The acutely bleeding cirrhotic

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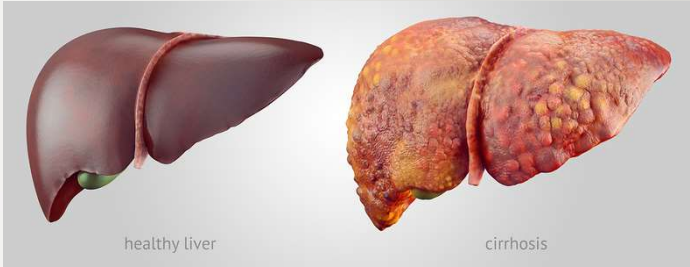
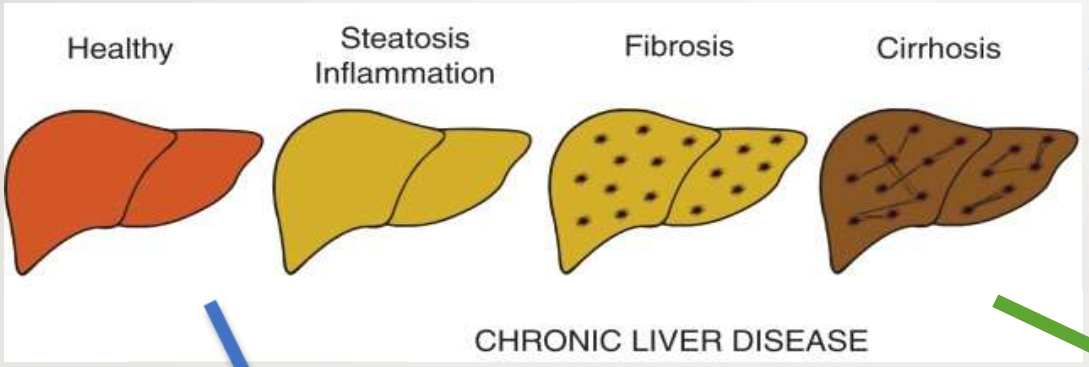
Outline



- What is cirrhosis and portal hypertension
- Management of acute bleeding
  - General measures
  - Medications
  - Endoscopy
  - TIPS
- Use decompensated cirrhosis care bundle

Liver disease is a spectrum



ACLF

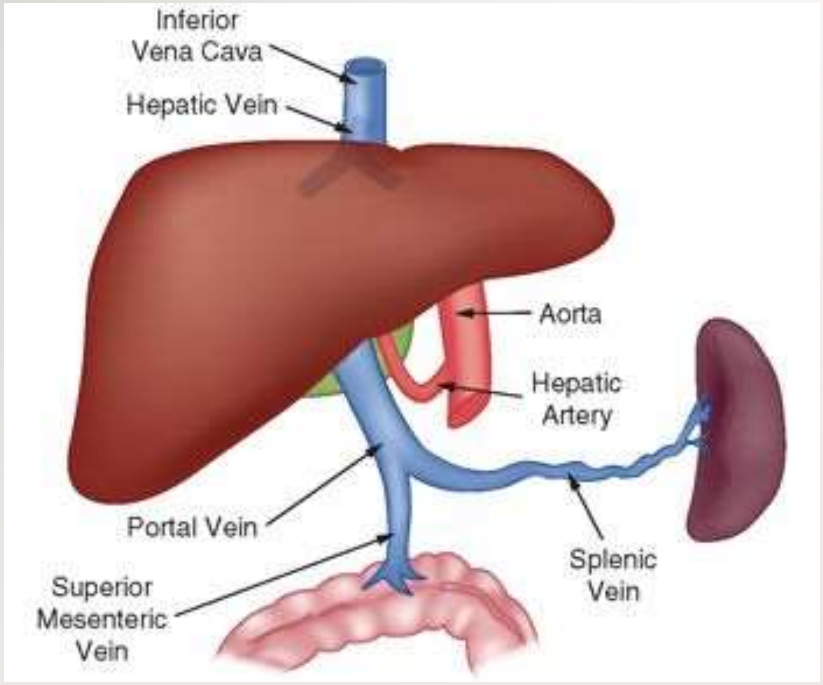
HCC

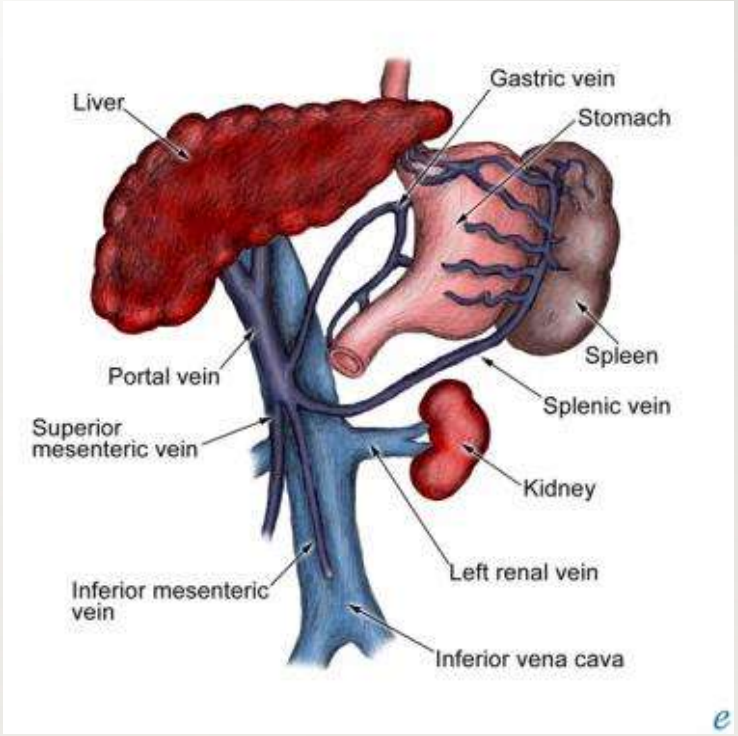
Portal hypertension
Ascites
Renal failure
HE
Variceal bleeding

