**Supplemental table 1: Patient demographics and characteristics**

|  |  |  |
| --- | --- | --- |
| Characteristics |  | 100 patients/456 times |
| Gender (M:F)  Age (years)  Reason for DC  Side of DC  Locations of TDS | 58:42  54.7±15.5  Ischemic stroke  Cerebral hematoma  Traumatic brain injury  Tumor  Aneurysm  Left  Right  Bilateral  Neuro-ICU  Common ward  Outpatient department  Emergency department  Operating room | 14  48  25  3  10  43  52  5  402  30  16  5  3 |

DC, Decompressive craniectomy; F, female; M, male; TDS, transcranial duplex sonography

**Supplemental table 2: Width of the third ventricle under different drainage volume during EVD and ELD**

|  |  |  |  |
| --- | --- | --- | --- |
| Procedures | Case | Width of the third ventricle (mm) | |
| Before After (drainage volume) | |
| EVD  ELD | 1  2  1  2  3  4  5  6 | 12.6  13.8  12.9  14.2  16.5  9.8  11.0  9.6 | 2.7 (370 ml) 6.6 (250 ml) 8.3 (180 ml)  5.6 (220 ml) 8.2 (120 ml) 7.2 (150 ml)  3.1 (300 ml) 6.3 (210 ml) 9.0 (90 ml)  6.0 (220 ml) 8.4 (180 ml) 10.1 (110 ml)  5.8 (300 ml) 8.2 (200 ml) 9.7 (130 ml)  3.6 (280 ml) 4.8 (200 ml) 4.0 (240 ml)  4.5 (200 ml) 6.5 (160 ml) 5.2 (180 ml)  5.3 (150 ml) 5.8 (140 ml) 4.6 (180 ml) |

ELD, external lumbar drainage; EVD, external ventricular drainage