Anion gap level

Normal results are 3 to 10 mEq/L, although the normal level may vary from lab to lab. If your results are higher, it may mean that you have metabolic acidosis.

A total of 89 patients with intracerebral hemorrhage (ICH) were recruited. Of these, 68 and 21 patients were categorized into screening cohort and validation cohorts, respectively. In the screening cohort, patients were categorized into three groups, according to the serum anion gap levels at admission. Shen et al. dynamically recorded AG levels. Neurological and cognitive functions were assessed using the Glasgow coma scale (GCS), Glasgow outcome scale (GOS), and mini-mental state examination (MMSE) scale at different time points. Furthermore, in the validation cohort, 9 patients with increased AG levels underwent interventions to rectify the electrolyte imbalance.

In the screening cohort, statistical differences were observed for respiratory diseases (p=0.029) among the three groups. The number of patients in the ≥16 mmol/L group (59.3%) was higher than that in the other groups. The mean scores of GCS in the ≥16 mmol/L group were lower than those in the other groups. The AG levels at admission had significant associations with 180-day GOS (p=0.043) and 180-day MMSE (p=0.001). Among them, the mean scores of the 180-day GOS and 180-day MMSE were lower in the ≥16 mmol/L group than in the other groups. In the validation cohort, AG intervention promoted recoveries of neurological and cognitive functions when compared to those without AG interventions.

Anion gap level is a potential predictive biomarker for the long-term outcomes of spontaneous intracerebral hemorrhage patients, and rectifying AG at admission improves the spontaneous intracerebral hemorrhage prognosis [1)].

1)
Shen J, Li DL, Yang ZS, Zhang YZ, Li ZY. Anion gap predicts the long-term neurological and cognitive outcomes of spontaneous intracerebral hemorrhage. Eur Rev Med Pharmacol Sci. 2022 May;26(9):3230-3236. doi: 10.26355/eurrev_202205_28741. PMID: 35587074.