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ADDRESS IN MEDICINE.*

(Continued)

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THE ARTERIOLES AND CAPILLARIES OF THE KIDNEYS.

The arterioles are very muscular and well supplied with vasoconstrictor fibres, and thus while these nerves contribute to raise the general arterial pressure, they protect the capillaries of the glomeruli from any excessive pressure; thus high arterial pressure increases the velocity in the glomeruli, but not necessarily the lateral pressure. The glomeruli are further protected by the endothelial lining of Bowman's capsule, and are not easily permeable to albumen, but readily allow the transudation of water and salts. Moreover, the glomeruli are protected in ordinary circumstances from any backward venous pressure by the second set of capillaries into which the efferent vessels divide. In cases of orthostatic albuminuria there is defective vasomotor action in the whole of the splanchnic area, the kidneys are congested in the erect posture, and moreover the blood is deficient in lime salts as has been shown by Professor A. E. Wright, so the albumen more easily permeates the walls. Here, with the lessened velocity and lowered pressure, the concentration of the filtrate is increased.

The same local conditions occur in a more marked degree in inflammatory disturbances in the kidneys. We have seen that

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