

In all of the cases studied there was no significant change in the white blood-cell counts. Judging from the percentages of blood total solids, the increases in red blood cells were not due to a concentration of the blood from loss of fluid. The color index generally dropped early in the treatment with a gradual rise later. A study of chemical blood and urine analyses in certain cases revealed no apparent effect of the germanium on the functional activity of the kidneys. The periodic effect on the red-cell count noted by Hammett and Müller was also noted in this study.

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Influence of ischemia on infection.

By TORALD SOLLMANN and J. G. BRODY.

[From the Department of Pharmacology of the Medical School of Western Reserve University, Cleveland, Ohio.]

The following experiments furnish a striking illustration, suitable for class-room demonstration, of the influence of temporary ischemia on the local resistance to infection:

Two or three slight cuts are made on the upper or middle third of each ear of a rabbit, by closely clipping the hair from the dorsal surface of the ear; lifting with forceps a small fold of the skin, and snipping this fold away with scissors. This makes small wounds of about 4 by 7 mm., usually without hemorrhage. The wounds may then be smeared with active agar-cultures of staphylococcus or pyocyaneus; or they may be left without artificial infection. Within a few minutes after making the wounds, 1 c.c. of epinephrin, 1 : 1000, is injected into the root of one ear, close to the entrance of the vessels. This produces an intense ischemia of the entire ear, persisting for several hours.¹

From the following day, the two ears present a striking difference in appearance: The wounds on the normal ear show signs of healing, even if they were severely infected. The wounds on the ear that had been rendered anemic appear much more inflamed, and may be covered with pus, and a perforating ulcer

¹Auer and Meltzer, *Proc. Soc. Exper. Biol. and Med.*, 1916, xiv, 54.

may have started. This is shown in the adjoining photograph, taken 24 hours after inoculation with a virulent staphylococcus culture, recently prepared from a human throat: The epinephrin ear (the right) shows the perforation of the ear by the infection; whilst in the left ear, no inflammation is visible on the inner side, although the ear had been equally wounded and inoculated, but not treated with epinephrin. These differences persist in the further course; the ear that had received epinephrin healing more slowly than the other ear.

Marked differences, although not always quite as striking as these, were obtained in five inoculated rabbits, and in four rabbits without artificial inoculation. In only one rabbit did there fail to be a striking difference between the two ears.

Injection of slightly acidulated water, on the other hand, did not influence the course, showing that the difference is due to the epinephrin, and not to the volume or reaction of the fluid.

The experiment illustrates the current conceptions as to the origin of "colds," *i.e.* by increased susceptibility to infection, through the reflex vasoconstriction of "chills." It also warns against the indiscriminate local use of epinephrin in wounds, and especially in catarrhs.

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Morphology of cystic growths in the ovary and uterus of the guinea pig.

By G. N. PAPANICOLAOU and C. R. STOCKARD.

[From the Department of Anatomy, Cornell University Medical College, New York City.]

The ovary in the guinea pig, as in most other mammals, fre-

