

Clinical Utility of Selective Intra-arterial Calcium-stimulated Hepatic Venous Sampling in Regionalisation of Insulinomas—The Singapore Experience

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Abstract

Introduction: To evaluate the efficacy and safety of selective intra-arterial calcium-stimulated hepatic venous sampling (ASVS) as a preoperative regionalisation modality for insulinomas. **Design and Methods:** Four patients with biochemically-proven endogenous hyperinsulinism and negative spiral computed tomographic (CT) pancreas were subjected to ASVS between October 1999 to May 2001. Results obtained from ASVS were compared with localisation studies using either magnetic resonance imaging (MRI) or endoscopic ultrasonography (EUS); and these were confirmed surgically whenever possible. **Results:** ASVS led to a definitive regionalisation in all 4 patients evaluated; the predicted location of the insulinoma matched the findings intraoperatively in all 3 patients who were operated upon. These were all proven to be insulinoma histologically. However, 1 patient showed a positive ASVS result in samples obtained from the left hepatic vein only. In the patient who was unable to undergo surgical resection due to other co-morbid factors, his ASVS findings were corroborated by localisation obtained from the MRI study. Conversely, EUS was found to give an incorrect localisation of insulinoma in 1 patient. Adverse effects were encountered in 3 patients (2 with mild hypotension and 1 with transient atrial fibrillation); however, premature termination of the procedure was not necessary in any of the patients. **Conclusion:** ASVS is accurate and reliable for regionalisation of insulinoma, especially in patients who do not have an obvious, unequivocal tumour using high quality current-generation MRI scans.

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