

to the oxalated blood to make it equal the observed reading of the heparinized blood.

The average corpuscular volumes were calculated and the results expressed in Fig. 4. Doubtless the wide variation in our results was in part due to errors in the hematocrit determinations, the true range by our method probably lying between 80 and 92 cu.  $\mu$ .

The average hemoglobin content of the red cells is shown in Fig. 5. The relative hemoglobin content of the cells is shown in Fig. 6. This is obtained by dividing the hemoglobin content of the cell by the volume of the cell.

## 5603

### X-Ray Studies of Motility of Gastro-Intestinal Tract of Rachitic Rats with Healed Bone Lesions.

LEON J. MENVILLE, J. N. ANÉ AND S. N. BLACKBERG.

*From the Department of Medicine, Tulane University, and the Department of Pharmacology, Columbia University.*

We previously reported certain observations on the motility of the gastro-intestinal tract of a large number of normal and rachitic rats. It was found that the motility of the gastro-intestinal tract of rachitic rats was markedly altered, and in every case we found a hypomotility.<sup>1</sup>

This study was undertaken to ascertain whether the motility of the gastro-intestinal tract of rachitic rats returned to normal after the bone lesions of the rats were healed.

Three young rats of the same age were fed a rachitic diet for a period of 4 weeks, at the end of which time typical rachitic bone lesions were found in each animal. Gastro-intestinal examinations demonstrated a hypomotility of the gastro-intestinal tract.

TABLE I.

Rats	Stom. Emp. Time	Sm. Int. Emp. Time	Colon Emp. Time
3 rachitic rats	7 hrs. 25 min.	8 hrs. 25 min.	90 hours
The same rachitic rats healed with Viosterol	7 " 15 "	8 " 15 "	88 "
2 normal rats	6 " 18 "	7 " 32 "	65 "

<sup>1</sup> Menville, L. J., Blackberg, S. N., and Ané, J. N., *PROC. SOC. EXP. BIOL. AND MED.*, 1929, **26**, 758.

Each of the rats was given 5 drops of Viosterol per day, and the animals were continued on the original rachitic diet. After a period of 10 days roentgen examination showed that the bone lesions of all the rats were healed, but the motility of the gastro-intestinal tract had not been affected. There remained a hypomotility of this tract.

*Conclusions.* The hypomotility of the gastro-intestinal tract of rachitic rats is evident even after the healing of bone lesions. We appreciate that the number of rats used in our experiment is small, but we have received sufficient encouragement for us to continue on with the work.