Tibetan patients with hepatic hydatidosis can tolerate hypoxic environment with no incident increase of pulmonary hypertension - An echocardiograph study

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To evaluate the characteristics of right ventricular and pulmonary anatomical structure, function and hemodynamics of Tibetan patients with hepatic hydatidosis living in high plateau using echocardiography. This prospective study is involved 262 Tibetan patients diagnosed with hydatidosis from June 2016 to June 2017 in Shiqu and Seda areas (4178 meters above sea level in Shiqu County and 3,878 meters above sea level in Seda County). The anatomical structure, function and hemodynamic parameters of the right ventricle and pulmonary between the Tibetan patients with hepatic echinococcosis and the high plateau control group were compared.

In the hydatidosis group, there was no significant differences in the detection rate of TR and PR (χ^2=1.993, p=0.158 and χ^2=3.468, p=0.063, respectively). There was no significant difference in the incidence of PAH (χ^2=1.456, p=0.228) and also no significant difference in the degree of PAH between the two groups (38.93 ±4.60mmHg vs. 41.50 ±6.55mm, p>0.05). The OR value of PAH risk in patients with hydatidosis was 0.708 and the 95% CI was 0.317-1.582. There was no significant difference in the detection rate of TR and PR between the subgroups of hydatidosis and the plateau control group (χ^2=2.323, p=0.508 and χ^2=7.455, p=0.059, respectively). There was no significant difference in the incidence of PAH (χ^2=2.086, p=0.555) and also no significant difference in the degree of PAH among the four groups (F=0.738, p=0.535).

There was no significant effect on the incidence of pulmonary hypertension and its pressure level in Tibetan patients, suggesting that the pulmonary circulation system of Tibetan might have a strong tolerance to hepatic hydatidosis and hypoxic environment simultaneously.

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