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Educational Abstract

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Haemangiomas and Contrast Enhanced Ultrasound: Re-imaging the Convention

Ashwin Suri, Azhar Ali, Sabeeh Syed, Adnan Kabeer, Arthikkaa Thavakumar, Taha Khan, Sudeep Biswas, Ruhaid Khurram, Nazia Malik, Noreen Rasheed, Sami Khan, Imran Syed

Basildon and Thurrock University Hospital NHS Foundation Trust, United Kingdom

Objectives:

To compare the efficacy of contrast enhanced ultrasound (CEUS) with conventional imaging in the diagnosis of hepatic haemangiomas.

Background:

Haemangiomas are benign liver lesions commonly identified on radiological imaging. Appearances can be classic or atypical determined by size, echogenicity, density and respective rate of filling. Conventional imaging revolves around non-contrast ultrasound scans (NCUS), computed tomography (CT) and magnetic resonance imaging (MRI), how ever CEUS is being increasingly used as a second line investigation.

Findings:

We identified 122 cases (29 male and 93 female) of CEUS conducted over a 5-year period at a district general hospital. Median age of patients 54 and range 27 – 91 years. Sub group analysis showed that alongside CEUS patients also had NCUS in 76 cases, CT in 53 and MRI in 14 cases. The diagnosis of haemangiomas in all three modalities were lower in comparison to CEUS respectively; NCUS (n=50, 66% vs n=72, 95%), CT (n=25, 47% vs n=72, 94%) and MRI (n=6, 43% vs n=14, 100%). CEUS was also noted to be more effective in differentiating atypical haemangiomas when compared to its partner modalities; NCUS (0% vs 16%), CT (2% vs 23%) and MRI (14% vs 29%).

Conclusions:

Our study of over 120 cases demonstrates the relative and comparative advantage of CEUS over NCUS, CT and MRI in the identification of classic and atypical haemangiomas. How ever, further prospective studies are recommended to ascertain the role of CEUS in liver pathology in order to clearly establish its role in being a first line investigation.