Alc Hep
Acute liver failure

95% due to Alcohol, viral hepatitis, obesity

Development of portal hypertension + varices





Survival without PHTN > 12 years; with PHTN < 2 years

Varices + mortality

- All cirrhotics will eventually develop portal hypertension + varices
- All varices grow + eventually bleed.
- Variceal bleeding is the most severe complication of cirrhosis

- Immediate mortality ~ 15-20%
- 6-week mortality rate ~ 30%.
- 1-2-yr risk of rebleeding ~ 60%
- 1-2 yr risk of death ~ 40% -50%

Abnormal bloods in a liver patient

- **Low plts**
  - Splenomegaly
  - Toxic effect on bone marrow from ETOH
  - Side effect of medications to treat liver disease
  - ITP

- **Deranged clotting**
  - Liver = production of almost all coagulation factors
  - Nutritional related vit k deficiency
    - esp in ETOH excess

National/International Guidelines

HEPATOLOG
PRACTICE GUIDANC

Portal Hype
Cirrhosis: Ri
and Manage
Guidance by
for the Study

Guadalupe Garcia-Tsao,[1,2] Juan G. Ab

A. Purpose and S
of the Guidance

This guidance provides a data
to risk stratification, diagnosis,
patients with cirrhosis and portal
A guidance document is differe
Guidelines are developed by a m
of experts who rate the quality (l
and the strength of each recomm

NICE National Institute for Health and Care Excellence

Acute upper gastroin
adults

Quality standard
Published: 30 July 2013
nice.org.uk/guidance/qs38

SIC
Scottish Intercol

105

Guidelines

UK guidelines on the management of variceal haemorrhage in cirrhotic patients

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ABSTRACT
These updated guidelines on the management of variceal haemorrhage have been commissioned by the Clinical Services and Standards Committee (CSSC) of the British Society of Gastroenterology (BSG) under the auspices of the liver section of the BSG. The original guidelines which this document supersedes were written in 2000 and have undergone extensive revision by 13 members of the Guidelines Development Group (GDG). The GDG comprises elected members of the BSG liver section, representation from British Association for the Study of the Liver (BASL) and Liver QuEST, a nursing representative and a patient representative. The quality of evidence and grading of recommendations was appraised using the AGREE II tool.

The nature of variceal haemorrhage in cirrhotic

maximum dose of 240 mg (level 1a, grade A).

1.3.3. Carvedilol: 6.25 mg once daily to increase to maintenance of 12.5 mg after a week if tolerated or once HR of <50–55 bpm is reached (level 1a, grade A).

1.3.4. It is suggested that NSBB are discontinued at the time of spontaneous bacterial peritonitis, renal impairment and hypotension (level 2b, grade B).

1.4. In cases of contraindications or intolerance to NSBB, we recommend variceal band ligation (level 1a, grade A).

2. Who should have surveillance for variceal

The classical bleeding cirrhotic

- Will present with haematemesis and melaena/collaspe

- Likely to have other signs of decompensation
  - Jaundice
  - Ascites
  - Sarcopenia/malnutrition

310523 18:01	010623 13:39	020623 07:59	020623 10:35
	64	59	
	↑ 19		
			IRIS ui..
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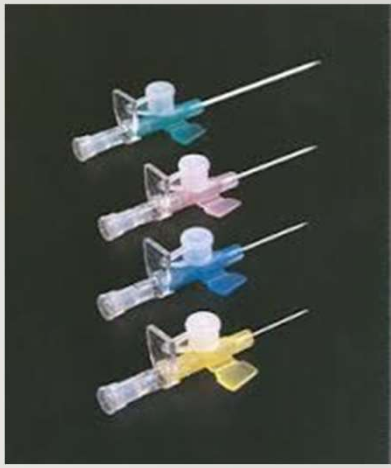
	7.1	6.3	
	94	↑ 100	
	* 0	* 0	
	↓↓ 46	↓↓ 48	
	↓ 25	↓ 26	
	21	22	
	↑ 141	↑ 147	
	↑ 34	↑ 38	
	↑↑ 385	↑↑ 424	
	1.0		
	29.7		
	1.1		
	15.2		
	3.7	5.3	
	↓ 78	↓ 88	
	↓ 41	↓ 34	
	↓ 2.4	↓ 2.6	
	↓ 0.226	↓ 0.252	
	94.9	95.4	

