Case Report

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Renal Infarction Caused by Chemotherapy for Chorioepithelioma

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Key Words

Kidney
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Abstract

We report a case of multiple renal infarction which was possibly caused by the chemotherapy for chorioepithelioma.

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Case Report

This 26-year-old housewife was transferred from the neurosurgical ward because of possible renal metastasis of chorioepithelioma. She had hysterectomy for hydatidiform mole 5 years prior to this admission. She was quite well until 1 month prior to admission, when she experienced nausea and dizziness. Investigation revealed a metastatic brain tumor and she was admitted to the neurosurgical ward on 27th June 1981. Extirpation of the tumor was performed on 1st July 1981. Pathological report was metastatic chorioepithelioma. Then anticancer chemotherapy was started on 22nd July. Three series of actinomycin D 0.4 mg intravenously, and methotrexate 20 mg intramuscularly daily for 1 week were given at 1-week intervals. After the 6-week treatment had been completed, she developed left lumbago and gross hematuria. IVP revealed possible renal masses.

She was transferred to the urological ward on 22nd September 1981. She had no fever but had mild tenderness on the left hypo-chondral region. CBC, serum electrolytes, and other routine laboratory data were normal. Hematological examination was also normal. Urine culture was negative. Computed tomography (CT) demonstrated multiple renal cystic masses on the left (fig. 1). Angiography showed avascular masses with interruption of small arterial branches (fig. 2). Suspecting metastatic tumors, left nephrectomy was performed on 1st October 1981 because of persisting gross hematuria. Her postoperative convalescence was quite uneventful and she returned home 2 weeks later.

Pathological examination showed no tumor cells but multiple renal infarctions.

Discussion

Occlusion of renal arteries usually results from embolism in patients with rheumatic heart disease and arterial fibrillation [1]. Although many other less-frequent causes are known, there have been no reported cases in which anti-cancer drugs caused renal infarction.

Fig. 1. Cystic masses with low-contrast enhancement were seen on computed tomography.
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There is no report that actinomycin D and methotrexate caused infarction in any part of the body. Considering her clinical course, however, the chemotherapy with these drugs was possibly responsible for the renal infarction.

On CT, renal infarction usually has cortical rim signs or wedge-shaped lower attenuation areas [2]. However, renal infarction sometimes make a mass lesion [3]. Therefore, renal infarction should be kept in mind when a mass lesion develops in a patient who is receiving actinomycin D and methotrexate.

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Fig. 2. Angiography showed interruptions of intrarenal small arteries (arrowhead).

In this case, the patient had no signs of heart disease, urinary tract infection or other reported causes of renal infarction. She developed lumbago and hematuria immediately after 6 weeks' chemotherapy for chorioepithelioma.