

Pre-workshop notes for abdominal paracentesis workshop

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By the end of the workshop you will have undertaken “paracentesis” on a manikin, understand how to safely perform the procedure, understand its purpose and the tests to be undertaken on the ascitic fluid. The brief notes below provide a little background information but do not replace what you will cover during the interactive workshop.

Most paracentesis is carried out in patients with cirrhosis. The procedure in patients with ascites secondary to malignant disease is similar but there is no evidence that albumin replacement in these patients is of benefit.

Diagnostic ascitic tap. This is required in those with new onset ascites, those with clinical deterioration and those admitted with ascites. A sample can generally be taken with a green (or white) needle through an area of cleaned skin. The sample is checked for SBP (Spontaneous Bacterial Peritonitis). 15% of those admitted with cirrhosis and ascites have SBP, mortality is 20%. Send for PMN leucocyte count (values >250 cells/cu.mm. positive), inject 10 ml. sample into blood culture bottles (91% yield in SBP, compared with 42% for standard culture) and dip with urine dipstick for leucocytes (specific but only 43% sensitive). Gram stain is rarely positive. Check the Serum Albumin Ascitic fluid Albumin Gradient (SA-AG). If $SA-AG > 1.1$ g/dl portal hypertension is present. If $SA-AG < 1.1$ g/dl portal hypertension is absent (97% accurate).

Treatment of SBP. While not the focus of this workshop treatment of SBP should not be delayed. Use a broad spectrum non-nephrotoxic intravenous antibiotic e.g. cefotaxime 2g 8-hourly. Intravenous albumin 1.5g/Kg at diagnosis and 1g/kg on Day 3 preserves renal function and improves survival. A 5-day course is as efficacious as a 10-day course.

Large volume paracentesis. Patient preparation, procedure and aftercare will be discussed in the Workshop. Large volume paracentesis with plasma volume expansion in cirrhotic patients with symptomatic tense ascites is the preferred option. It is more effective than diuretic therapy, renal function and circulatory hemodynamics are better preserved, risks of SBP are reduced and in-patient stay is shortened. The maximum volume of ascitic fluid is drained; this is safer than repeated paracentesis. For volumes over 5 litres removed 6-8g albumin/litre of ascites drained is infused. A sample is sent for analysis and to exclude SBP. The drain should not be in place for more than 6 hours (Grabau et al. mean volume removed 8.7 litres, mean time 97 minutes, data on 1100 cases). Abnormalities of platelet and prothrombin time secondary to cirrhosis do not need to be corrected prior to paracentesis (Grabau et al. INR range 0.9-8.7, IQR 1.4-2.2, platelet count 19-341, with platelet count <50 in 612 cases). This will be discussed in the Workshop.

Enjoy the Workshop!

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