Acute setting – General measures



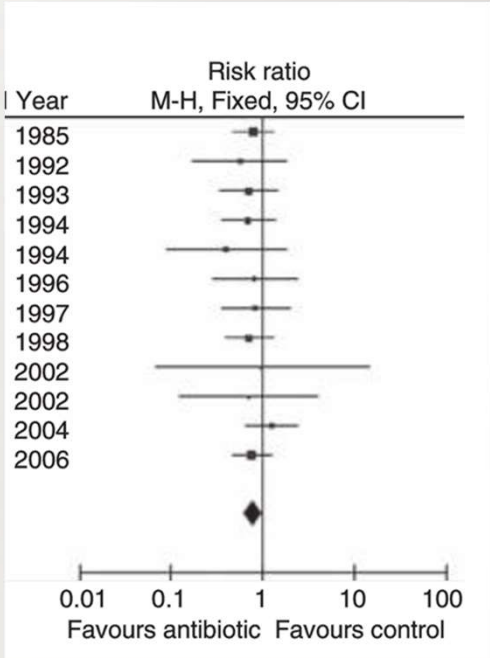
- Good basic general measures
  - Bloods
  - Good venous access
  - IVI/Catheter/Strict fluid balance
  - Consider HAS as fluid replacement
  - NBM
  - Activate the major haemorrhage pack
  - CIWA/nutrition

Guidelines

UK guidelines on the management of variceal haemorrhage in cirrhotic patients

Acute setting - Pharmacological treatments

- **Terlipressin**
  - Vasopressin analogue
  - 2g qds
  - Care with IHD
- **Antibiotics**
  - Broad spectrum IV
- No role for PPI
- Tranexamic acid – HALT IT trial
- IV prokinetic – if possible



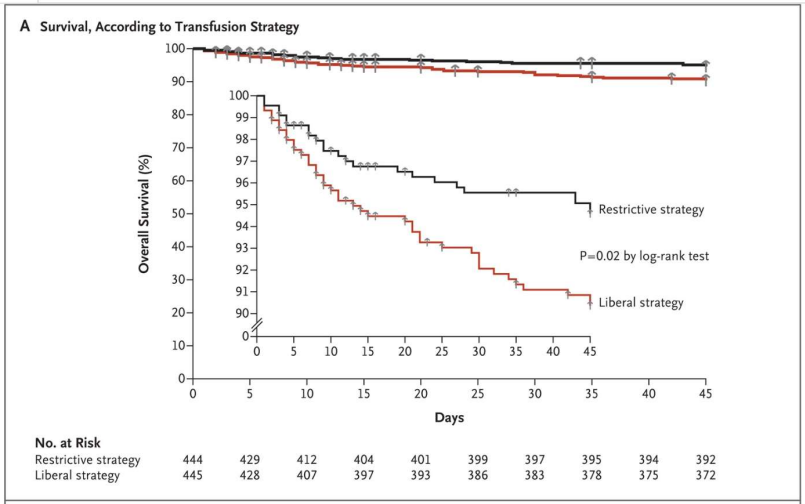
UK guidelines on the management of variceal haemorrhage in cirrhotic patients

In the acute setting - blood products

- *Transfuse patients with massive bleeding with blood, platelets and clotting factors in line with local protocols for managing massive bleeding*

- Blood
  - Aim for Hb ~ 7
- Platelets
  - actively bleeding + plt count <50
- FFP
  - fibrinogen level of <1 g/L
  - INR > 1.5
- Vitamin k 10mg IV 3/7

