Hepatiq: Hepatic Function Predicts Survival after Hepatocellular Carcinoma (HCC)

John Hoefs, MD., Dept. of Medicine, Divs of GI & Hepatology, University of California Irvine

HYPOTHESIS

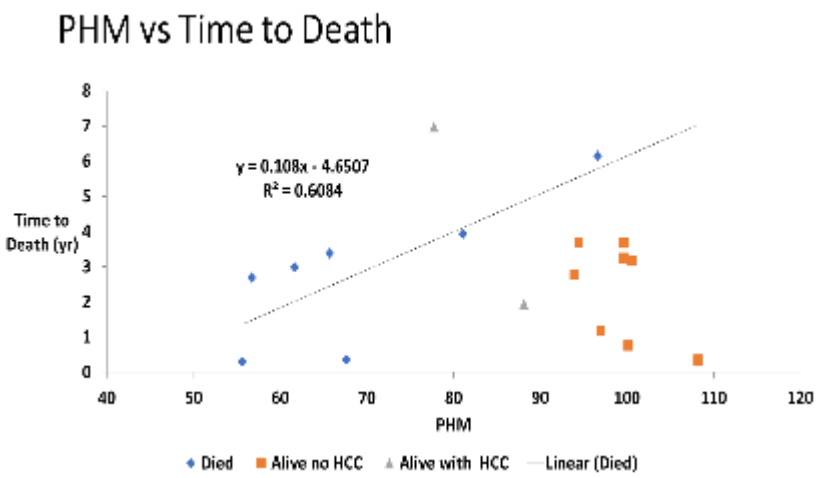
Quantitative hepatic function is a determinant of the severity of CLD and the ability to tolerate treatment of HCC.

AIMS

Determine whether hepatic function as measured by PHM correlates with treatment results of HCC

METHODS

Hepatiq was performed on a fed sulfur-colloid QLSS with calculation of PHM (N100-110), fSV (n<2.5 cc/lb IBW) and fLV (7-12 cc/lb IBW). Blood tests and clinical data were abstracted from the clinical records at the time of HCC diagnosis.



PATIENTS

17 patients had treatable HCC (confined to liver) diagnosed during screening with AFP and ultrasound for HCC Rx between 1/2011 - 12/2017. All patients with HBV or HCV were treated to HBVDNA <20 and SVR. 4 of these patients were on the liver transplant (LT) list and referred after removal from the list: 1 had a 9 cm HCC at surgery and 1 had 10 cm HCC discovered only after LT. 2 with delayed Rx by >1 year, one on LT list awaiting HCC to grow > 2 cm (sudden PV HCC thrombosis) and one without insurance and 2 with minimal Rx. 9 patients had early Rx, 8 for single lesions and 1 multifocal HCC. 1 patient had a second lesion 1 year after TCA and Rx Y90, but the rest had no recurrence including 1 with multifocal HCC. Patients were treated until there was no recurrence of HCC or a steady decline in PHM and/or Flv.

	#	HCV/HBV/NASH	Age (yrs)	M/F	A/VB/HE	# HCC	Size (cm)	Bx
Died	7	7/0/0	64 (6)	5/2	7/2/6	1.6 (.8)	3.8 (3.3)	3/7
Alive +HCC	2	0/1/1	76 (11)	1/1	2/1/2	1.0 (0)	2.0 (1.4)	1/2
Alive - HCC	8	6/2/0	68 (9)	7/8	0/0/0	1.8 (2)	2.4 (1.7)	4/8

	Hb	Plt x1000	INR	Na+	Creat	Bili	MELD	AFP
Died	11 (1)	67 (25)	1.0 (.4)	134 (4)	1.0 (.4)	4.5 (6.7)	16 (5)	315 (530)
Alive +HCC	12 (1)	103 (79)	1.1 (.1)	140 (2)	1.0 (0)	.7 (.4)	8 (1)	4 (1)
Alive - HCC	14 (2)	167 (67)	1.1 (.1)	139 (2)	1.1 (.3)	.7 (.4)	9 (2)	7 (6)

RESULTS

Cause of CLD: HCV 15, HBV 3, NASH 1 (see figure for clinical). Treatment was surgical resection (3), TCA (16 in 12 patients), RFA (8) and Y90 (9). 9 patients had 1 treatment and the rest multiple treatments. **Follow-up**: 7 patients died (D), 2 were alive with known tumor (A+HCC), and 8 were alive with no known tumor (A-HCC). Baseline PHM was significantly (p <.05) worse in those who D (69+/-15) vs A+HCC (83+/-7) vs A-HCC (99+/-4) and fSV greater D (5+/-2) vs A+HCC (4+/-2) vs A-HCC (2+/-1). Time to D was 3+/-2 yr (2/7 live >3 yr). A+HCC survived 16 and 3 yr. A-HCC alive 3+/-2 yr (5/9 >3 yr and 4/9 followed < 3 yr). Survival after Dx HCC correlated with baseline PHM (figure1). Demographics and labs are below.

DISCUSSION

- In patients with HCC discovered on screening who subsequently died, the time to death correlated with the baseline PHM
- Patients with PHM baseline > 90 had less recurrence and lived longer than those < 90
- The functional spleen volume was significantly larger in patients who died
- Only 1 patient with a PHM > 90 at baseline had recurrence of HCC after the initial treatment
- Patients with good PHM tolerated treatment better than PHM < 80 allowing aggressive treatment

CONCLUSIONS

- PHM correlates with outcome of HCC
- Regardless of treatment, baseline PHM:
  a) predicts those who will survive
  b) correlates with time to death in those who die