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THE BRITISH MEDICAL ULTRASOUND SOCIETY

Helen Matthews has completed this personal reflection on **27/02/2020**

Paper: Ascites matters

Personal Reflection:

Description of Learning :

The presence of excessive intra-peritoneal fluid is known as ascites and is an important feature indicating significant underlying illness. This may be secondary to an underlying condition or due to a pathological event within the peritoneal cavity.

Based on protein content, ascites is classified into transudate and exudate with a wide range of differential diagnoses. Transudates are typically due to increased leakage of fluid secondary to raised intravascular pressure, due to an underlying systemic illness such as cardiac failure or portal hypertension. Exudate represents protein rich fluid formed secondary to haemorrhage, infection, inflammation or neoplasia and may exhibit low level echoes, particulate debris and septations. Loculated ascites can become encapsulated, forming a collection and exert a localized mass effect.

Evaluation & Analysis :

In the acute setting a trace of fluid in the upper abdomen is an abnormal finding and may be the only clue for an underlying acute abdomen.

Gas is mobile and highly reflective on ultrasound. In conjunction with ascites it can indicate bowel perforation or sepsis.

Ultrasound is a useful, robust, first-line imaging modality and can reliably detect small volumes of fluid. Once detected it is imperative to have a systematic approach to give an underlying diagnosis. Ultrasound can quantify the volume of fluid and aid the decision process for fluid drainage.

Ultrasound is superior to CT in the qualitative assessment of ascites as both simple and complex fluid has a uniform appearance with no differentiation of CT.

Conclusion :

Ultrasound is a safe, relatively inexpensive, reproducible and a readily available modality.

Action Plan :

When assessing ascites, start with a wide field of view for a global overview of the abdomen and pelvis and obtain a clinical perspective of the volume and distribution of the fluid. When

supine, fluid will accumulate in the dependent areas of the abdominal cavity, typically in Morrison's pouch, Pouch of Douglas and para-colic gutters. Being able to assess the patient in different positions is an inherent strength of ultrasound and allows scrutiny of the dependent areas closely. The dynamic nature of ultrasound also allows detection of loculated pockets of fluid.