Restrictive transfusion policy



January 3, 2013
N Engl J Med 2013; 368:11-21

ORIGINAL ARTICLE

Transfusion Strategies for Acute Upper Gastrointestinal Bleeding

Restrictive transfusion =

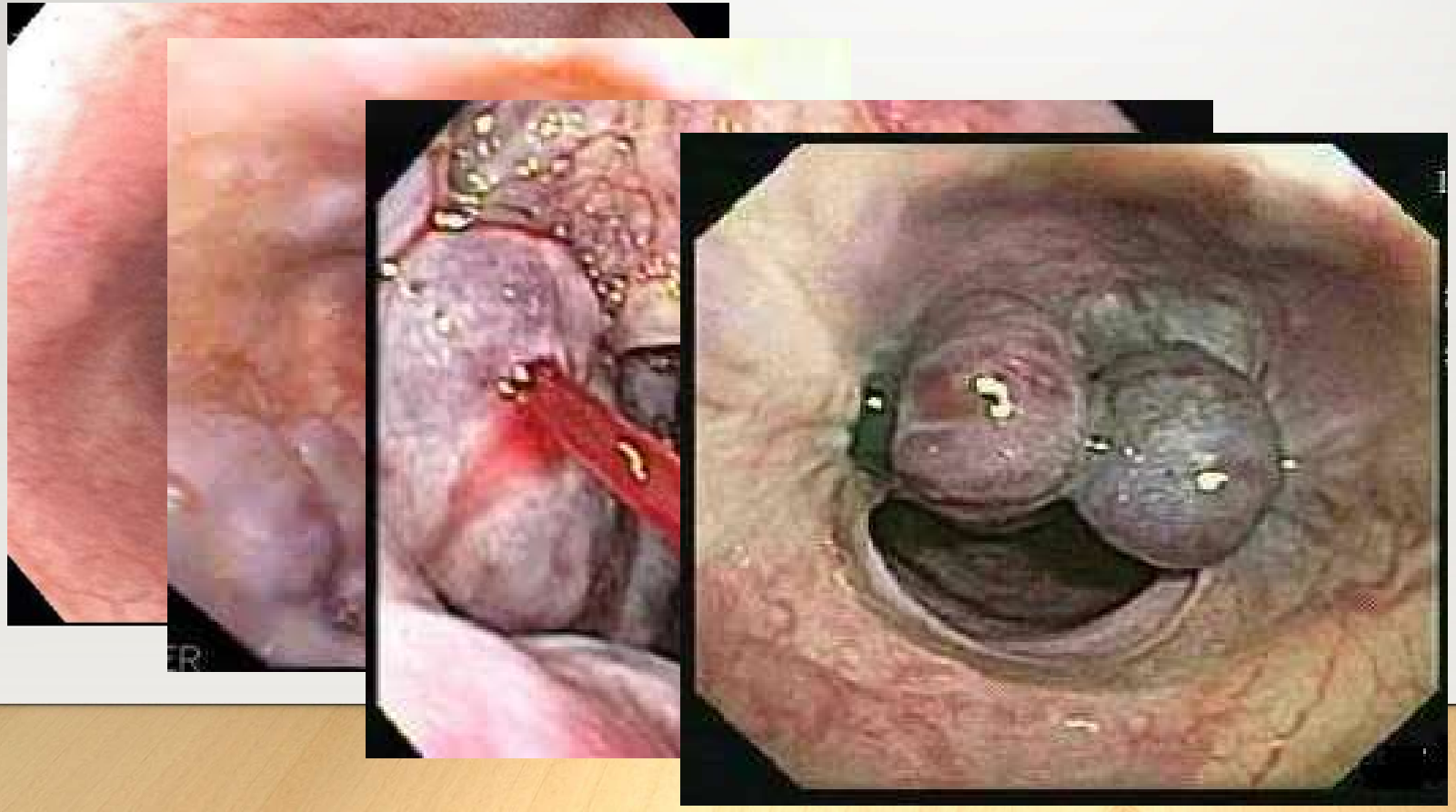
- **reduced risk of further bleeding**
- **reduced need for rescue therapy**
- **reduced complication rate**
- **increased survival**

Endoscopy

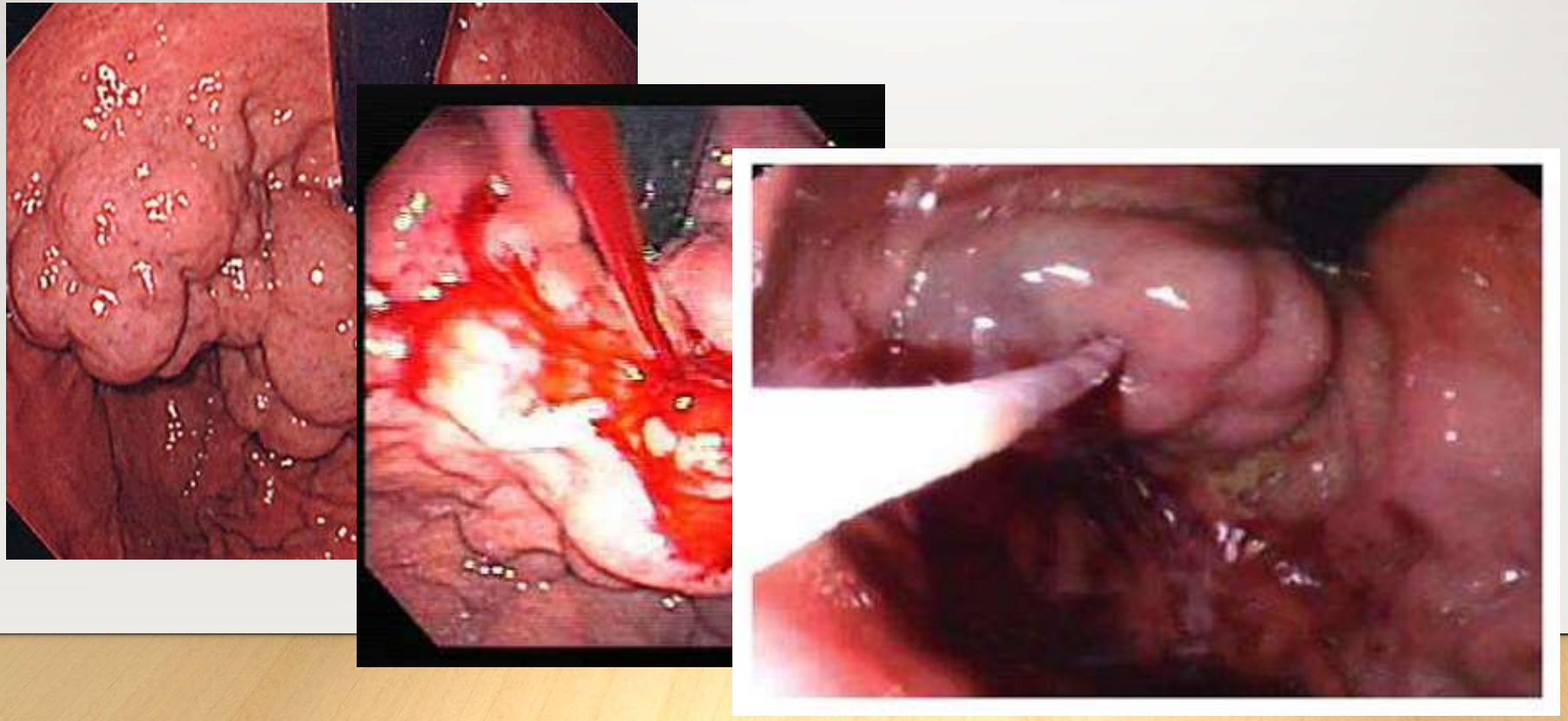
- Use of scoring systems
  - Rockall
  - GBS

