**Training in Gall Bladder and Biliary Tree Ultrasound**

**Descriptor:**

Adherence to departmental protocol during routine examination of the gallbladder by radiologists, sonographers, medical practitioners and other staff in training.

**Background:**

False positive and false negative reports occur following ultrasound (US) examination of the gallbladder [1]. With increasing numbers of healthcare professionals performing ultrasound assessments, a methodical approach using an agreed protocol will facilitate a standardised patient assessment and help reduce operator-dependent errors. The recently revised 2020 BMUS guidelines can be used as a standard to audit stored images and reports [2].

## The Cycle

**The standard:**

• Gallbladder should be scanned in at least two patient positions

• Examine the gallbladder along both long and transverse axes

• Make sure the gallbladder neck is fully assessed to exclude pathology

• Assess the echogenicity of bile within the gallbladder

• Assess gallbladder wall thickness perpendicular to ultrasound beam

• Assess common bile duct with ultrasound beam perpendicular to portal vein

• Lumen of common bile duct should be measured from inner - inner wall measured at the porta hepatis

• If there is intrahepatic duct dilatation, efforts should be made to trace the system back to point of obstruction

**Target:**

100%

## Assess local practice

**Indicators:**

Percentage of US examinations that demonstrate adherence to the standards.

**Data items to be collected:**

Review each examination and its request form and record whether the standards were adhered to.

**Suggested number:**

5 consecutive US examinations of the gallbladder per trainee.

**Suggestions for change if target not met:**

• Present the results of the audit to all the trainees as a group and to the Head of Training

• Review the clarity and explicitness of the written protocol for examination of the gallbladder

• Make the protocol available in the US room in written form

• Improve the supervision of US examinations by the consultants and supervising sonographers

**Resources:**

- Protocol guide

- Review of soft copy using PACS system

- Radiologist or trained sonographer (4 hours)

**References:**

1. Allen-Mersh TG et al. Does it matter who does ultrasound examination of the gallbladder? BMJ1985;291:389–90.
2. <https://www.bmus.org/static/uploads/resources/2020_Guidelines_for_Professional_Ultrasound_Practice.pdf>
3. de Lacey GJ et al. Should cholecystography or ultrasound be the primary investigation for gall bladder disease? The Lancet 1984;1:205–7.
4. Davies HTO, Crombie IK. Assessing the quality of care: measuring well supported processes may be more enlightening than monitoring outcomes. BMJ 1995;311:766.

**Editor's comments:**

This template can be adapted and applied to any area of ultrasound practice, perhaps particularly those areas where ultrasound is being performed by staff without radiology, having being trained initially by the Radiology Department, to ensure that standards are being maintained.

**Submitted by:**

Taken from Clinical Audit in Radiology 100+ recipes RCR 1996, updated by Magdalena Szewczyk-Bieda 2021

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