

## New Castle Variceal Risk in PBC Score Calculator

\* The Newcastle Risk Score:

$$1 / 1 + \exp \cdot (-9.186 + (0.001 \cdot \text{alkaline phosphatase in IU}) - (0.178 \cdot (\text{albumin in g/L})) - (0.015 \cdot \text{platelets} \times 10^9)))$$

After entering serum albumin in g/L, platelet count ( $10^9$ ) and alkaline phosphatase in IU click the Calculate button. Your Risk Score will then be computed and displayed in the "Predicted risk of Varices =" text box

Input:

Enter Your Serum Albumin:	(g/dL)	
Enter Your Platelets:	( $\times 10^9$ )	
Enter Your Alkaline Phosphatase:	(IU)	
Your reference Alkaline phosphatase range:	to	(IU)
Calculate	=	

Output:

Predicted risk of Varices = %

### Abstract PWE-146 Figure 1

with primary biliary cirrhosis based on serum albumin levels, platelet count and serum alkaline phosphatase level. A easy accessible online tool is available where values can be entered and score greater than 50% is considered to predict the presence of varices, thereby warranting oesophago-gastro-duodenoscopy (OGD). The aim of this study was to validate this score in an external validation cohort from Liverpool.

**Methods** Retrospective study involving 80 PBC patients under follow up at a university hospital. Of them, patients who had undergone a OGD for any clinical reason were identified and findings of the OGD noted. Results of blood tests to allow calculation of the NVP score were recorded. An NVP probability of 0.5 was used as the cut-off to analyse the performance of the score.

**Results** Patients involved in the study had mean albumin levels of 36, platelets of 260 with an ALP ranging between 58 and 811. 97% were female and median age of patients was 67 years. 30 PBC patients who had an OGD were identified. 10 of the 30 patients had varices on endoscopy. The NVP Score performed well in identifying those in whom varices were absent in this cohort (sensitivity of 100%, specificity 69%, Negative Predictive Value 100% and Positive Predictive Value 10%; overall accuracy 84.5%) and had a good discriminating power with AUROC 0.89.

**Conclusion** The NVP Score proved to be a highly sensitive tool to discriminate patients with PBC who do not have varices and in whom OGD is unnecessary in our cohort. The study therefore strongly supports the view that prospectively applying the score in patients with PBC will help to direct endoscopic evaluation in the right category of patients thereby ensuring effective use of resources.

### REFERENCE

- 1 Patanwala I, et al. *J Hepatol*. 2013 Aug;59(2):32735  
doi:10.1016/j.jhep.2013.04.010

**Disclosure of Interest** None Declared.

### PWE-147 NURSE LED DAY CASE PARACENTESIS

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**Introduction** Refractory ascites is a debilitating condition. Prior to the implementation of nurse led day case paracentesis all patients were admitted into the hospital for an inpatient stay of

between 3 and 5 days. An audit of inpatient paracentesis was carried out to assess the quality and efficiency of inpatient paracentesis. From this the service was developed to improve the overall quality of the patient experience and reduce inpatient admissions for paracentesis. Disease aetiology includes alcoholic liver disease, viral disease, autoimmune disease and advanced malignancy.

**Methods** The hepatologist CNS was trained by the consultant hepatologist to perform paracentesis. All patients requiring paracentesis are referred directly to the CNS from GP's, out patient clinics and the accident and emergency department. Patients are assessed in a pre procedure clinic by the CNS. A clinical examination is performed, bloods are checked and if necessary corrected accordingly to facilitate day case paracentesis. To date, the CNS has performed over 200 day case paracentesis procedures and complication rates remain below the national average.

**Results** Data collected from a patient feedback exercise was extremely positive in all aspects of the nurse led day case paracentesis service. An audit of the service demonstrated no difference in overall outcomes when the CNS performed the paracentesis in comparison to the medical registrar. There has been a significant reduction in hospital bed days required for paracentesis.