- Call early for endoscopy
  - Out of hours in emergency theatres
  - Should be done within 12 hours of admission
  - GA for airway protection

Endoscopy measures –oesophageal varices

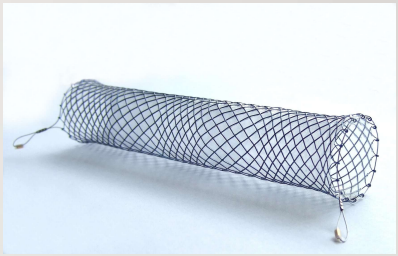


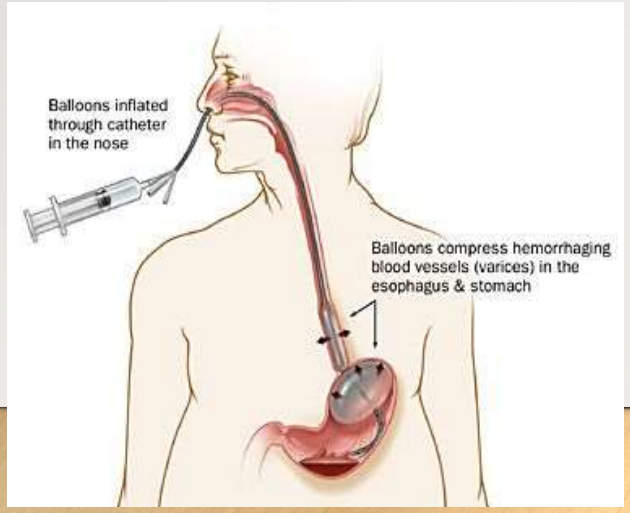
Endoscopy measures- gastric varices

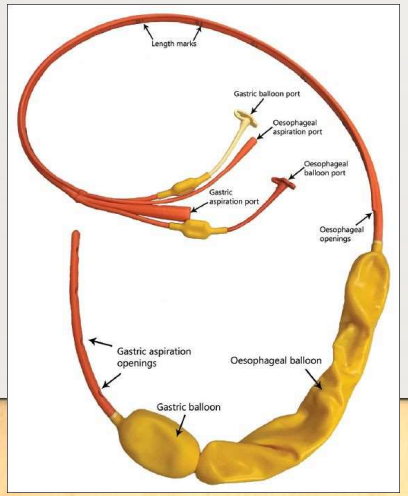


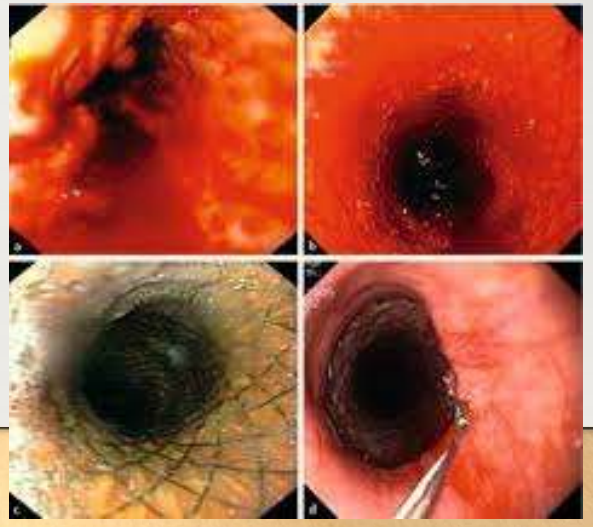
Immediate temporising measures

- Sengstaken-Blakemore tube
  - Must be intubated in ITU
- Oesophageal Stents

