proliferation of the epithelial cells in the glomeruli. The cause of proliferation can not be determined, but because kidney is a part of blood forming organ during fetal period this proliferation may be a part stimulation of extra bone marrow blood forming system in the adult because of severe anemia. This speculation needs to be clarified.

#### SUMMARY

In 6 patients with iron deficiency anemia the proliferation of epithelial cells of glomeruli were prominent associated with edema and adherence of Bowman's capsule in kidney biopsy, the cause of proliferation is not known.

#### RESUME

La biopsie renale chez 6 malades atteint d'anemie ferruprive montrait la proliferation des cellules epitheliales des glomerules remplissant l'espace de la capsule de Bowman accompagne d'oedeme et adherence de cette derniere. La cause des ces proliferation n'est pas connu.

#### ACUNOLWDGEMENT

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