

usually in its capsule. Sarcomata of infants originate in the connective tissue of the renal sinus and gradually distend the cortex until the tumor is surrounded by a thin capsule, formed by the expanded secreting tissue of the kidney. On this account these tumors are described as encapsuled, but it is a spurious encapsulation, formed partly by renal tissue and partly by the true capsule of the kidney.

Cavities are due to secondary changes. The base is of connective tissue, some round or oat-shaped cells and others spindle-celled. Renal sarcomata of infants are extrinsic in origin and strictly non-renal. The ureter is rarely obstructed. This freedom of the ureter explains the rarity of hæmorrhage and the painlessness, because there is no pressure from accumulated urine.

The tumor tissue will extend into the renal vein and often into the vena cava. Portions become detached and get into the pulmonary circulation and start secondary deposits. The disease may be bi-lateral.

In 1903, twenty-one cases of nephrectomies of infants were reported. Of these twelve died as the result of the operation, and in the remainder there was recurrence within the year. Since this date a large number of cases have been reported. In six years, the mortality from nephrectomy is fifty per cent. Out of the fifty, forty-five died of recurrence in from two months to one year. Of the five remaining, one died in a year and a half, one was alive and well at five years, one was alive three years after, and one lived ten years after.

A method of determining the excretory efficiency of the kidney substance has been recently described by Wright and Ross. The principle concerned is that of hæmolysis, or the solution of the red blood corpuscles by a fluid medium possessing a certain minimum of salt concentration. The normal or physiological ratio of salts in the urine as compared with the salts in the blood serum is as 2 is to 1.

That ratio is disturbed in conditions where the renal substance is so seriously affected as to prevent the secretion of a urine of such concentration in salts. So it is that in Bright's disease and other similar conditions the ratio of salts in the urine and serum becomes 1 to 1, or less.

This reaction, therefore, would appear to furnish a ready, rapid and easy means of determining whether or not, in a condition of kidney involvement, one is justified in proceeding to nephrectomy. For, if the combined efforts of the remaining secreting substance of both kidneys be not effectual in carrying out the work demanded by the organism, one is not justified in proceeding to remove one kidney, representing, as it almost always does, a certain modicum of healthy renal tissue.

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