Tibet

Department of Neurosurgery, People's Liberation Army 115th Hospital (People's Liberation Army 956th Hospital), Linzhi, Tibet, People's Republic of China.

High hemoglobin (HGB) concentration is frequently seen in Tibetans in clinical practice; however, the impact on postsurgical prognosis in patients with Poor-grade aneurysmal subarachnoid hemorrhage (aSAH) is not precisely known. Thus, Anqi et al., sought to understand the association between high HGB level and postoperative outcome in Tibetans with poor-grade aSAH.

Results of clipping in consecutive Tibetan patients with poor-grade aSAH were analyzed retrospectively for the period January 2012 to January 2017. Based on the upper limit (160g/L) of normal hemoglobin levels, patients were divided to a high (HHC) and a normal (NHC) HGB-level cohort according to the first routine blood result on admission. Propensity score matching was used for baseline matching in the 2 cohorts. Postoperative complications in the 2 groups were compared. Prognosis after ictus, including 6-month neurological functional status and mortality at 30 days and 6 months were also assessed.

Risk of ischemia, pulmonary embolism and lower-limb deep venous thrombosis (DVT) was higher in HHC than NHC (62.88% vs. 21.64%; $P < 0.001$; 10.30% vs 1.31%, $P < 0.005$; 24.74% vs 7.21%, $P < 0.001$, respectively). Hospital stay also differed significantly (15.82±3.86 vs 10.37±4.80 days; $P < 0.001$). 150 of the 194 patients survived at 6 months. At 6-month neurological functional follow-up, 8 NHC patients had favorable modified Rankin scale (mRS) scores ≤2 at discharge, versus only 1 HHC patient, showing better outcome in NHC than HHC (8.25% vs. 1.03%; $P = 0.035$). In-hospital mortality was significantly greater in HHC than NHC (17.52% vs. 7.22%; $P = 0.029$). 30-day post-ictus mortality was 30.93% in HHC versus 14.43% in NHC ($P < 0.006$). There was also a significant difference in mortality at 6 months post-ictus (47.42% vs. 18.56%; $P < 0.001$).

High hemoglobin (HGB) level was associated with increased risk of postsurgical cerebral ischemia, pulmonary embolism and lower-limb DVT and poor prognosis in Poor-grade aneurysmal subarachnoid hemorrhage patients. Preoperative hemodilution therapy might be beneficial in reducing operative complications, reducing hospital stay and improving short-term prognosis for neurological functional recovery in aSAH patients with high hemoglobin concentration, but further detailed research is needed [1)].

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