

17TH ANNUAL CONFERENCE OF THE
BRITISH HIV ASSOCIATION (BHIVA)

British HIV Association
BHIVA

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6-8 April 2011, Bournemouth International Centre

SSAT
ST STEPHEN'S AIDS TRUST

**Non-cirrhotic portal hypertension (NCPH) is
the commonest cause of varices in HIV
infected individuals**

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Chelsea and Westminster Hospital **NHS**
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Definition of NCPH

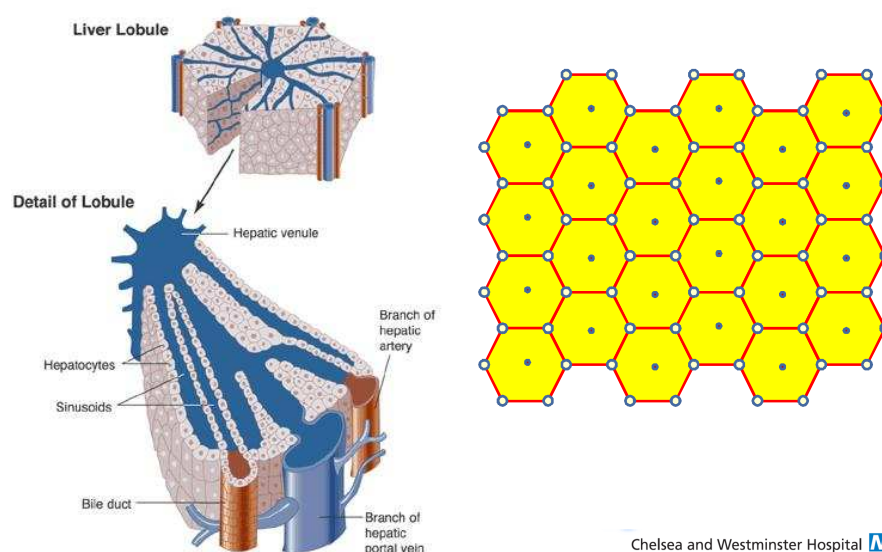
- Clinical, radiological or endoscopic features of portal hypertension in the absence of cirrhosis on liver biopsy
- Didanosine has been consistently implicated in the development of NCPH [1-5]

[1] Schiano TD, Am J Gastroenterol. 2007 [2] Mallet V, AIDS 2007

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[3] Saifee S, Clin Gastroenterol Hepatol. 2008 [4] Maida I, Antivir Ther. 2008 [5] Kovari H, Clin Infect Dis. 2009

Hepatic Lobule



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Liver Lobule

Detail of Lobule

Hepatic venule

Hepatocytes

Sinusoids

Bile duct

Branch of hepatic artery

Branch of hepatic portal vein

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Hyperplastic nodules

Atrophic lobules

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SSAT ST STEPHEN'S AIDS TRUST **Portal Circulation**

