TAP IN 24

Are we performing an ascitic tap in patients presenting with decompensated liver disease and ascites within 24 hours of admission?

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1. Background and Problem

Decompensated liver disease is common and carries a high inpatient mortality (10-20%).[1] The 2013 NCEPOD report highlighted the management of these patients as suboptimal.[2]

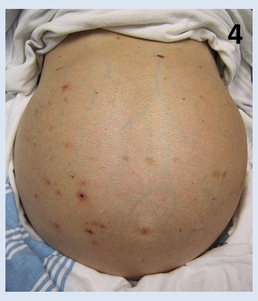
Early intervention for complications of cirrhosis can save lives. SBP (spontaneous bacterial peritonitis) is one of the most serious complications. Untreated, it has a mortality of 90%. This falls to 20% with prompt recognition and treatment.[3]

The key test in diagnosing SBP is an ascitic tap; as listed in the 'Decompensated Cirrhosis Care Bundle – First 24 Hours', published by the BSG and BASL.[1]

There is a lack of awareness of the need to perform this procedure within 24 hours in this group of patients and of the care bundle's existence.

2. What Is An Ascitic Tap?

Needle inserted into ascites (collection of fluid in the peritoneal cavity) to obtain a sample of fluid to send to the lab for testing. Namely cell count and cultures to look for infection in SBP.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Polymorph count >250/mL is suggestive of SBP

3. My Aim

70% of patients presenting with decompensated liver disease and ascites will have an ascitic tap within the first 24 hours of admission to Gloucester Royal Hospital (GRH) by March 2017.

4. Driver Diagram

Primary Drivers	Secondary Drivers	Change Ideas
Early identification of these patients	Triage	Signpost on Trackcare
	Communication between ED & medics	Put care bundle[1] on intranet guidelines and paper copies in ED & ACUA
	Aid juniors to recognise	Education for junior doctors ★
Preparation for ascitic tap procedure	Understanding of urgency	Laminated equipment list in treatment room
	Time getting equipment ready	Equipment stocked and readily available 'TAP IN 24' trolley
	Consent	Consent checklist
Ability performing the procedure	Confidence & competence	Education - practical demonstrations ★ Incentive to learn - certificate
	Supervision	Involve alcohol specialist nurses & Gastro registrars
	Training	1 confident 'TAP IN 24' lead per ward
Dealing with sample	Contacting Microbiology	Advice on Micro/Pathology intranet page
	Correct samples & labelling	Intranet flag re samples
	Handover & documentation	Sticker in notes for easy documentation

Driver diagram. PDSA (Plan, Do, Study, Act) cycle indicated by stars.

5. Method and PDSA Cycle

- Safety concern and stakeholders identified
- Quality improvement (QI) tools including a driver diagram and fishbone analysis used to generate change ideas
- Retrospective data collection undertaken to establish baseline data (data source = e-referrals to two Gastroenterology registrars based at GRH)
- PDSA cycle 1 – teaching session to ACUA junior doctors (quiz, presentation, practical tap demo using grapefruits!)
- Prospective data collection undertaken
- Data analysed using Excel

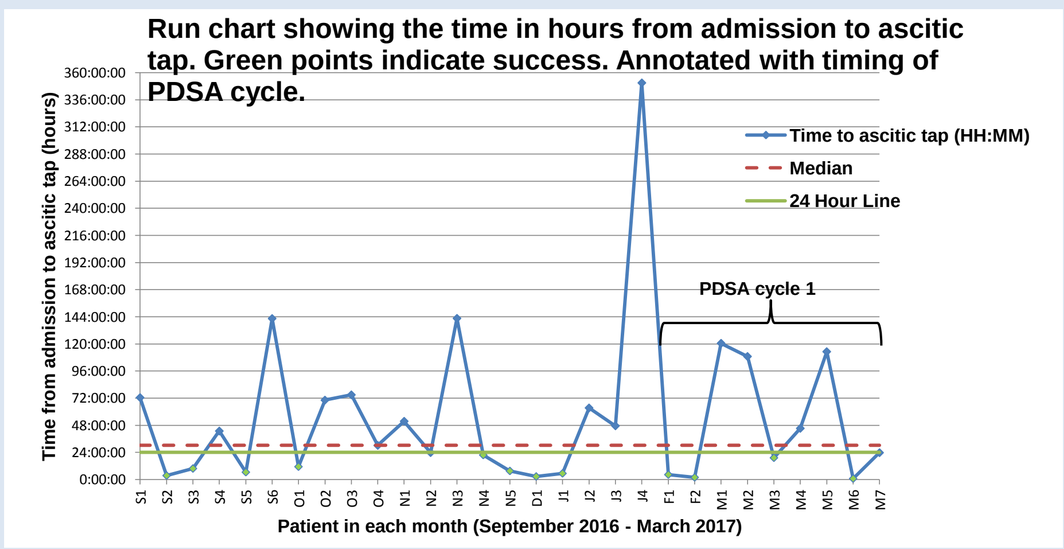
6. Results

Baseline result: Analysis of Gastro referrals September 2016-January 2017 showed a 42.9% success rate.

Post intervention result: Analysis of Gastro referrals February-March 2017 showed a 55.6% success rate.

Limitations of QI project:

- Teaching session only available to some ACUA doctors
- Junior doctors on other wards need to be reached
- Small sample sizes
- More PDSA cycles required



7. Conclusions and Next Steps

- 55.6% patients had an ascitic tap ≤ 24 hours of admission
- Did not meet aim of 70% but did see improvement of 12.7% with one PDSA cycle in a short time
- Scale up education eg. lecture during Foundation/Core Medical local teaching
- More PDSA cycles: put guidelines on intranet, paper copies in ACUA/C and ED, laminated equipment list for ascitic tap procedure in treatment rooms

With thanks to Gastroenterology SpR's Dr Hazel Woodland and Dr Luke Materacki for access to e-referrals and for Dr Woodland's referral document.

[1] British Society of Gastroenterology. 'Decompensated Cirrhosis Care Bundle – First 24 Hours' [internet]; [cited 23rd March 2017]. Available from: http://www.bsg.org.uk/care-bundles/care-bundles-general/decompensated-cirrhosis-care-bundle-first-24-hours.html [2] National Confidential Enquiry into Patient Outcome and Death. 'Alcohol related liver disease: Measuring the units (2013)' [internet]; [cited 23rd March 2017]. Available from: http://www.ncepod.org.uk/2013arld.html [3] Rawson TM, Bouri S, Allen C, Ferreira-Martins J, Yusuf A, Stafford N et al. Improving the management of spontaneous bacterial peritonitis in cirrhotic patients: assessment of an intervention in trainee doctors. *Clinical Medicine*. 2015; 15: 426. [4]Heilman J. Hepatic failure [photograph]. 2011. Located at: Wikimedia Commons. [5]DrER.tv. Paracentesis [video on the internet]. August 2012. Available from: https://www.youtube.com/watch?v=6d-L6Hni6A4. [6]Blood Culture /Ascitic Fluid [photograph]. Gloucester: Gloucestershire Hospitals NHS Foundation Trust; 2014.