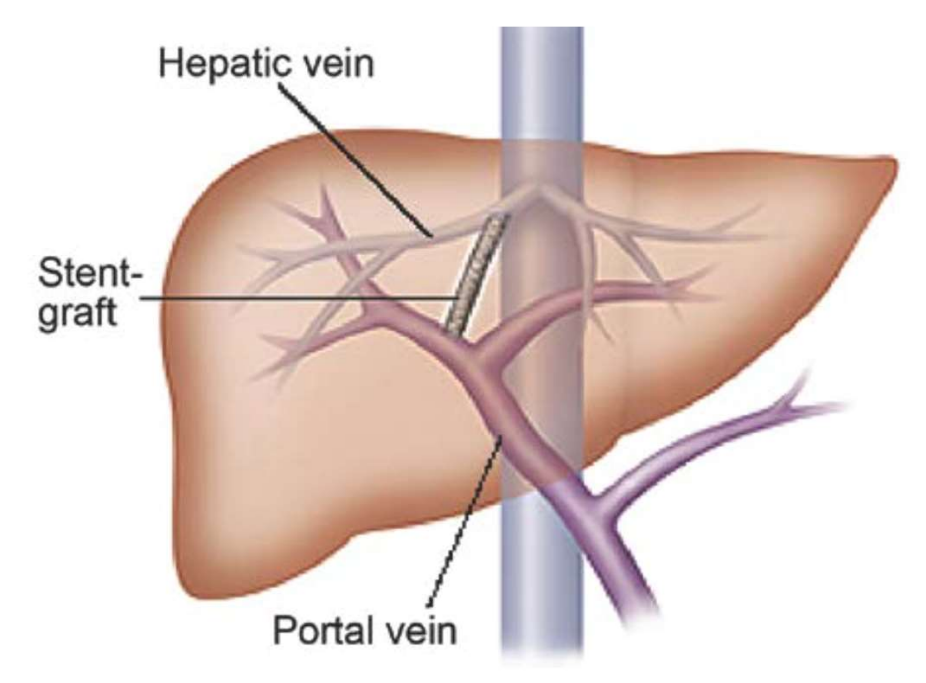








TIPS - Transjugular intrahepatic porto-systemic shunt



- CT
  - Check no PVT
- Echo
  - Right heart function
- EEG

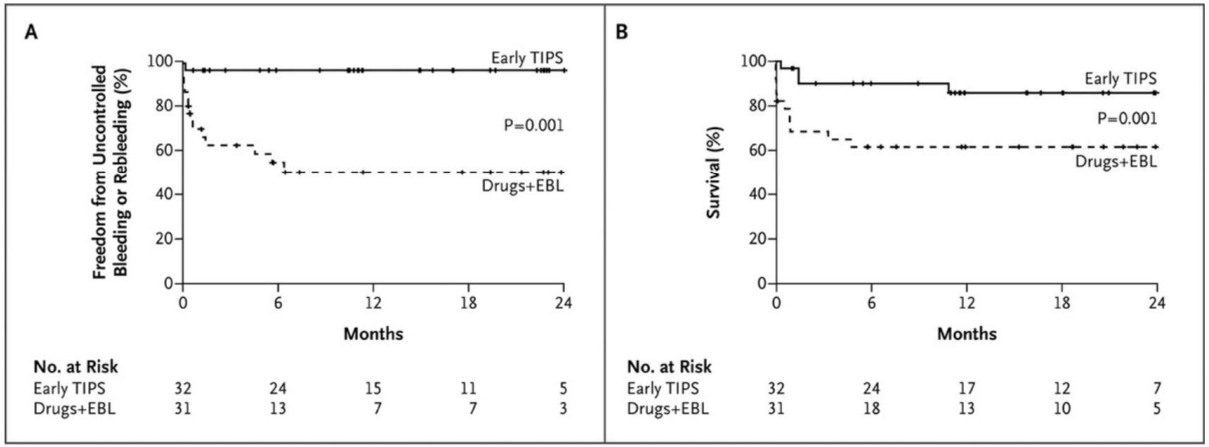
Timing of TIPS

June 24, 2010
N Engl J Med 2010;

ORIGINAL ARTICLE

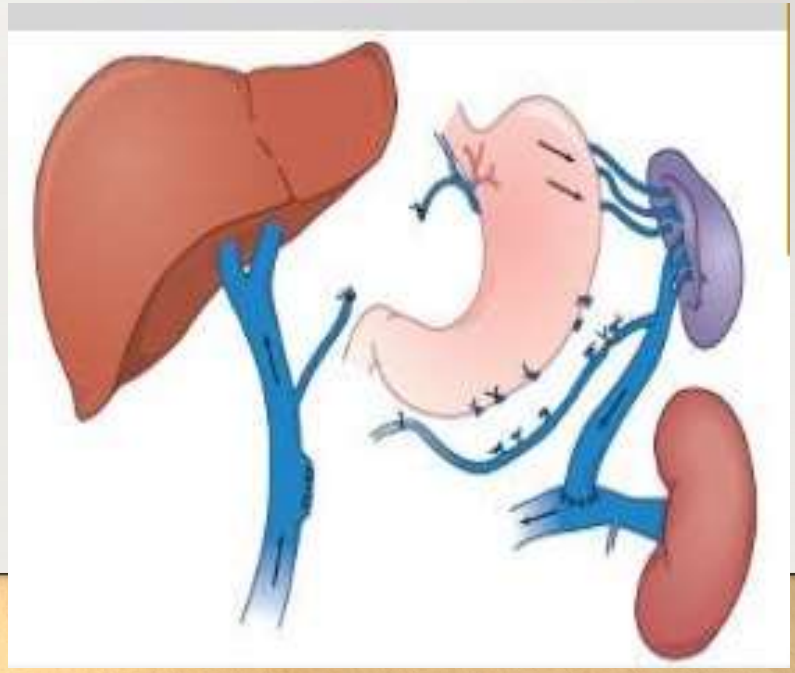
Early Use of TIPS in Patients with Cirrhosis and Variceal Bleeding

Figure 2. Actuarial Probability of the Primary Composite End Point and of Survival, According to Treatment Group.



