Introduction Portal vein embolisation (PVE) is now an established technique to increase the future liver volume/remnant (FLR) prior to liver resection. For those patients where hypertrophy is still considered insufficient complete uni-lateral embolisation incorporating both portal and hepatic artery embolisation (HAE) has been less frequently reported. The aim of this study was to evaluate the feasibility of sequential PV/HAE embolisation to increase the FLR prior to liver resection.

Methods All HBP patients are discussed at a weekly MDT meeting to decide on appropriate management decisions including the necessity for FLR augmentation. PVE is performed by initially obtaining a portogram by percutaneous trans-hepatic puncture. Selective embolisation of the necessary portal veins are then performed using a combination of coils and glue etc. Embolisation of Segment 4 PV branches are performed on a selective basis. HAE embolisation is performed by mapping arterial inflow and selectively embolising the desired segments planned for resection while carefully preserving the FLR. The aim of this study was to evaluate the feasibility/safety of PVE with sequential HAE to increase the FLR over a 5-year period (January 2006–May 2011).

Results 50 patients (M:F = 38:12) underwent a right PVE; 33 (66%) progressed to liver resection. Reasons for inoperability (34%) following PVE (n=17) were (1) Small FLR, (n=6) all underwent HAE (with five proceeding to resection) (2) extra-hepatic disease (n=7) (3) progression of hepatic disease (n=4). The median FLR of those who progressed to resection following PVE, by CT volumetry, was 384.5 cc (350–490), significantly more than those who did not reach 257 cc (110–280) (p = 0.03). HAE increased the FLR by a further 99.8 cc (range 80.5–150 cc). An R0 resection was achieved in 25 patients (76%), including 4/5 (80%) of sequential patients. Following PVE and sequential embolisation; 9/33 (27%) and 3/5 (60%) suffered serious complications (Clavien-Dindo 3 or 4). There were six post operative deaths including 5/33 (15%) after PVE and 1 (20%) following sequential embolisation respectively.

Conclusion PVE is an increasingly used technique to increase the FLR allowing a significant proportion of patients an R0 resection despite initially being considered inoperable. Nevertheless at least 20% of patients will also have progression of disease. Patients who do not achieve adequate hypertrophy can potentially have HAE embolisation to increase the FLR by a further 100 cc but perhaps at the expense of increasing post-operative complications.

Competing interests None declared.

Ongoing studies and future work

Drugs

Despite being a highly等候的 compostion, the development of antiviral drugs remains challenging. The success of current treatments has highlighted the need for alternative therapeutic approaches. In this context, research is focused on identifying new targets and developing novel therapies to enhance the efficacy and safety of existing treatments. This ongoing research is essential for improving the outcomes of patients infected with HCV, aiming to reduce the burden of disease and improve patient care.