poses, particularly the study of acidosis, the method of dialysis is quite as applicable as the electrometric method, and yields results in general comparable with those of that method. It has the advantages of simplicity and rapidity.

CONCLUSIONS

1. The indicator method of determining H-ion concentration is made applicable to blood and serum by utilization of dialysis through a collodion membrane, which excludes the disturbing influences of color and of proteins. The method is simple, accurate, rapid and well adapted for clinical use.

2. The technic consists of dialyzing 3 c.c. of blood or serum at room temperature against 3 c.c. of 0.8 per cent. salt solution for five minutes, adding an indicator and comparing with colored standard phosphate mixtures of known H-ion concentration.

3. Phenolsulphonephthalein is employed as the indicator in this method. It is found to exhibit easily distinguishable variations in quality of color, with minute differences in H-ion concentration between the limits pH 6.4 and pH 8.4.

4. Oxalated blood from normal individuals gives a dialysate with a pH varying from 7.4 to 7.6, while that of serum ranges from 7.6 to 7.8.

5. Variations from these figures toward the acid side were encountered only in conditions which clinically, and from the standpoint of the laboratory findings, evidenced an acidosis.

6. In a small series of clinical acidoses, the serums varied from 7.55 to 7.2 and the oxalated blood from 7.3 to 7.1. In experimental acidosis in dogs, a pH of 6.9 has been encountered in both serum and blood just before death.

REPORT OF CASES

Case I.—H. S. (Medical No. 33,441), a white man, aged 43. Diagnosis: congenital cystic kidneys, adherent pericardium, myocardial insufficiency, edema of lungs, hydrothorax, and uremia. Admitted Dec. 12, 1914.

The patient had good general health until ten years ago. He had muscular rheumatism at eight. Eighteen years ago he had an attack of "acute Bright's disease," which confined him to bed for two weeks. Ten years ago, a lump was discovered in the left flank. Exploratory operation revealed congenital cystic kidneys and a few of the cysts in the right kidney were punctured. Five years later the left kidney also became palpable.

The present illness began five months before the patient's admission, with attacks of nocturnal dyspnea, which gradually became worse. Three weeks ago swelling of the legs appeared.

Examination showed an undernourished man, dyspneic and orthopneic. Signs of fluid were present in both pleural sacs, with bubbling râles over the lower lobes. There was marked cardiac enlargement and systolic retraction of interspaces lateral to apex. Broadbent's sign was present, also a protodiastolic gallop. There was a faint systolic blow at the apex, which was transmitted to the axilla. The pulmonic second sound was accentuated. The abdomen was