Rescue options – surgical

- Surgical options
  - Redirection of flow around portal system
  - Embolise the splenic artery
  - Spleno- renal shunt
  - Spleno- caval shunt
  - Balloon occluded retrograde transvenous obliteration



Ectopic bleeding in cirrhotic

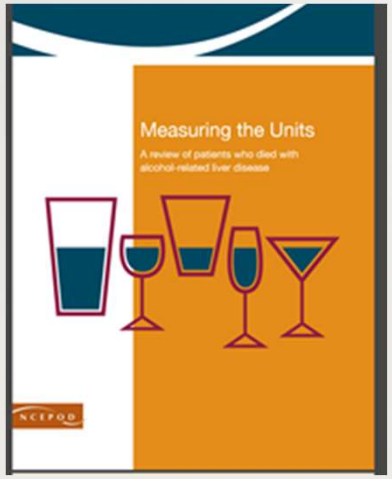
- Portal hypertensive gastropathy

- Varices elsewhere
  - Stoma varices
  - Rectal varices
  - Duodenal varices

- Iatrogenic cause
  - Post paracentesis
  - Post endoscopy

NCEPOD - ARLD – The results
'A study of missed opportunities'

- 1 in 4 were never seen by a gastro/hepatologists



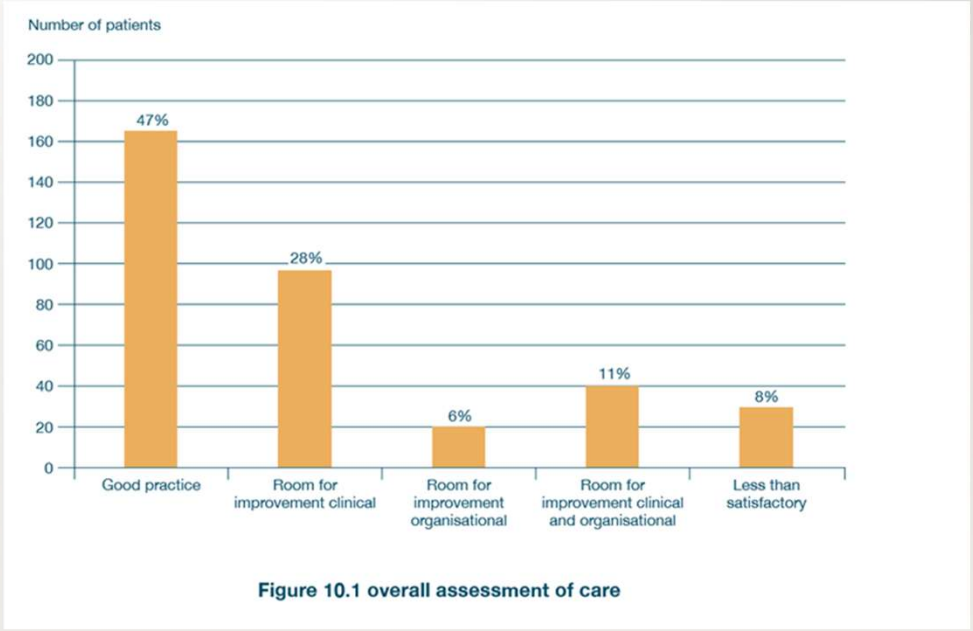


Figure 10.1 overall assessment of care

Patient details

BASL British Association for the study of the Liver

bsg British Society of Gastroenterology

Decompensated Cirrhosis Care Bundle - First 24 Hours

Decompensated cirrhosis is a medical emergency with a high mortality. Effective early interventions can save lives and reduce hospital stay. This checklist should be completed for all patients admitted with decompensated cirrhosis within the first 6 hours of admission.

