Human albumin (HA) use in aneurysmal SAH (aSAH) is controversial. There is some evidence that HA may exert neuroprotection and may provide hemodynamic stability. In December 2013 we adopted a new clinical protocol for aSAH treatment, including continuous administration of 5% albumin and a high level of cardiovascular monitoring. The aim of this work is to evaluate the impact of this protocol on the incidence of medical complications, serum sodium levels and neurologic outcome in aSAH patients.

Methods
After IRB approval, we reviewed retrospectively medical records of aSAH patients from 2011-2013 (pre-albumin) and 2014-2015 (albumin). According to the new protocol, adults within 3 days of aSAH received continuous infusion of 5% albumin (60 g/day). Hemodynamic evaluation included TCD criteria. We found 26 patients that were treated in the first period and 24 in the second. Most cases were female (80.8% vs 54.2%); age was similar in both groups (median 57 vs 58 years); WFNS score showed a tendency to be lower in the group with albumin; Apache-II score was similar in both groups; and there was no difference in aneurysm treatment modality and timing after bleeding.

TCD vasospasm occurred in similar proportions in both groups, but Delayed Neurologic Deficit (DND) and ischemia in CT scan showed a tendency lower in the albumin group.

Baseline characteristics

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Weibull score

1 & 2 2 (8.3%) 1 (3.9%) 3 (6.0%)
3 4 (16.7%) 10 (38.5%) 14 (28.0%)
4 18 (70.0%) 15 (57.7%) 33 (66.0%)

Aneurysm score

1 5 (20.8%) 11 (42.3%) 16 (32.0%)
2 7 (29.2%) 3 (11.5%) 10 (19.6%)
3 2 (8.3%) 5 (19.2%) 4 (8.0%)
4 10 (41.7%) 2 (7.0%) 17 (34.0%)
5 4 (15.4%) 3 (11.1%)

Aneurysm location

Surgey 8 (33.3%) 10 (38.5%) 18 (36.0%)
Endovascular 13 (54.2%) 11 (42.3%) 24 (48.0%)
Base of brain 3 (12.5%) 5 (19.2%) 8 (16.0%)

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