Inferior Vena Cava Thrombosis Following a Traumatic Liver Injury

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Thrombosis within the inferior vena cava (IVC) following liver injury is an extremely rare condition. However, while the incidence of severe post-traumatic venous thrombosis is not high, it can cause fatal complications such as pulmonary embolism. Thus, it remains a therapeutic challenge in a traumatic context because of the hemorrhagic risk due to anticoagulation. Here we report a case of thrombosis from the iliac vein to the inferior vena cava following hepatic injury.

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Key Words: Inferior vena cava thrombosis; Liver injury

CASE

A 25-year-old man visited the hospital due to abdominal trauma caused by a traffic accident. His vital signs were normal, and he complained of pains in the abdomen, neck and right foot. Abdominal computed tomography showed a hepatic injury and a conservative treatment was performed in the intensive care unit. One week later, a follow up abdominal computed tomography revealed thrombosis from the iliac vein to the inferior vena cava which prompted heparin therapy. Two weeks after admission, the patient underwent an operation on a right metatarsal fracture, and a follow up abdominal computed tomography scan was performed to observe thrombosis. Thrombosis was found to be elevated, and an IVC filter was inserted into the inferior vena cava. Concomitant use of heparin, followed by conservative treatment with coumadin, continued the 28th day

following abdominal computed tomography, which resulted in abatement of the thrombosis. The patient was discharged on the 34th day after admission without further complications.

DISCUSSION

Although the incidence of severe post-traumatic venous thrombosis is not high, it may lead to fatal complications such as pulmonary embolism (1,2). Therefore, early detection and appropriate treatment are required. Prophylactic treatment is warranted to identify risk factors that increase the likelihood of thrombosis, and active treatment is required when this occurs.

Conflict of Interest Statement

None of authors has a conflict of interest.

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Fig. 1. CT scan of the abdomen-pelvis on admission day shows traumatic liver injury.

Fig. 3. IVC filter insertion

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Fig. 2. Serial CT scan shows the change of the thrombosis.