**Conclusion** Nurse led day case paracentesis is a safe, effective and economic alternative to costly inpatient hospital admissions. It has proven to be both beneficial to the service user and the NHS trust. Patients benefit from a key worker who specialises in the management of refractory ascites who can provide management and out patient intervention to avoid the potential complications of large volume refractory ascites and unnecessary hospital admissions.

**Disclosure of Interest** None Declared.

### PWE-148 LONG TERM OUTCOMES OF PERCUTANEOUS RECANALISATION FOR BUDD-CHIARI SYNDROME (BCS): OUR EXPERIENCE IN BIRMINGHAM, UK

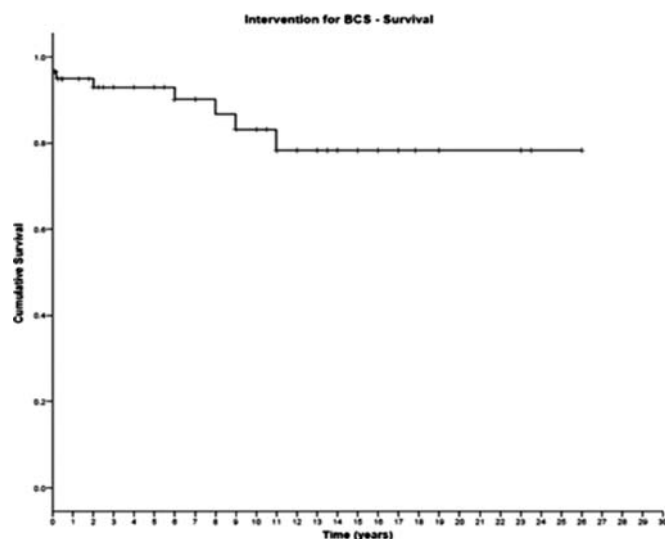
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**Introduction** Patients with BCS and short stenosis of the hepatic vein or the upper IVC can be treated with recanalisation by percutaneous venoplasty  $\pm$  hepatic vein stent insertion. Recent data suggests >60% failure rate (PMID 23389867). We studied the long-term outcomes of this approach in our institution.

**Methods** Retrospective analysis of patients referred from 1987 to 12/2012 for radiological intervention. Of 161 patients treated for BCS, 60 patients were selected.

**Results** Median age, 34.5 years (19–65), M:F ratio 23:37. Mean follow up,  $8 \pm 6.6$  years (0.1–26 years). 60% of patients had  $\geq 1$  haematological risk factor. Percutaneous recanalisation was technically successful in all patients. The obstruction was at the level of hepatic vein (s) (86.6%), IVC (6.6%) and both IVC and HV (6.6%). 30 patients were managed with venoplasty alone. Of the 30 who had stent placement, 15 had venoplasty prior to stent placements, ranging from 1–11 venoplasty episodes. Due to failure of recanalisation, 26.66% patients required TIPSS (16.7%), surgery (8.3%) and liver transplantation (6.7%). Actuarial survival at 1, 5, 10 was 95%, 93%, and 83% respectively (*kaplan meier survival Graph 1*). All patients maintained Child's



Abstract PWE-148 Figure 1

A status throughout follow up and there was no incidence of Hepatocellular Carcinoma.

**Conclusion** BCS patients due to short stenosis of the hepatic vein or the upper IVC can be successfully managed with percutaneous recanalisation alone with good outcomes over a long period of follow up. Our data supports the stepwise approach to the managements of BCS, with better results than recent series.

#### REFERENCE

- 1 PMID 23389867. Good long-term outcome of Budd-Chiari syndrome with a stepwise management. *Hepatology* 2013 May;57(5):1962–8. doi: 10.1002/hep.26306.

**Disclosure of Interest** None Declared.

#### PWE-149 MINIMAL HEPATIC ENCEPHALOPATHY IS A SIGNIFICANT COMPLICATION IN CIRRHOTIC PATIENTS ADMITTED TO HOSPITAL

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**Introduction** Minimal hepatic encephalopathy (MHE) is a subtle cognitive impairment in patients with cirrhosis or porto-systemic shunts in the absence of abnormalities in standard neurological examination. The diagnosis of MHE has always taken a back seat in the evaluation of patients with cirrhosis primarily due to the fact that it is time consuming and not well validated. However, the prognostic importance of MHE cannot be understated as it has been found to affect motor skills like driving and timely treatment does improve quality of life and progression to overt encephalopathy (OHE).