Liver

Esophageal veins

Short gastric veins

Left, right gastric veins

Splenic vein

Gastro-epiploic vein

Inferior mesenteric vein

Superior mesenteric vein

Veins from descending & sigmoid colon

Veins from jejunum & ileum

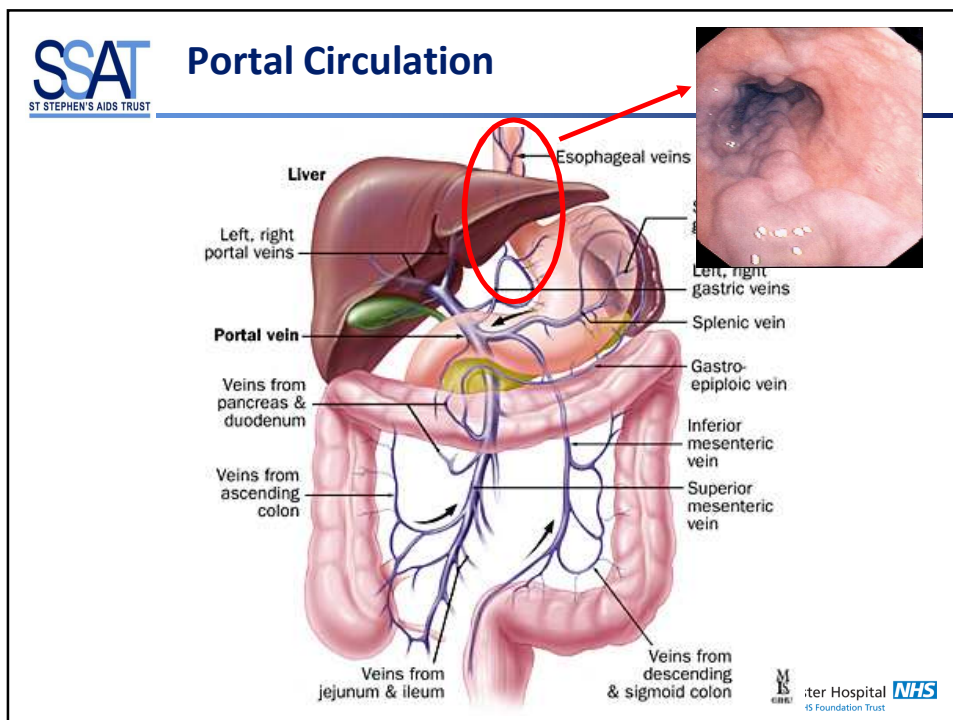
Veins from ascending colon

Veins from pancreas & duodenum

Portal vein

Left, right portal veins

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SSAT Aims
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- To describe the prevalence of endoscopic varices in our cohort
- To determine underlying causes, particularly the contribution of NCPH
- To investigate the amenability of NCPH to screening

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Methods

- All individuals with endoscopic evidence of oesophageal or gastric varices were identified from our HIV cohort using electronic clinical codes from 2000-2010
- A retrospective review of case notes, pathology, endoscopy and radiology reports was performed to identify likely cause of portal hypertension

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Methods

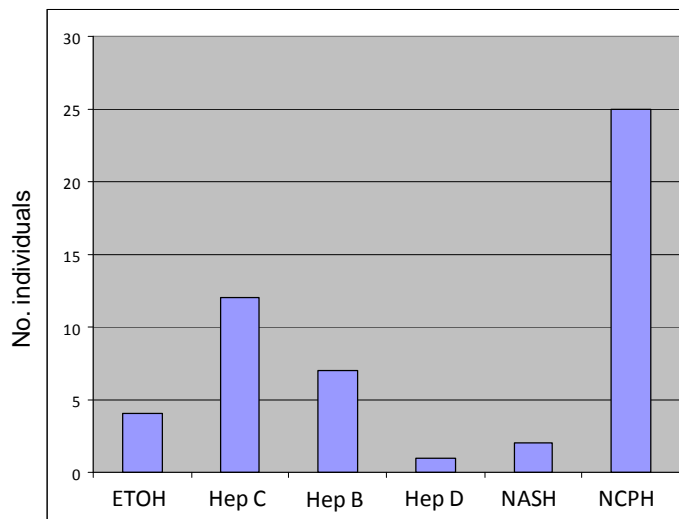
- A diagnosis of presumptive NCPH was made after exclusion of other causes of liver disease:
 - viral hepatitis, schistosomiasis, Wilson's disease, haemochromatosis, α -1 antitrypsin deficiency, autoimmune causes and drugs known to cause liver fibrosis
- Definitive NCPH required a liver biopsy demonstrating the absence of cirrhosis

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SSAT Results
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- 48 individuals with varices were identified

SSAT Aetiology of Varices
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SSAT Results
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	NCPH (n=25)	Other (n=23)
Median age (years)	49	49
Duration HIV (years)	11	11
Gender	80% male	78% male
Present upper GI bleeding	60%	43%
Number endoscopies (median)	3	2
Grade varices (median)	2	1
Portal hypertensive gastropathy	92%	74%
Endoscopic intervention	80%	48%
Rebleeding risk	32%	30%

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SSAT Biopsy results (NCPH)
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- 17/25 (68%) individuals in the NCPH group underwent liver biopsy confirming absence of cirrhosis
- Biopsy results:
 - 12 with mild fibrosis
 - 4 with moderate fibrosis
 - 4 with features of nodular regenerative hyperplasia
- All subjects with NCPH had been exposed to ddl
 - median duration 62 months (IQR 44-80)

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Ultrasound results (NCPH)

- All 25 had undergone abdominal ultrasound imaging

Splenomegaly (>12cm)	24 (96%)
Portal venous distension in (>12mm)	5 (20%)
Portal venous thrombosis	4 (16%)
Evidence of varices	4 (16%)

- Abdominal CT scans were performed in 15 with similar findings to ultrasound but higher percentage of varices (27%)



Liver elastography results (NCPH)

- 13 individuals underwent liver elastography
 - 4 >21 kPa (strongly predictive of oesophageal varices)
 - 5 >14.6 kPa (a value indicative of cirrhosis)
 - 8 >9.6 kPa (stage F2 fibrosis)
 - 5 (38%) <7.2 kPa normal



Follow-up of NCPH patients

- 5 (20%) subjects since deceased
 - 4 from decompensated liver disease
 - 1 from non-Hodgkin's lymphoma
- 5 others are being followed up in the liver transplant clinic



Conclusion

- NCPH is the commonest cause of varices in our HIV cohort
- Non-endoscopic screening for varices in NCPH is unlikely to be useful:
 - A large proportion of subjects with varices had normal liver elastography
 - Ultrasound and CT scans detect other features of portal hypertension but missed most cases of varices



Acknowledgements

- Thank you to all the patients at Chelsea & Westminster Hospital



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