Contrast-Enhanced Ultrasonography of liver lesions in patients referred after inconclusive findings on CT – Preliminary Data

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Purpose:
To evaluate the diagnostic performance of CEUS for evaluation of focal liver lesions in cases where CT gave an inconclusive diagnosis.

Materials and methods:
- 57 patients with various focal liver lesions were referred for CEUS.
- A Logiq E9 scanner (GE Healthcare, Waukesha, WI) combined with a C1–5 curvilinear probe (1-5 MHz) was used to image the lesions.
- SonoVue contrast agent at doses of 2.4 – 4.5 ml were given I.V. after ordinary B-mode and Doppler scanning.
- Suspicious lesions were examined in arterial, portal, and venous phases.
- In 20 (35%) patients, image quality during CEUS was considered not optimal.

Background:
• Benefits of CT
  o Whole body scan
  o Minimal artefacts
  o Fast scan, minimal affection of body movements

• Drawbacks of CT
  o High radiation
  o Dedicated location needed
  o Expensive
  o Need independent specialized person to evaluate images

• Benefits of CEUS
  o Cost effective
  o No damaging radiation
  o Bed side
  o Quick answer
  o Video recording

• Drawbacks of CEUS
  o Operator dependent
  o Artefacts such as bone, air in colon

Results:
- 25 (44%): CEUS examinations confirmed the suspected CT diagnosis
- 27 (47%): New diagnoses were given after CEUS examination
- 5 examinations had no diagnostic conclusion

Conclusion:
- Surprisingly are CT examinations of focal liver lesions often not conclusive.
- CEUS can in many cases provide new diagnostic information from inconclusive CT examination of liver lesions.
- This may lead to improved patient treatment.