# ADULT WILMS' TUMOR

Patchrin PEKANAN, Chitchanok TANTIWIWAT

## ABSTRACT

Wilms' tumor (nephroblastoma) is a mixed renal tumor composed of metanephric blastema and its stromal and epithelial derivatives at variable stages of differentiation. It is a disease of early childhood and 80% of patients are cured with current therapy (1,2). Wilms' tumor in adults occurs rarely and has a poorer prognosis (3). The adult patients present more often with metastases and patients who present with localized disease, relapse more frequently at follow-up (3). The chemotherapy regimens, which have been successfully used in pediatric patients, are not as effective in the adult patients (3,4,5,6).

We report a case of adult Wilms' tumor in a 60-year-old female patient, studied by IVP, ultrasonography and CT scan.

## CASE REPORT

A 60 year-old female patient had an abdominal discomfort and a palpable mass at LUQ. Physical examination showed left upper quadrant mass. Plain film of the abdomen showed a large soft tissue mass at left upper and mid abdomen. The mass did not obliterate the shadow of left psoas muscle or left kidney. The stomach was displaced superiorly. Intravenous pyelography showed enlarged left kidney with preserved outline, mild hydropelvis and separation of the upper and middle pole calyceal system. The right kidney appeared normal. CT scan of the mass showed a large solid mass with lobulated superior border and rim enhanced border at the other part of the mass. The ventral parenchyma of the upper pole, middle pole and lower pole of left kidney was invaded. The lateral part of the parenchyma of the middle pole seemed to stretch around the lateral aspect of the mass. There is large area of central necrosis. The proximal half of left renal vein was compressed, the distal half and the inferior vena cava contained no thrombus. The mass sat on the left psoas muscle with preserved the fat plane which could explain the unobliteration of the muscle on plain film. The surrounding organs were not invaded. The enlarged nodes were also not seen. Ultrasonography revealed the hyperechoic mass (compared with the echo of the renal parenchyma; however less echoic compared with the central renal fat). The hyperechoic area was intervened by the low echoic septa-like areas. Surgery was performed and left kidney was removed. Histology revealed a nephroblastoma.

## DISCUSSION

Wilms' tumor occurs primarily in infants. Klapproth in 1959 reviewed 1351 cases of Wilms' tumors reported in the literature and added 45 cases of the his own (7). Four point four per cent occurred in adults, 13.4 per cent were in children below the age of one, and 82.2 per cent were in children above the age of 1 year. The peak incidence in children was between the ages of 1 and 2 years. In adults, the highest peak of occurrence of Wilms' tumor in reported cases appears to be in the fifth decade. The oldest patient was an 80 year-old woman. Wilms' tumor appears to occur in both sexes with approximately the same frequency. No predilection has been shown for either the right or the left kidney.

Wilms' tumor varies considerably in size. It may grow enormously and destroyed the kidney and the surrounding structures. Grossly the tumor is usually grayish in color, homogeneous in appearance and may appear encapsulated. The gross picture may be altered by extensive necrosis and hemorrhage. Cystic

Department of Radiology, Ramathibodi Hospital, Rama 6 Street, Bangkok 10400, Thailand.

degeneration and calcification may occur. Islands of bone and cartilage may be present.

Generally the Wilms' tumor is known to spread to neighboring organs by direct extension. Blood borne metastases also occur. Metastasis to lungs is the most common site in reported cases.

Wilms' tumor in adults is usually recognized after surgical and histologic examination or at autopsy as an incidental finding. The symptoms include abdominal pain, fever, hematuria, nausea, vomiting, constipation, secondary anemia, loss of weight, anorexia, cachexia and few reported of ascites. Hypertension is present in more than 50 per cent of cases.

Reported associated abnormalities included 1) Beckwith-Wiedemann syndrome (exophthalmos, macrosomia, macroglossia, hepatomegaly, omphalocoele, hyperglycemia from islet cell hyperplasia) 2) Sporadic aniridia 3) Hemihypertrophy; total/segmental/crossed 4) Drash syndrome (pseudohermaphroditism, glomerulonephritis, nephrotic syndrome) 5) Renal anomalies (horseshoe kidney, duplix/solitary/fused kidney) 6) Genital anomalies (cryptorchidism, hypospadia, ambiguous genitalia).

The tumor is hypervascular with enlarged tortuous vessels, coarse neovascularity, small arterial aneurysms, vascular lakes and parasitization of the vascular supply (8).