**Objective** To estimate the prevalence of minimal hepatic encephalopathy in a sequential population of cirrhotic patients admitted in the gastroenterology ward at Aberdeen Royal Infirmary.

**Methods** 26 patients with a diagnosis of cirrhosis admitted over a 3 week period were included in the study. All patients with overt encephalopathy and sepsis were excluded from the study. The psychometric hepatic encephalopathy score (PHES) was used to assess the patients at the bedside. This comprises of a standardised battery of five paper-pencil psychometric tests: number connexion test A, number connexion test B, the digit symbol test, the line tracing test (time and errors) and the serial

dotting test. Minimal hepatic encephalopathy can be diagnosed when the psychometric hepatic encephalopathy score is less than -5. This score can be easily obtained by inputting data in an online tool (<http://www.redeh.org/phesapp/datosE.html>).

**Results** The mean age of the selected cirrhotic patients was  $59 \pm 2.8$  years and 74.1% were male. The commonest aetiology of cirrhosis was alcohol related liver disease (62.9%). 33.3% of patients were Child's A, 44.4% were Child's B and 22.3% were Child's C. The mean MELD score was  $16.5 \pm 9.2$ . The median PHES score was 1 (Range -10 to 2). Of the 26 patients evaluated, 7 patients were diagnosed to have MHE (25.9%). The prevalence varied with the Child's stage, 11.1% in Child's A, 25% in Child's B and 60% of Child's C patients. All patients diagnosed with MHE were commenced on Lactulose.

**Conclusion** Hospitalised patients with cirrhosis have a significant prevalence of MHE which is proportional to the stage of the liver disease. Prompt identification and treatment of this cohort will help in preventing them from progressing to overt encephalopathy.

**Disclosure of Interest** None Declared.

#### PWE-150 TRANSIENT ELASTOGRAPHY (FIBROSCANS) SUCCESS RATES ARE OPERATOR DEPENDENT; EXPERIENCE FROM THE SOUTH WEST LIVER UNIT

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**Introduction** Transient Elastography (FibroScan®) is a well validated, easy to use, non-invasive method of assessing the stage of liver fibrosis, whilst avoiding potential complications of liver biopsy. Despite ease of use, operator success rates vary, there is a known failure rate and its accuracy at assessing the stage of fibrosis depends on a 'valid' reading being gained. The South West Liver Unit has been performing transient elastography since 2010 and receives referrals from regional hospitals where scanning is unavailable. The aim of this study was to review the overall numbers performed, the success rates of operators, and the percentage of valid scans obtained.

**Methods** Data was collected and analysed retrospectively; and was obtained from the FibroScan® hard drive. Clinical information was obtained from clinical databases and clinical letters. Validation of scan was based on the three recognised validation criteria; (1) >10 valid readings, (2) success rate > 60% and (3) interquartile range to median ratio of < 0.3.

**Results** Between 2010 and 2012 inclusive, 1819 scans were undertaken. Multiple attempts (n = 247), including probe size change, were excluded. Of the remaining 1572 scans, (2010 = 537, 2011=544, 2012= 558), 74% were valid on above criteria (2010=72%, 2011=75%, 2012=74%). Overall doctors performed more scans than nurses, n = 856 versus n = 713, but nurses had a slightly higher mean success rate, 75.5% vs. 72.5%. Scans were performed by 14 different operators (registrars, consultants and nurses). Individual operator success rates varied widely from 43% to 87%; as did the number of scans performed, median = 70, range 15–373. Success rates were highest in those with formal training, with a weak correlation to number of scans performed ( $r^2 = 0.34$ ,  $p = ns$ ). The commonest scan indications included regional hospital referral (31%), non-alcohol related fatty liver disease (25%), viral hepatitis (13.5%) and alcohol related liver disease (11%).