Liver Biopsy - Full Clinical Guideline

Reference no.: CG – GASTRO/2015/205

The decision to request a liver biopsy is a clinical one and should be made by the consultant in charge of the patients care. Please discuss any patient in whom you believe liver biopsy is indicated with a consultant either during or at the end of clinic.

1. Referring clinician:

Before sending a request:

- **Is there a contra-indication to percutaneous liver biopsy?**

Absolute contra-indications:

- INR > 1.4 (Stop Warfarin 5 days before biopsy)
- Platelet count < 75
- Anticoagulant or antiplatelet therapy (Stop Aspirin and Clopidogrel 7 days before biopsy)
- Uncooperative patient
- History of unexplained bleeding
- Suspected echinococcal cysts of liver

Relative contra-indications (imply higher than average risk. Consider Trans-jugular biopsy)

- Tense ascites (Transjugular approach usually recommended)
- Established renal failure (creatinine > 150) - consider use of DDAVP
- Severe jaundice (bilirubin > 100)
- Suspected systemic amyloidosis

Haemophilia (percutaneous biopsy can be performed safely with Factor replacement after discussion with a Consultant Haematologist

- **Discuss the procedure with the patient and complete part 1 of the consent form**

Complications - 60% occur within 2 hrs and 96% within 24hrs of procedure

Minor
- pain requiring analgesia (25%)
- transient hypotension (vasovagal)

Major
- Haemorrhage - mild/moderate (causing pain, hypotension or tachycardia, but not requiring intervention) - 1:500
- severe (change in vital signs and intraperitoneal haemorrhage on imaging) 1: 2500-1:10,000
- Pneumothorax, Haemothorax, Bile peritonitis, Haemobilia
- Death 1:10,000

- **Decide whether suitable for day case or requiring overnight stay**

The majority of patients seen in the outpatient clinic will be suitable for day-case biopsy. The following circumstances require an overnight stay.

- Targeted liver biopsy for suspected malignancy (increased risk of bleeding)
- Transjugular liver biopsy

- No responsible adult available to be with patient for next 24hrs
- Patient lives more than 30 minutes from hospital
- Any relative contraindications as outlined above

Sending a request:

- Complete the admission form for the elective procedure unit (Ward 202) and include:
  - Brief clinical details and information about co-morbidity
  - A completed ultrasound request form
  - A completed histology form
  - Indicate whether day case or overnight stay

2. Planned investigation unit (ward 202)

Pre-biopsy assessment (This will usually be carried out by Liver CNS Alison Beard/ Sam Whyld). The assessment will include:

- Confirmation that the biopsy is still indicated and that the patient is fit enough
- Confirmation that there are no contraindications and that anticoagulants/ antiplatelet agents have been stopped for required period of time
- Answering patient questions
- Brief entry in the hospital notes documenting that the assessment took place. A full clerking is unnecessary.
- Prescribe stat dose of paracetamol to be taken 1 hour prior to the biopsy (2g if ≥ 65kg, 1.5g if < 65kg)
- If in doubt, consult with referring clinician directly.

The biopsy

This is performed ultrasound assisted (the operator uses ultrasound to mark the best site from which to sample the liver). Once a satisfactory site has been marked, the skin will be cleaned using standard povidine-iodine or hibiscrub. Under aseptic conditions, the skin, needle tract and liver capsule will be infiltrated with 1% or 2% lignocaine (approximately 15ml) in order to minimise patient discomfort. Next, the biopsy will be taken whilst the patient undertakes a short breath hold – no longer than 10 seconds.

Following the biopsy, the patient will be closely observed for 2 hours for signs of bleeding. This will involve pulse and blood pressure measurement every 15 minutes for the first hour, and then every 30 minutes for the second hour. If the patient is pain free and stable then at 2 hours, they will be allowed to mobilise on the ward. After a further 1 hour and repeat observation, all stable day-case patients who can be discharged into the care of a responsible adult. All other patients will remain on ward 202 overnight. All patients without complications will be discharged by the nursing staff.

Any unexpected or adverse events should be reported to the clinician who performed the biopsy immediately or as soon as practicable.

3. Post biopsy

In the absence of evident complications or significant pain the patient can to return to work the next day. Heavy lifting should be avoided for 48hrs.

Warfarin may be restarted the day following biopsy
Antiplatelet therapy may be restarted 48-72hrs following biopsy
After the biopsy the patient will be seen in clinic in 4 weeks.

Further reading:

AASLD position paper on liver biopsy. Hepatology 2009; 49 (3): 1017-1044

Documentation Controls

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Review Date:	December 2021
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