**Supplemental Digital Content 5**

**Derived data from seven studies discussing one type of hemodynamic monitoring: main characteristics of each study, type of monitoring and number of patients divided according to clinical presentations (WFNS grade) and neurological outcome (mRS)**

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| **ARTICLES** | | **STUDY CHARACTERISTICS** | | | | **TYPE OF MONITORING** | **WFNS** grade Good (I-III) | **WFNS** grade  Poor (IV-V) | **mRS** at 3 months Favorable (0-3) | **mRS** at 3 months  Poor (4-6) |
| TITLE | AUTHOR & YEAR | TYPOLOGY | AIM | PERIOD | NUMBER OF PATIENTS |
| Impact of transpulmonary thermodiluition-based cardiac contractility and extravascular lung water measurements on clinical outcome of patients with Takotsubo cardiomyopathy after subarachnoid hemorrhage: a retrospective observational study | Mutoh et al. 2014 | Retrospective observational study | To investigate TCM-induced cardiac function by PiCCO and its impact on clinical outcome | Day 0 to day 14 after SAH | 46 | PiCCO | 16 | 30 | 24 | 22 |
| Multicenter prospective cohort study of volume management after SAH. Hemodynamic Changes According to Severity of Subarachnoid Hemorrhage and Cerebral Vasospasm | Yoneda et al. 2013 | Multicenter prospective cohort study | Examine the dynamics of time-dependent hemodynamic variables based on severity of SAH | from day 1 to day 14 | 204 | PiCCO | 66 | 138 |  |  |
| A Multicenter prospective cohort study of volume management after subarachnoid hemorrhage: circulatory characteristics of pulmonary edema after subarachnoid hemorrhage. | Obata et al. 2016 | Multicenter prospective cohort study | To investigate the incidence and cause of pulmonary edema in patients with SAH | from day 1 to day 14 | 204 | PiCCO | 65 | 138 |  |  |
| Fluid balance and Blood volume measurement after aneurysmal SAH | Hoff et al. 2008 | Prospective observational study | to assess the effectiveness of fluid administration | with 48 h from SAH onset to day 14 | 50 | Fluid balance and PDD | 33 | 17 |  |  |
| Optimal range of global end-diastolic volume for fluid management after aSAH: a multicenter prospective cohort study | Tagami et al. 2014 | multicenter prospective cohort study | to identify those hemodynamic variables that are associated with DCI and PE after SAH | from day 1 to day 14 | 180 | PiCCO | 64 | 115 |  |  |
| Goal directed fluid management by bedside transpulmonary hemodynamic monitoring after SAH | Mutoh et al. 2007 | prospective observational cohort study | to demonstrate the feasibility of advanced hemodynamic monitoring with TPT | within 24 h from SAH onset to day 14 | 46 | PiCCO | 23 | 23 |  |  |
| Bedside Monitoring of Circulating Blood Volume After Subarachnoid Hemorrhage | Kasuya et al. 2003 | prospective observational study | to investigate the change of CBV after SAH and early surgery | from day 1 to day 14 | 50 | PDD | 33 | 17 |  |  |

**LEGEND**

IG= intervention group (more advanced monitoring); CG= control group (basal invasive monitoring); TPT= transpulmonary thermodilution; PE= pulmonary edema; DCI= delayed cerebral ischemia; SAH= subarachnoid hemorrhage; WFNS= world federation of neurosurgical societies; EGDT= early goal directed therapy; TPCO= transpulmonary cardiac output; PDD= pulse dye densitometry; PCCI= pulse contour cardiac index; PACI=pulmonary artery cardiac index; APCO= arterial pressure cardiac output; CO= cardiac output; NA= noradrenaline; ELWI=extra lung water index; GEDVI= global end diastolic volume index; LVEF= left ventricular ejection fraction; CVP= central venous pressure; CBV= circulating blood volume; PCWP= pulmonary capillary wedge pressure; PVPI= pulmonary vascular permeability index; TCM= Takotsubo cardiomyopathy; ICG= indocyanine green; CI= cardiac index; PiCCO= pulse contour continuous cardiac output.