

CO-ORGANIZED EVENT

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## Impaired homocysteine metabolism in patients with alcoholic liver disease in Taiwan

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**Background:** Impaired homocysteine metabolism plays an important role in alcoholic liver disease (ALD); however, there are limited data about its relationship with the risk and severity of patients with ALD in Taiwan.

**Participants & Methods:** To understand plasma homocysteine and related vitamin concentrations in patients with ALD in Taiwan, we recruited 50 male patients with ALD from Cathay General Hospital, with 49 age- and gender-matched healthy adults as the control group. The Institutional Review Board for Human Studies approved the study, and informed consent was obtained from all patients prior to blood collection.

**Results:** Significantly higher plasma homocysteine concentrations but lower folate concentrations were obtained from patients with ALD. In addition, patients with ALD showed a significant lower erythrocyte reduced glutathione (GSH)/oxidized glutathione (GSSG) ratio but higher plasma thiobarbituric acid-reactive substance (TBARS) concentration, which indicated that oxidative stress was occurring in patients with ALD. A negative correlation between plasma folate and homocysteine was observed in all subjects. There was also a negative correlation between plasma homocysteine and the erythrocyte GSH/GSSG ratio which indicated impaired homocysteine metabolism may have disrupted the antioxidative status. In addition, patients in Child-Pugh class B and C showed higher plasma vitamin B12 concentrations than did patients without cirrhosis and patients in Child-Pugh class A.

**Conclusion:** These findings show that impaired homocysteine metabolism was observed in patients with ALD in Taiwan. In addition, the plasma vitamin B12 concentration may reflect the degree of liver injury.

### Biography

S C Yang is a Professor in the School of Nutrition and Health Sciences, Taipei Medical University. She has worked on the relationship between nutrition and alcoholic liver diseases.

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