Procedure: Assisting with Abdominal Paracentesis

1.1 Objective

To relieve the symptoms associated with ascites both physical and psychosocial
Abdominal paracentesis is carried out safely by medical staff

1.2 Personnel Authorised to assist with Procedure

Registered Nurses
Enrolled Nurses under the supervision of a Registered Nurse
Student Nurses under the direct supervision of a Registered Nurse

1.3 Associated Documents

CDHB Infection Control Manual Volume 10
Paracentesis/ Pleurocentesis Procedure Form
Paracentesis patient information leaflet

1.4 Definitions

Ascites is the abnormal accumulation of serous fluid within the peritoneal cavity.

For malignant ascites, abdominal paracentesis gives good, temporary relief from distressing symptoms in approximately 90% of cases.

1.5 Equipment

Top of dressing trolley

Dressing pack
Sterile gloves
Skin preparation – Chlorhexidine 2% in Alcohol 70% swab stick
2 x 10ml syringes
26G and 22G needles
14 GA 3.25 inch (2.1 x 83mm) Angiocath™
Bonano suprapubic catheter (if required – source from urology ward)
IV giving set
Local anaesthetic: Xylocaine 1% plain (2 ampoules)
Gauze squares
Tegaderm (6 cm x 7 cm)
½ inch tape
Sharps box
½ absorbent (Johnsons) pad X2
Urinary catheter drainage bag
Measuring jug
2 specimen pottles (if required)
Wound drainage bag (if required)

Contra-indications to procedure

- *Absolute* contra -indications include anticoagulation, severe and irreversible disorders of coagulation, intestinal obstruction and an infected abdominal wall.

- *Relative* contraindications are poor patient co-operation, surgical scarring over the puncture area and severe portal hypertension with abdominal collateral circulation.

- If the patient appears very frail or unwell it is necessary to ensure that they are haemodynamically stable- include a lying and standing blood pressure. Sometimes the procedure may require hospital admission.

Prior to Procedure

Anticoagulation is an absolute contra-indication to paracentesis.

Clexane must be stopped at least 24h before paracentesis.

- Patients on **Warfarin** should have this stopped 3-4 days before the procedure, and have an INR of <1.5 before paracentesis.
- Medical staff should confirm the presence and location of ascitic fluid within the abdomen, which may be done by clinical examination or with an XMTS ultrasound
- Nursing staff should clarify if coagulation blood test is required prior to procedure with medical staff – this is required for all first time patients, patients on warfarin & patients with liver ca/mets.
- Written consent should be obtained for the first paracentesis. Verbal consent is satisfactory for subsequent paracenteses.

Potential Procedure complications

Patient starts to cough

- Indicates possible lung re-expansion due to tense ascites

Management

Stop drainage by clamping IV set
Notify medical staff

Haemorrhage

- Can be a complication from the puncture site
- Record pulse, blood pressure and respiratory rate

Management

Haemostasis is usually obtained by applying pressure to the site

Cessation of fluid drainage

- Abdomen is empty of ascitic fluid
- Patient's position is inhibiting drainage
- The ascitic fluid has clotted in the drainage system

Management

Check the total ascitic fluid output.
Discuss with medical staff removal of cannula
Change the patient's position; i.e. move the patient upright or onto his/her side to encourage flow by gravity
"Milk" the tubing. If this is unsuccessful change the drainage system aseptically.

Perforation
- May develop localised abdominal pain
- Frank blood in drainage bag

Management
Monitor observations
Notify medical staff

Local or systemic infection
- Bacterial invasion at the site of abdominal paracentesis

Management

Obtain a swab from the site for culture and sensitivity
Refer to medical staff

PROCEDURE

Step	Action
1.	Ensure patient privacy throughout procedure
2.	Explain procedure to the patient. Medical staff to obtain informed consent. A QMR002A is completed for first procedure and verbal consent is gained for subsequent procedures
3.	Ensure patient has emptied their bladder
4.	Social hand wash
5.	Record baseline observations
6.	Position patient supine on the bed, in the same position as the XMTS was performed where applicable
7.	The procedure is performed by medical staff with nurse assistance
8.	Assist medical staff to assemble equipment/ open sterile equipment onto sterile field
9.	Medical staff perform procedural hand wash and don sterile gloves
10.	The abdomen is prepared aseptically and draped with a sterile sheet
11.	Local anaesthetic is administered using a 26g needle
12.	The Angiocath™ is inserted with syringe attached; position is confirmed by fluid withdrawal. Needle is removed, leaving cannula.
13.	Attach IV giving set (luer plug end) to cannula and attach the urinary catheter drainage bag to the opposite spike end of the IV giving set.
14.	Secure Angiocath™ to abdomen with tape. Gauze padding may be required underneath the cannula if it is protruding. **DO NOT KINK** the cannula
15.	Record time drainage starts
16.	If first paracentesis or frail / elderly consider stopping the flow for 5 mins after 1000mls has drained

17.	**Stop drainage** if patient complains of feeling light headed or unwell or severe pain Record pulse and blood pressure If signs of shock i.e. tachycardia, hypotension, cold and clammy Notify medical staff urgently
18.	Continue assessment of patient comfort and amount of drainage every 15 minutes. Empty drainage bag into measuring jug, measure amount, and record
19.	After 4000mls has drained, turn drainage off for 15- 30 mins
20.	Recommence drainage if patient continues to experience no side effects
21.	Continue drainage until flow stops or 8000mls has drained Record time drainage stops
22.	Remove Angiocath™ and cover site with gauze and a transparent dressing.
23.	Explain to the patient that there may be leakage and if ascitic fluid continues to drain a wound drainage bag maybe applied over the puncture site

Post procedure

1.	If diagnostic specimens are required it is useful to send a large volume (>1000 mls) to the laboratory.
2.	The patient should remain in the department for 30mins after the procedure is completed.
3.	Documentation in the Oncology notes/ Hospital records of patient status throughout procedure, duration of procedure and amount of drainage.
4.	Provide patient with Paracentesis patient information leaflet

Discharge Advice

- Patient should be advised to rest for 12 hours post-procedure
- Remove dressing after 24 hours
- Education on the importance of diet and fluid intake to replace the protein and fluid lost in the ascitic fluid
- Patient should be given patient information leaflet on whom to contact if complications develop. Oncology Department phone No: (03) 3640 020 (24 hours).

References

1. Mallett J. & Bailey C (Eds) (1999) Manual of Clinical Nursing Procedures. The Royal Marsden Manual 5th edition. Blackwell Science Ltd. London