The BSG/BASL bundle for patients admitted with decompensated chronic liver disease improves standard of care but utilisation is poor across the UK

ToRcH-UK

INTRODUCTION

Standardised mortality in patients with chronic liver disease (CLD) has significantly increased since 1970 and the NCEPOD report of 2013 raised concerns about inpatient care

The BASL/BSG bundle was created to improve care for patients with decompensated CLD within the first 24 hours of admission

We aimed to audit uptake and impact on patient outcomes across the UK

METHODS

Retrospective audit of all patients admitted to secondary care as an emergency between 1/11/2019-30/11/2019 of patients identified through coding

Univariate and multivariate analyses (MVA) were undertaken

RESULTS - 1179 ADMISSIONS FROM 1124 PATIENTS ACROSS 99 HOSPITALS IN THE UK

Figure 1 - Map of bundle usage across the UK

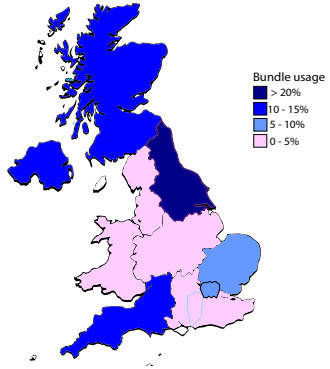

Figure 2 – Forest plot of MVA for mortality

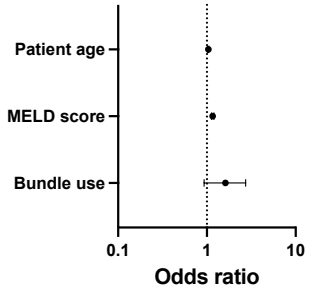

Table 1 – Who is the bundle used for?

Variable	N	Bundle use	N	No bundle	P value
Age	111	57.0 (47.0-65.0)	1068	58.0 (48.0-68.0)	0.12
Gender (% males)	111	79 (71.2%)	1068	652 (61.1%)	0.04
Admitted in hours	109	37 (33.9%)	1055	437 (41.4%)	0.15
NAFLD or alcohol-related	111	108 (97.3%)	1068	925 (86.6%)	<0.01*
Current alcohol use	96	60 (62.5%)	812	447 (55.1%)	0.19
Previously known liver disease	111	93 (83.8%)	1068	909 (85.1%)	0.68
Principle reason for admission					
Acute kidney injury	111	4 (3.6%)	1068	40 (3.8%)	>0.99
Ascites	111	40 (36.0%)	1068	355 (33.2%)	0.60
Encephalopathy	111	16 (14.4%)	1068	183 (17.1%)	0.51
GI bleed	111	8 (7.2%)	1068	169 (15.8%)	0.02*
Jaundice	111	28 (25.2%)	1068	149 (14.0%)	<0.01*
Sepsis	111	7 (6.3%)	1068	68 (6.4%)	>0.99
Other	111	8 (7.2%)	1068	104 (8.7%)	0.50
Prognostic scores					
MELD	108	19.0 (14.0-22.0)	954	16.0 (12.0-21.0)	<0.01*
CP	103	9.0 (8.0-11.0)	930	9.0 (8.0-10.0)	<0.01*

Table 2 – Bundle use improves standards of care within first 24 hours

Variable	N	Bundle use	N	No bundle	P value
NEWS documentation	111	108 (97.3%)	1068	987 (92.4%)	0.08
Complete blood tests	110	76 (69.1%)	1059	413 (39.0%)	<0.01*
US abdo request	111	74 (66.7%)	1062	516 (48.6%)	<0.01*
Ascitic tap	82	55 (67.1%)	628	330 (52.6%)	0.01*
ALCOHOL					
Daily alcohol intake recorded	111	96 (86.5%)	1068	809 (75.8%)	<0.01*
Pabrinex prescribed	77	73 (94.8%)	586	480 (81.9%)	<0.01*
CIWA score if withdrawing	70	61 (87.1%)	492	313 (63.6%)	<0.01*
INFECTIONS					
SBP Suspected source of infection	42	14 (33.3%)	359	83 (23.1%)	0.18
Abx as per trust protocol	40	37 (92.5%)	272	249 (91.5%)	>0.99
If SBP – HAS 1.5g/kg	16	9 (56.3%)	60	19 (31.7%)	0.09
AKI/HYPONATRAEMIA					
Diuretics/nephrotoxics stopped	33	30 (90.9%)	241	192 (79.7%)	0.16
Fluid resuscitation	40	28 (70.0%)	283	222 (78.5%)	0.23
Fluid balance chart and daily weights	43	27 (62.8%)	293	178 (60.8%)	0.87
MAP aim >80mmHg	40	12 (30.0%)	270	31 (11.5%)	<0.01*
GI BLEED					
Fluid resuscitated (MAP >65mmHg)	18	14 (77.8%)	204	158 (77.5%)	>0.99
Terlipressin prescribed	21	16 (76.2%)	208	148 (71.2%)	0.80
ABX prescribed	20	16 (80.0%)	214	166 (77.6%)	>0.99
FFP given if INR>2.0	15	3 (20.0%)	160	34 (21.3%)	>0.99
Platelets if <50	6	2 (33.3%)	50	19 (38.0%)	>0.99
FBC if <70	13	7 (53.9%)	125	67 (53.6%)	>0.99
Endoscopy <12 hours	24	3 (12.5%)	233	81 (34.8%)	0.04
ENCEPHALOPATHY					
Precipitant identified	48	36 (75.0%)	291	192 (66.0%)	0.25
Lactulose/enema prescribed	53	49 (92.5%)	302	262 (86.8%)	0.36
CT head requested	50	20 (40.0%)	284	134 (47.2%)	0.36
OTHER					
VTE	100	75 (75.0%)	966	641 (66.4%)	0.09
GI/Hep review within 24 hours	110	87 (79.1%)	1054	713 (67.7%)	0.01*

CONCLUSIONS

The BASL/BSG bundle improves standards of care but is poorly used across the UK. Work is required to understand the barriers to use in order to improve inpatient care for patients with chronic liver disease.

REFERENCES

Williams R, Aspinall R, Bellis M, *et al.* Addressing liver disease in the UK: a blueprint for attaining excellence in health care and reducing premature mortality from lifestyle issues of excess consumption of alcohol, obesity, and viral hepatitis. *The Lancet* 2014;384:1953-97

"Measuring the Units" - A review of patients who died with alcohol related liver disease. National Confidential Enquiry into Patient Outcome and Death (UK) 2013 http://www.ncepod.org.uk/2013report1/downloads/MeasuringTheUnits_FullReport.pdf (Accessed 07/02/2022)

McPherson S, Dyson J, Austin A and Hudson M. Response to the NCEPOD report: development of a care bundle for patients admitted with decompensated cirrhosis-the first 24 h. *Frontline Gastroenterology* 2016;7:16-23.

The Trainee Collaborative for Research and Audit in Hepatology UK. ToRcH-UK: shining a light on liver disease in the UK. *Frontline Gastroenterology* Published Online First: 26 July 2021. doi:10.1136/flgastro-2021-101948