Diagnosis of Port-A Catheter-Induced Thrombosis by Upper Extremities Radionuclide Venography

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Port-A catheters are used as the essential devices for chemo-drug administration through intravenous route in patients with malignancy. However, they were associated with some troublesome clinical complications, especially the thrombosis. We report a case of suspected upper extremity venous thrombosis after Port-A catheter implantation. Nuclear medicine flow studies demonstrated clearly the obstructed venous return from this patient. Therefore, venous thrombosis in his left subclavian vein was diagnosed. Follow up CT scan confirmed this diagnosis. This image finding suggests that radionuclide venography is easy-performed and showing valuable clinical benefit for investigation of upper venous condition.

Key words: Port-A catheter, venography, thrombosis, obstruction


This 70-year-old male was a victim of colon cancer with liver metastases. Port-A catheter was implanted for long-term chemotherapy purpose. One month after insertion, he complained left arm swolleness. Upper extremities venography was performed for investigating his venous obstruction status. Truncated venous return to the left subclavian vein and reflux into the jugular veins was found in this patient (Figure 1). Therefore, venous obstruction was diagnosed. Follow-up CT scan further confirmed the formation of thrombus around patient’s tip of Port-A catheter (Figure 2), which had caused almost the total obstruction of venous