



<b>Title</b>	<b>A pilot study of transcatheter arterial interferon embolization for hepatocellular carcinoma</b>
<b>Author(s)</b>	<b>Hui, CK; Yuen, MF; Ooi, CGC; Wong, WM; Chan, OO; Wong, BCY; Lai, CL</b>
<b>Citation</b>	<b>The 6th Medical Research Conference, Hong Kong, China, 13-14 January 2001, v. 23 n. 2 Supp, p. 16</b>
<b>Issued Date</b>	<b>2001</b>
<b>URL</b>	<b><a href="http://hdl.handle.net/10722/45746">http://hdl.handle.net/10722/45746</a></b>
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## G-GH-1

### A Pilot Study of Transcatheter Arterial Interferon Embolization for Hepatocellular Carcinoma

CK Hui, MF Yuen, C Ooi, WM Wong, OO Chan, BCY Wong, CL Lai.

**Background:** Subcutaneous high dose ( $50 \times 10^6$  IU/m<sup>2</sup> thrice weekly) interferon-alpha (IFN-alpha) is effective in 30% of patients with hepatocellular carcinoma (HCC) [Lai CL et. al., Hepatology 1993]. A pilot study on transcatheter arterial interferon embolization (TAIE), using IFN-alpha2b and gelfoam, was performed to determine the optimal dose and safety of IFN-alpha.

**Patients and Methods:** A total of 18 patients with biopsy proven inoperable HCC (M:F 15:3, median age 64 years) were recruited into this study. The patients were randomized to receive IFN-alpha2b 10 MU/m<sup>2</sup> (5 patients), 30 MU/m<sup>2</sup> (8 patients), or 50 MU/m<sup>2</sup> (5 patients) intraarterially once every 8 weeks. Other than by arteriography, tumor size was also assessed by CT scan performed after 5 sessions of TAIE. Side effects were closely monitored.

**Results:** Each patient received a median of 4 sessions of TAIE. Two patients had only one session of TAIE because of liver failure and tumor lysis. None of the other 16 patients had progression of tumor locally. Tumor became undetectable in 2/16 (12.5%), showed > 50% decrease in 4/16 (25%), 25-50% decrease in 5/16 (31.2%), and was stable in size in 5/16 (31.2%). One patient had distance metastases to the brain. Alpha-fetoprotein showed a median decrease of 22.3% with each session of TAIE. There were seven deaths (median survival 15.23 months): 4 from liver failure, 1 each from brain metastases, ruptured HCC and tumor lysis. The only side effects observed in all these patients was fever (median 9 days, range 0-21 days). There was no observable deterioration in liver function attributable to IFN.

**Conclusion:** TAIE was effective and safe in treating HCC. More long term studies are required to compare the efficacy of TAIE with other forms of treatment for HCC.

## G-GH-2

### The Significance of HBsAg Seroclearance in Chinese Patients with Chronic Hepatitis B Infection

MF Yuen, CK Hui, CW Siu, CL Lai.

Department of Medicine, The University of Hong Kong, Queen Mary Hospital, Hong Kong.

**Background:** Loss of serum HBsAg is a rare phenomenon in Chinese patients with chronic hepatitis B virus (HBV) infection since childhood. The pathological and clinical significance is unknown. **Aim:** To study the liver function tests (LFT), serum HBV DNA levels and clinical outcome of patients who had HBsAg seroclearance.

**Patients and Methods:** 63 patients [M:F 42:21, median age 42 yrs (range 3-75.4 yrs), median follow-up 89.9 months] with positive HBsAg on presentation (15 HBeAg +ve, 48 anti-HBe +ve) and with subsequent loss of serum HBsAg were recruited. The serum biochemistry, HBV DNA (measured by Digene Hybrid Capture assay) and the clinical outcome were studied. 63 HBV patients who did not lose serum HBsAg matched for age, sex and HBeAg status were chosen for comparison.

**Results:** The median age of HBsAg seroclearance was 47.14 yrs (4.3-84.7 yrs), with 34 developing anti-HBs. 4 of these had prior interferon therapy. There was no significant difference in the LFTs of those who lost and those who did not lose HBsAg. For the 15 patients with positive HBeAg on presentation, the albumin, ALT and AST were significantly improved after HBeAg seroconversion compared to those on presentation (46 vs 45 g/L,  $p = 0.041$ ; 20 vs 276 U/L,  $p = 0.001$ ; 23 vs 210 U/L,  $p = 0.001$  respectively). The ALT and AST further improved after HBsAg seroclearance when compared to those after HBeAg seroconversion (12 vs 20 U/L,  $p = 0.004$ ; 17 vs 23 U/L,  $p = 0.008$ ). For the 48 patients with positive anti-HBe on presentation, only the ALT improved after HBsAg seroclearance when compared to that on presentation (20 vs 22 U/L,  $p = 0.02$ ). After HBsAg seroclearance, serum HBV DNA levels were below the limit of detection in 26/39 (66.7%), between 0.5-1pg/ml in 12/39(30.8%) and 38.15 pg/ml in one patient. 7/63 (11.1%) had biochemical, ultrasonographic and/or histological evidence of cirrhosis, all detected before HBsAg seroclearance. The median interval between detection of cirrhosis and HBsAg seroclearance was 12.5 mos (range 1-164 mos). One patient with ascites before HBsAg seroclearance continued to have ascites afterwards and was considered for liver transplantation. Two patients developed hepatoma 12 and 20 months after HBsAg seroclearance respectively.

**Conclusions:** Liver function tests on presentation were not of predictive value for HBsAg seroclearance. Albumin, ALT and AST improved after HBeAg seroconversion and continued to improve further after HBsAg seroclearance. The majority of the patients who lost HBsAg had a low levels of viraemia. Cirrhosis developing before HBsAg seroclearance would continue to progress afterwards.