platinum was completely precipitated at 1–200, partially at 1–500 and not at all at 1–1,000.

In other words the precipitating power of the serum of the first rabbit, after it received three injections of the colloidal platinum, had increased from 1–100 to 1–1,000 or ten times, whereas for the colloidal silver there was only a very slight increase. Serum from the second rabbit, which received colloidal silver, increased its precipitating power from 1–100 to 1–500, whereas for the colloidal platinum, from 1–100 to 1–250. In both these rabbits there was then an increase in the precipitating power of the serum after injection with these colloidal metals, and it would seem that they increased more for the metal injected than for the other.

Unfortunately both of these rabbits died before I was able to complete this work. Nevertheless I have thought it best to report to this society the results of this study, for they seem very interesting. Other animals are undergoing treatment with these and other colloids and I hope that I shall be able to report more fully at our next meeting.

105 (248)

Remote results of transplantations of blood vessels.

By **ALEXIS CARREL.**

[*From the Rockefeller Institute for Medical Research.*]

This communication deals first with the evolution of the anastomoses, and secondly with the modifications of the walls, of the transplanted vessels.

The results of the arterio-arterial, veno-venous and arterio-venous anastomoses remained excellent after many months. No stenoses or aneurisms have been observed on the arterial anastomoses six to seven months after the operation. No stenosis occurs after the venous anastomosis: a cat, in which an Eck fistula was made eighteen months ago by Guthrie and myself is still in good health. The same is the case for the arterio-venous anastomosis: the jugular vein and the carotid artery of a dog were anastomosed by Guthrie and myself twenty two months ago and now strong thrill and pulsations are easily detected by palpation of the jugular vein.

The modifications of the vascular walls are produced mainly by the changes of blood pressure. No great change occurs if the blood pressure of the transplanted vessel be not modified. Segments of carotid, aorta or vena cava of one animal, transplanted in the carotid, aorta or vena cava of another animal of the same size and species, do not undergo any important anatomical modification. If blood pressure be diminished, the wall of the transplanted vessel becomes thinner. Six months after the operation, it was found that the wall of the carotid transplanted in the external jugular vein was thinner than the normal one. If blood pressure be increased, hypertrophy of the wall ensues. A segment of external jugular vein interposed between the cut ends of the carotid artery was a little dilated and its wall was as thick as the arterial wall, eight months after the operation. In other cases, there was no dilation of the lumen of the vessels. As a rule when a vein is anastomosed uniterminally to an artery, its lumen is found to be dilated, six or seven months after the operation. Nevertheless, after one year the lumen may progressively diminish in size, as was seen in a dog operated upon twenty two months ago.

It may be concluded that transplanted blood vessels adapt themselves to the pressure by thinning or thickening their walls.

106 (249)

The dependence of gastric secretion upon the internal secretion of the salivary glands.

By **JOHN C. HEMMETER.** (Communicated by **S. J. MELTZER.**)

[*From the Physiological Laboratory of the University of Maryland.*]

The relations of the gastric secretion to the salivary glands are illustrated by the following clinical and experimental observations:

1. In four cases of Mikulicz's disease with normal conditions of the blood the stomach was found to secrete no gastric juice during the course of the disease. Mikulicz's disease consists in a benign chronic swelling of all the salivary and lacrimal glands.

2. In dogs with accessory stomachs (Pawlow) the removal of all the salivary glands abolishes permanently all gastric secretion.

3. The gastric secretion is not started in such dogs by feeding