Hepatic Resection for Metastatic Wilms' Tumor

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Aggressive surgical treatment with multidrug chemotherapy for metastatic Wilms' tumor can produce long term survival. Although, surgical removal of hepatic metastases from Wilms' tumor is a well established procedure, very few cases cured by such an approach were reported in literature(1,2) and none in the Indian context. We present a case of Wilms' tumor treated initially by nephrectomy and chemotherapy, who subsequently developed hepatic metastases which was cured by right hepatic lobectomy along with chemotherapy.

Case Report

An 8-year-old boy presented with lump in the abdomen of 12 days duration, along with significant loss of weight and appetite. A firm, irregular, mobile mass was found in his right flank, crossing the midline of the abdomen. Intravenous urography was suggestive of a mass arising from the right kidney. Fine needle aspiration cytology was consistent with the diagnosis of nephroblastoma. The chest *X*-ray and ultrasonography did not reveal any pulmonary or hepatic metastases. Because of the large bulky tumor crossing the midline, the patient was given preoperative chemotherapy for a period of three weeks with vincristine, actinomycin D, adriamycin and a significant reduction in the size of the tumor was noted. At operation, a right renal tumor of 15 × 10 cm, infiltrating the pelvis of the kidney was removed without any operative spillage. There were no enlarged lymph glands or thrombus in the renal vein or hepatic metastases. Histopathlogy was consistent with triphasic Wilms' tumor. The lymph nodes were free of tumor. Post-operative chemotherapy was given 15 months with the previous three drugs. As the tumor was down staged to stage I disease by preoperative chemotherapy, post-operative radiotherapy was not considered.

One and half years after nephrectomy, the patient presented with fever, loss of weight and appetite of one month duration. A firm, non-tender hepatomegaly of about 2.5 cm below the right costal margin was detected. Ultrasonography and CT Scan *(Fig. 1)* revealed metastasis in the right lobe of liver, confirmed by ultrasound guided fine needle aspiration cytology from the liver mass. The lungs were free of metastates. Four courses of Etoposide (VP-16) were give and marginal reduction of the size of the metastatic lesion was noted in the subsequent CT scan of liver. Right hepatic lobectomy was performed which revealed a metastatic nodule of 5 × 3 cm at the posterosuperior segment of the right lobe. The histopathology was consistent

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Received for publication: May 26, 1992;
Accepted: September 3, 1992

with metastatic Wilms' tumor and the resection margins were free of tumor invasion *(Fig. 2)*. No radiotherapy or chemotherapy was given after hepatic resection. The patient is now well and free of disease at one year after hepatic lobectomy.

Discussion

Metastases from Wilms' tumor are no longer considered incurable. With aggressive multimodality treatment (surgery, radiotherapy and multidrug chemotherapy), high cure rates can be achieved(2,3). Although cure following surgical removal of lung metastases is often reported(1), similar result for liver metastases are infrequently reported(2,4). Surgical removal of hepatic metastases from Wilms' tumor should be done if present during initial laparotomy or subsequently whenever hepatic resection is feasible(5). Fine needle aspiration cytology is useful for the diagnosis of both primary and early confirmation of metastatic disease of Wilms' tumor(6). The cure rate of metastases present during initial presentation is higher than if metastases develop during the course of treatment. Prognosis is better in metastases from favorable histology Wilms' tumor.

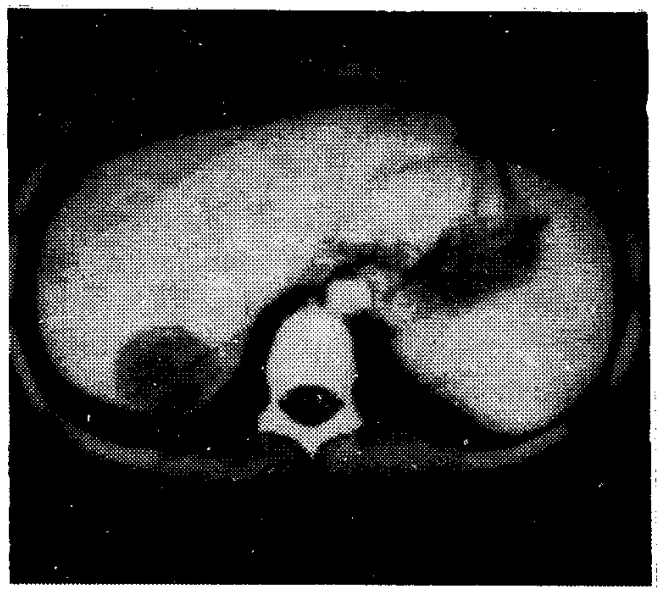

Fig. 1. CT Scan of abdomen showing a 6 ×6 cm metastasis in right lobe of liver.

Fig. 2. Microphotograph showing metastatic tumor in the liver with peripherally compressed normal hepatic parenchyma (H & E ×555).

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