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Original Articles

RENAL CALCULI IN WOMEN *

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Stone in the kidney is a condition of mid-adult life, operations for renal calculi being rare before the age of ten or after sixty years, the average in 38 cases in the General Hospital, Toronto, being 39.4 years.

Women are slightly less liable than men—one to two—in this hospital. Renal calculi belong more especially to the age of stress and strain, often, however, with symptoms dating back to adolescence.

Either kidney may be affected. In 38 cases in the General Hospital 20 cases were of the right kidney, 16 of the left kidney, and 2 cases were bi-lateral. Though at first uni-lateral, sooner or later both kidneys are affected—50 per cent. in post-mortem returns being bi-lateral. At first, then, stone is uni-lateral, but later becomes bi-lateral.

Definition of a renal calculus: A renal calculus is an agglomeration (fusion) of crystals, held together by a cement substance, and not crystallizations of certain inorganic salts. Hence, one must trace the origin of the crystals in the urine, and also the origin of the cement substance. Let us consider the origin of the cement substance first.

The cement substance is an "irreversible colloid"—that is, one which does not re-dissolve when placed in a non-saturated solution. Hence the great insolubility of renal calculi.

This "irreversible colloid" is probably fibrinogen or fibrin, according to Schade, and, therefore, an inflammatory reaction is a necessary precursor of a calculus. This is not hard to believe,

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