

ages from three to twenty-seven years, showing that it increases with growth of the organ. He then examined granular kidneys and determined all these points, still taking account of differences in age, with the following results. The sectional area of the renal artery in granular kidney is very slightly smaller than in healthy subjects of the same age, but relatively to the weight of the organ it is from a fifth larger to twice as large. The interlobular arteries in both places, the vasa afferentia, and the glomeruli, are all absolutely larger. By another series of experiments, he found that the rapidity of the flow of fluid in the renal artery of granular kidneys was not half, often not a fourth, of what it is in the renal artery of a healthy kidney. He also shows, by a very large number of observations, that the transverse section of the renal artery grows wider as the organ undergoes development, and proportionately to the weight of the kidney; and, further, that the peripheral resistance to the entering fluid grows relatively less, so that a greater quantity of blood passes in a given time through the organ.

By careful comparison of the effects of coloured injections on sound and on granular kidneys, he found that the latter permitted fluid to pass through the walls of the blood-vessels with much greater ease; and not fluid only, but gelatine, Prussian blue, chloride of sodium, and even solid grains of cinnabar, and this without rupture of the coats of the vessels; this happened, not on those parts which showed most connective-tissue growth, but in the vessels still otherwise apparently healthy. Careful injections proved, too, that the capillary network in granular kidneys was very scanty, and that, in many cases, the vasa afferentia anastomosed directly with the efferent vessels, being cut off from the glomerulus by the growth of fibrous tissue. On the changes in the walls of the vessels, he remarks that as a rule, in spite of the fibroid growth of the intima, the lumina of the vessels are not smaller than normal; only exceptionally, when the endarteritis has reached a high grade, does this take place. He regards these changes as connected with those endarterial processes—described by Köster, Friedländer, Trompetter, and others—as taking place in

almost all new formations of connective tissue, as they bear a distinct relation to the amount of interstitial growth. These facts are especially opposed to Gull and Sutton's theory that the narrowing of the lumina of the vessels by the new growth causes the obstruction to the circulation; they agree with independent observations that, as a rule, the vessels in granular kidneys are certainly not of less calibre than normal; they prove that the anatomical condition of the organ itself, independent of any vital changes, such as arterial contraction, causes a great increase in the resistance to the circulation through it; they explain the clinical phenomena of polyuria and albuminuria by the increased permeability of the vascular walls. We should very much like to see similar investigations on the state of the vessels in other organs, and especially the skin, in this disease, to determine whether a similar diminution of the capillary area is present. General capillary anaemia is undoubtedly a marked feature of even the early stages of this disease, and it is at least possible that the same cause, acting generally, may produce, although to a less extent, an universal reduction of the capillary network.—*Brit. Med. Journal.*

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TREATMENT OF DYSENTERY BY INJECTION OF NITRATE OF SILVER. Dr. H. C. Wood, in the *Philadelphia Medical Times*, reports several cases of dysentery cured by injecting nitrate of silver. He uses from forty to sixty grains dissolved in three pints of water, and advises common salt to be injected if the nitrate does not come away in from ten to fifteen minutes. No change in the diet at the time of the injections was made, and no medicine, save a little opium, was given. Some of the cases had been treated for from one to seven weeks with other remedies without relief. Two to four injections were in some cases sufficient.

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TREATMENT OF CARBUNCLE.—Dr. C. B. Leiter, in a paper read before the Georgia Medical Association, advocates exhausting the matter from carbuncles by the use of cupping glasses, dressing the wound with carbolic acid in the intervals of application. After the first application great relief ensues.