UHL guidelines for the management of non-cirrhotic, non-malignant and non-liver transplant associated acute portal vein thrombosis

Background

Thrombosis of the portal vein is defined as to thrombosis within the trunk of the portal vein (including its right and left intrahepatic branches). The thrombus may propagate to the superior mesenteric vein and/or splenic vein. It remains an important cause of pre-hepatic portal hypertension. If the thrombus involves the mesenteric venous arches and the superior mesenteric vein, intestinal ischaemia necessitating extensive bowel resection may ensue.

Acute PVT must be distinguished from chronic PVT which differs in its management. Acute PVT is distinguished radiologically by the absence of venous collaterals and portal cavernoma bypassing the obstructed segment. Spontaneous recanalisation of the portal vein occurs in only 16.7% of patients (1). Frequently this is only when associated with self-limiting underlying pathology and/or minimal thrombus extension.

Treatment aims to prevent thrombus extension, produce recanalisation of the portal vein and prevent the complications of chronic PVT. A systematic review showed that anticoagulation results in recanalisation (complete or partial) in 52.3% of patients (1). Data from this trust have demonstrated that partial or complete recanalisation of the portal vein occurred in 81.8% of anticoagulated patients and 37.5% of the non-treatment group (2).

The frequency of portal hypertension-related complications is higher in those with incomplete or no recanalisation (1-3). Early recanalisation is therefore important to reduce the risk of subsequent variceal bleeding. Varices may develop as early as one month after acute PVT and therefore surveillance from this point is appropriate (3). In patients with chronic PVT or

portal cavernoma formation, upper gastrointestinal endoscopy demonstrates varices in 20-55% of cases (3).

These guidelines below do not include patients developing PVT in the context of cirrhosis, malignancy or liver transplant. The prognosis in these pathologies is affected by factors not relevant to PVT *per se.* The guidelines are made based on a systematic review of the best available evidence and local data (1,2).

Guidelines

- Therapeutic dose LMWH should be initiated at the earliest opportunity from diagnosis if no contraindication.
- LMWH should be replaced by oral anticoagulation once safe to do so and should continue for 6 months if no contraindication.
- Oral anticoagulation should be continued life-long in patients with a prothrombotic tendancy.
- All patients should be followed up after acute portal vein thrombosis for signs of portal hypertension and related complications.
- Repeat imaging of the portal vein should be undertaken at 3 and 6 months after diagnosis to assess recannlisation of the portal vein. USS undertaken by an *expereicned* HPB radiologist may be appropriate. If not CT with portal venous scanning is recommended.

References

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