ent of the urine may be impaired while the others remain perfectly intact. In case H. with an acute exacerbation of a chronic affection of the kidney due to an attack of tonsilitis, the NaCl eliminating power was absolutely lost. No precipitate could be obtained with $AgNO_3$ after the removal of the albumin, whereas on the same days the patient eliminated water, nitrogen and $SO_3$ perfectly well.

CASE H.

| Date. | Volume of Urine. | Sp. Gr. | Total N. | NaCl | Inorg. $SO_3$. | $\frac{N}{\text{Inorg. } SO_3}$ | Diet. |
|---|---|---|---|---|---|---|---|
| 12/25/10 | 2405 | 1010 | 11.80 | 0.00 | 0.8021 | 14.7 | General |
| 12/26/10 | 2390 | 1011 | 11.32 | 0.00 | 1.0940 | 10.3 | Salt free. |
| 12/27/10 | 3120 | 1007 | 12.11 | 0.00 | —— | —— | Salt free. |

Similar results were also obtained in case Ba.

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## A note on the nature of oxyphilic granulation.

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An aqueous solution of eosin will give with ferric chloride a precipitate which has a deep red color. If very dilute solutions are used, say 0.1 of 1 per cent. ferric chloride, and an eosin solution which is just barely pink, no precipitate will be visible on mixing the two, but the pale pink of the eosin changes to a deeper shade of red, and the fluorescence, which is quite noticeable even at this dilution, disappears. If the dilution of the eosin solution used be increased so that these color changes can no longer be distinguished with certainty, it is possible to demonstrate the reaction by the addition of a colloidal suspension of Witte's peptone, or of sodium oleate.

On the addition of such a solution, which should be sufficiently strong to cause a well marked opalescence, the red color of the iron-eosin stain will at once be apparent, especially where sodium oleate has been used, in which case a flocculent precipitate stained a rich red will appear. The examination under the microscope of such a precipitate, reveals an appearance which, in respect to color

is apparently identical with that of oxyphilic granulation. It would appear that we have here not a true stain, in the sense of solution, but rather a case of condensation of the stain on the surface of colloidal particles.

The reaction thus detailed for eosin, is obtained also with Fuchsin S., though the eosin has a more marked color change, due to the loss of fluorescence. The experiment with the dilute solutions is comparable to the conditions under the microscope, where the thin layer of the specimen corresponds to the extreme dilution of the solution, and the visible staining of any tissue indicates a selected accumulation of such stain.

It has been shown that the granules of the eosinophile leucocytes contain iron, and it would seem that the reaction of these granules with eosin and fuchsin was due, in part at least, to this iron content.

The affinity of hæmoglobin for eosin is possibly dependent similarly upon its iron content.

Copper gives a similar reaction. The color change is, however, not quite the same, in that instead of a rich blood-red, the copper-eosin has a distinct purplish or bluish tinge.

Potassium bichromate gives the reaction though very weakly. This is suggestive, perhaps, of the effect of fixation by means of chromates.

In insufficiently stained blood smears, the granules of the eosinophiles, while characteristic in color, are superficially stained.

It is not probable that the stain depends upon a selective affinity, whereby an accumulation of dye is produced within the substance of the granule. It would appear, rather, that this reaction is of the physico-chemical sort, and occurs chiefly at the surface, between the more solid granule and the solution of stain.