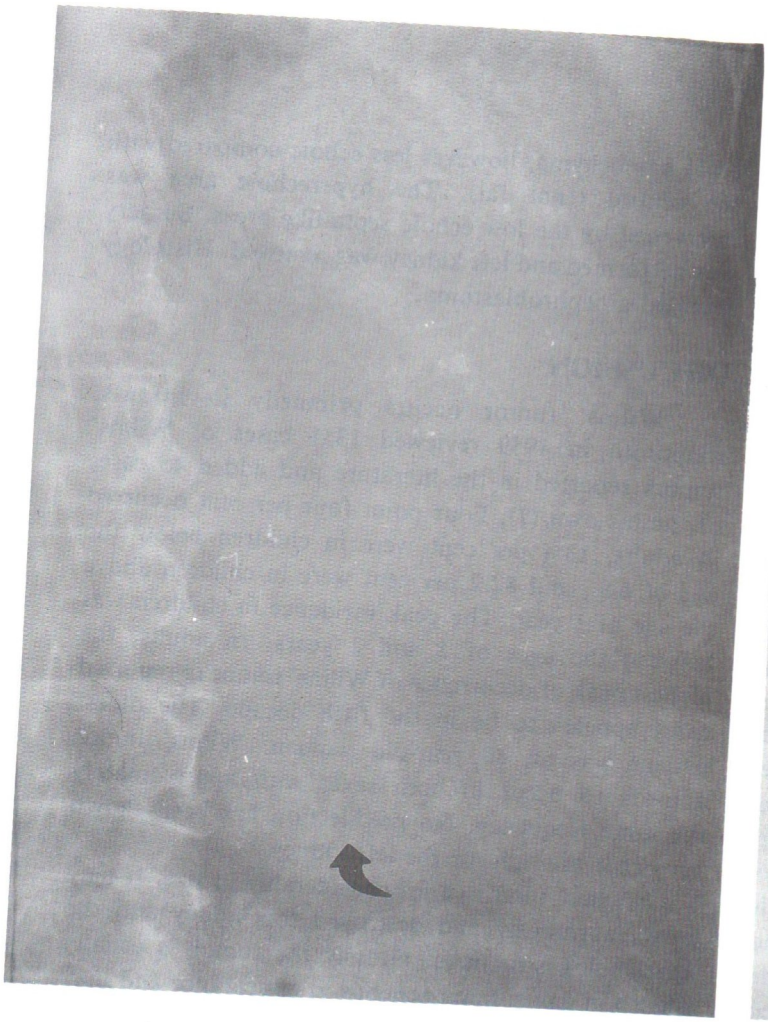

Fig.1 Plain KUB showed a large soft tissue mass at the left renal and left psoas region without obliterating them.

Fig.2 IVP of the left kidney showed preserved left renal outline with separation of the upper and middle pole collecting system

