A child with tumour thrombus extending to the right atrium

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A 2-year-old girl presented with abdominal distention after 20 days of anorexia. Computed tomography revealed a 4.6 cm mass on the upper pole of left kidney with tumour thrombus extending from left renal vein to the right atrium. The transthoracic echocardiography demonstrated that inferior vena cava (IVC) was full of dense mass extending to the right atrium and obvious obstruction of blood flow (Panel A, Supplementary material online, Video S1). She underwent left radical nephrectomy, resection of the thrombus, and tricuspid valvuloplasty under mild hypothermia cardiopulmonary bypass. Intraoperative transoesophageal echocardiogram revealed a 63 × 31 mm mass in the right atrium (Panels B and C). The freely moving mass prolapsed into the right ventricle in diastole and bouncing back in systole (Panel E, Supplementary material online, Video S2–S4). The enlarged left kidney (10 × 7 × 6 cm) was occupied by a large tumour, only litter tissue left in the lower pole. It is difficult to extract the tumour thrombus via right atrium intactly, so the suprarenal IVC incision/reconstruction was performed. The thrombus was divided into several sections and the largest one was 15 cm long (Panels D and F). Pathology confirmed Wilms tumour (WT) with negative lymph nodes margins. The patient recovered uneventfully and discharged 10 days later.

Supplementary material is available at European Heart Journal online.

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