1. Investigations			
a)	NEWS ❑ FBC ❑ U/E ❑ LFT ❑ Coag ❑ Gluc ❑ $Ca/PO_4/Mg$ ❑		Initials: Time:
b)	Blood cultures ❑ Urine Dip/MSU ❑ CXR ❑ Request USS abdo ❑ CRP ❑		
c)	Perform ascitic tap in **all patients with ascites** using green needle **irrespective of clotting parameters** and send for ascitic PMN/WCC, culture and fluid albumin	Done Y N / N/A ❑	
d)	**Record recent daily alcohol intake**	..... Units	
2. Alcohol - if the patient has a history of current excess alcohol consumption (>8 units/day Males or >6 units/day Females)		N/A ❑	Initials: Time:
a)	Give IV Pabrinex (2 pairs of vials three times daily)	Y N	
b)	Commence CIWA score if evidence of alcohol withdrawal	Y N N/A	
3. Infections - if sepsis or infection is suspected		N/A ❑	Initials: Time:
a)	What was the suspected source?		
b)	Treat with antibiotics in accordance with Trust protocol	Y N	
c)	If the ascitic neutrophils >0.25 x 10^9/L (>250/mm^3)(i.e. SBP) then give:	Y N	
I)	Treat with antibiotics as per trust protocol	Y N NA	
II)	IV albumin (20% Human Albumin solution) 1.5g/kg (20g of albumin in 100ml of 20% Human Albumin Solution)	Y N NA	
4. Acute kidney injury and/or hyponatraemia (Na <125 mmol/L)		N/A ❑	Initials: Time:
AKI defined by modified RIFLE criteria	1: Increase in serum creatinine ≥ 26µmol/L within 48hrs *or*		
	2: ≥50% rise in serum creatinine over the last 7 days *or*		
	3: Urine output (UO) <0.5mls/kg/hr for more than 6 hrs based on dry weight *or*		
	4: Clinically dehydrated		
a)	Suspend all diuretics and nephrotoxic drugs	Y N NA	
b)	Fluid resuscitate with 5% [illegible] Chloride (250ml bolus then regular reassessment: 1-2L will correct most losses)	Y N	
c)	[illegible] fluid balance chart/daily weights	Y	
d)	Aim for MAP>80mmHg to achieve UO>0.5ml/kg/hr based on dry weight	Y N	
e)	At 6 hrs, if target not achieved or EWS worsening then consider escalation to higher level of care	Y N NA	
5. GI bleeding – if the patient has evidence of GI bleeding and varices are suspected		N/A ❑	Initials: Time:
a)	Fluid resuscitate according to BP, pulse and venous pressure (aim MAP >65 mmHg)	Y N	
b)	Prescribe IV terlipressin 2mg four times daily (caution if known ischaemic heart disease or peripheral vascular disease; perform ECG in >65yrs)	Y N NA	
c)	Prescribe prophylactic antibiotics as per Trust protocol (cefuroxime unless contraindicated)	Y N	
d)	If prothrombin time (PT) prolonged give IV vitamin K 10mg stat	Y N NA	
e)	If PT> 20 seconds (or INR >2.0) – give FFP (2-4 units)	Y N NA	
f)	If platelets <50 – give IV platelets	Y N NA	
g)	Transfuse blood if Hb <7.0g/L or massive bleeding (aim for Hb >8g/L)	Y N NA	
h)	Early endoscopy **after** resuscitation (ideally within 12 hours)	Y N	

Continues overleaf →

Please place in medical notes

6. Encephalopathy		N/A ❑	Initials: Time:
a)	Look for precipitant (GI bleed, constipation, dehydration, sepsis etc.)	Y N	
b)	Encephalopathy – lactulose 20-30ml QDS or phosphate enema (aiming for 2 soft stools/day)	Y N	
c)	If in clinical doubt in a confused patient request CT head to exclude subdural haematoma	Y N N/A	
7. Other			Initials: Time:
a)	Venous thromboembolism prophylaxis – prescribe prophylactic LMWH (patients with liver disease are at a high risk of thromboembolism even with a prolonged prothrombin time; withhold if patient is actively bleeding or platelets <50)	Y N NA	
b)	GI/Liver review at earliest opportunity (ideally within 24 hrs)	❑	

Name.....Grade.....Date.....Time.....

Decompensated Cirrhosis Care Bundle - First 24 Hours

The recent NCEPOD report 2013 on alcohol related liver disease highlighted that the management of some patients admitted with decompensated cirrhosis in the UK was suboptimal. Admission with decompensated cirrhosis is a common medical presentation and carries a high mortality (10-20% in hospital mortality). Early intervention with evidence-based treatments for patients with the complications of cirrhosis can save lives. This checklist aims to provide a guide to help ensure that the necessary early investigations are completed in a timely manner and appropriate treatments are given at the earliest opportunity.

- Decompensated cirrhosis is defined as a patient with cirrhosis who presents with an acute deterioration in liver function that can manifest with the following symptoms:
  - Jaundice
  - Increasing ascites
  - Hepatic encephalopathy
  - Renal impairment
  - GI bleeding
  - Signs of sepsis/hypovolaemia
- Frequently there is a precipitant that leads to the decompensation of cirrhosis. Common causes are:
  - GI bleeding (variceal and non-variceal)
  - Infection/sepsis (spontaneous bacterial peritonitis, urine, chest, cholangitis etc)
  - Alcoholic hepatitis
  - Acute portal vein thrombosis
  - Development of hepatocellular carcinoma
  - Drugs (Alcohol, opiates, NSAIDs etc)
  - Ischaemic liver injury (sepsis or hypotension)
  - Dehydration
  - Constipation

When assessing patients who present with decompensated cirrhosis please look for the precipitating causes and treat accordingly. The checklist shown overleaf gives a guide on the necessary investigations and early management of these patients admitted with decompensated cirrhosis and should be completed on all patients who present with this condition. The checklist is designed to optimize a patient's management in the first 24 hours when specialist liver/gastro input might not be available. Please arrange for a review of the patient by the gastro/liver team at the earliest opportunity. Escalation of care to higher level should be considered in patients not responding to treatment when reviewed after 6 hours, particularly in those with first presentation and those with good underlying performance status prior to the recent illness.

Conclusions

- Cirrhosis leads to portal hypertension + varices
- Variceal bleeding has a high mortality and rebleeding rate
- Treat with antibiotics and terlipressin
- Use a restrictive transfusion policy
- Early endoscopy
- TIPS as rescue therapy
  - Think about it early
- Use the decompensated cirrhosis care bundle

Thank you!
Any questions?