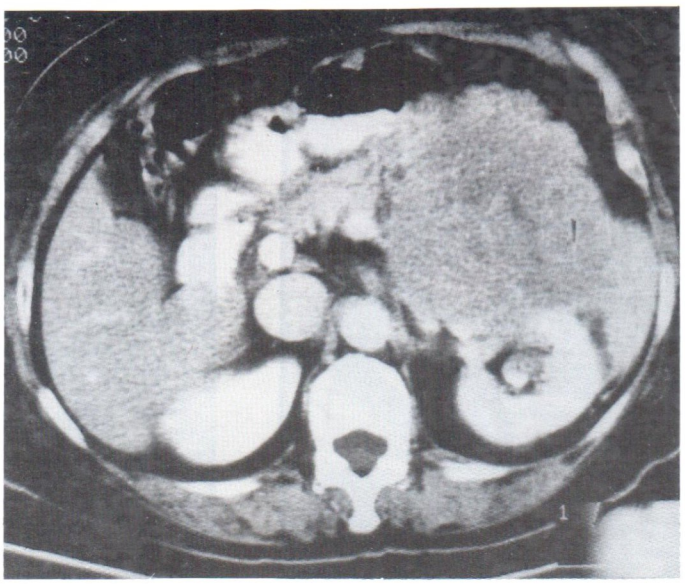

Fig.3A

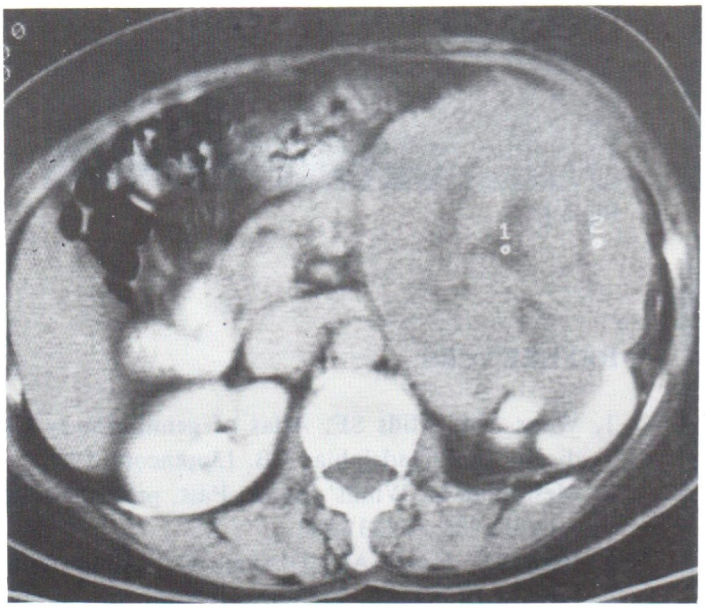

Fig.3A,B,C.

I.V. contrast CT scan showed a rim enhanced solid mass with lobulated border. Multiple necrotic areas were shown. Well defined border invasion of the renal pelvis was seen. The pancreatic body and tail was elevated and infiltrated. The psoas muscle was free from involvement.

Fig.3B

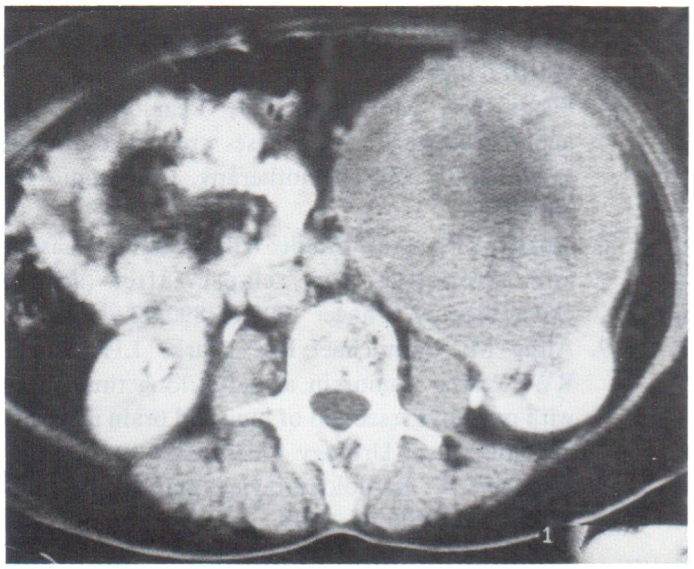

Fig.3 C

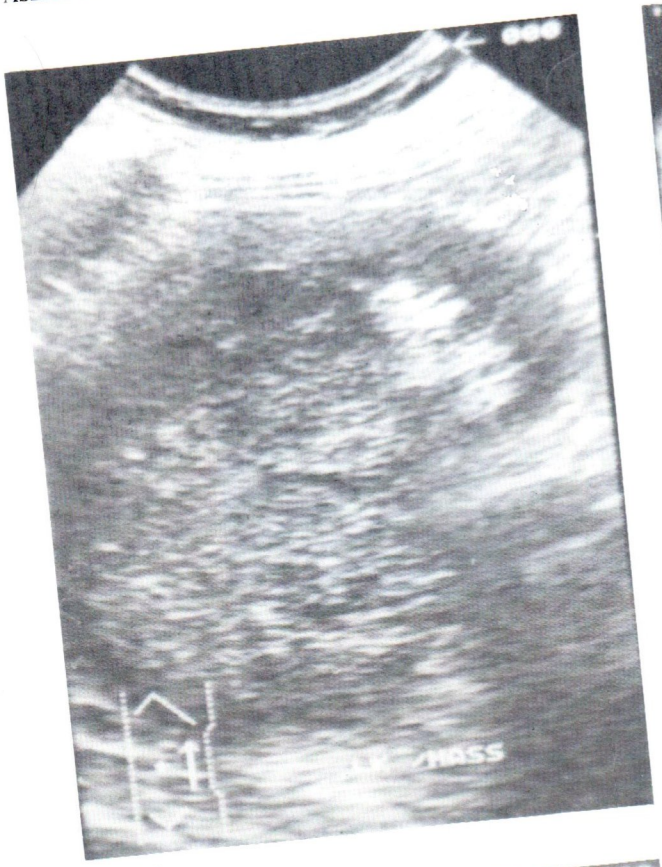

Fig.4A

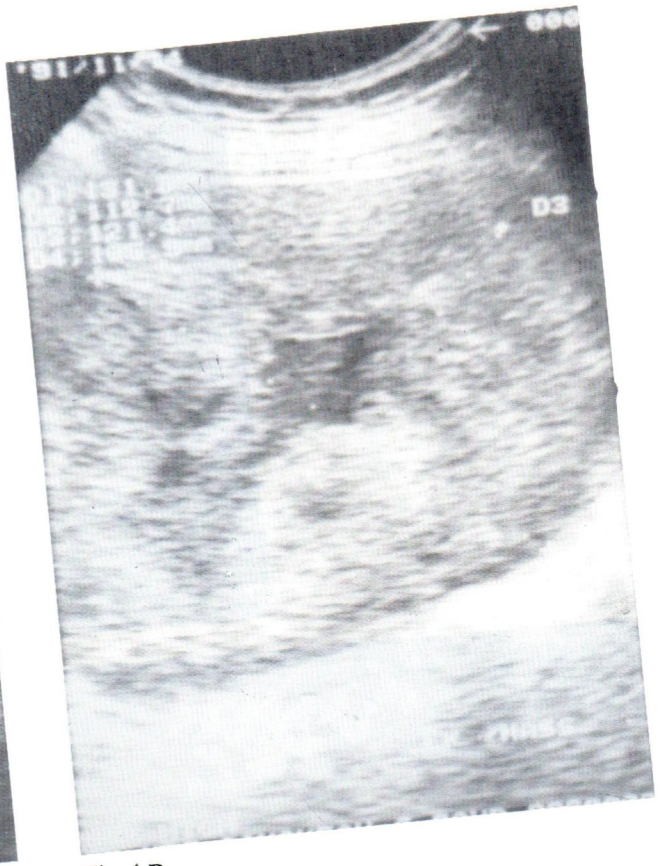

Fig.4 B

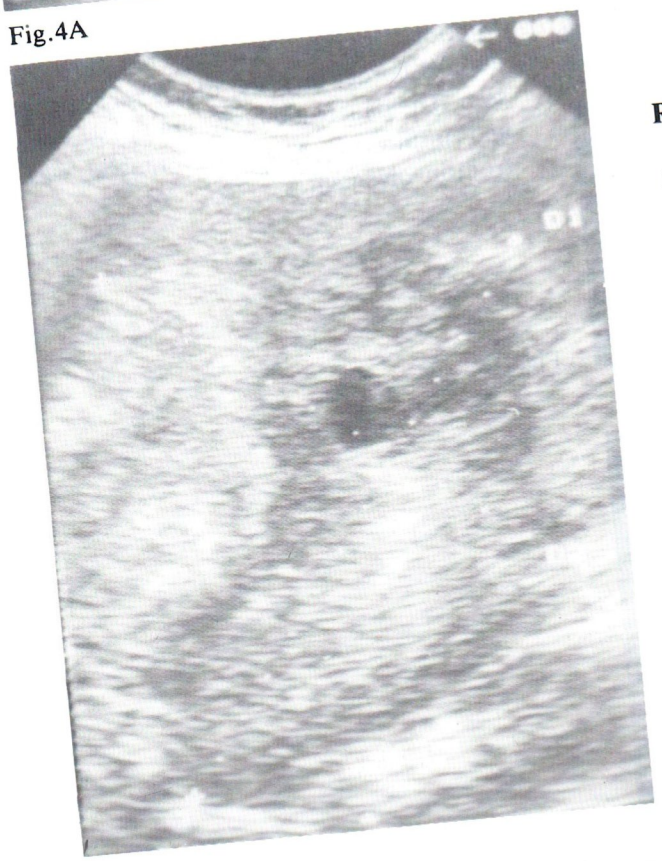

Fig.4 C

Fig.4A,B,C. Ultrasonography showed a solid mass at ventral aspect of the upper and middle pole of left kidney. The mass was hyperechoic, compared with normal renal parenchyma and contains low echoic areas of necrosis.

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