**Supplemental Table 1: Demographic and clinical variables of participants with TBI**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Patient ID | Gender | Age | Ethnicity | Education (years) | Handedness | Months post-injury | Injury mechanism | GCS |
| 1 | F | 21.1 | AA | 13 | Right | 10.7 | TA | 3 |
| 2 | M | 44.0 | A | 12 | Right | 25.2 | Assault | 14 and deteriorated |
| 3 | M | 24.6 | C | 16 | Right | 18.4 | TA | 10 |
| 4 | M | 43.9 | C | 16 | Right | 17.7 | TA |  |
| 5 | M | 45.2 | C | 12 | Right | 20.7 | TA |  |
| 6 | M | 25.9 | AA | 12 | Right | 41.5 | TA | 15 |
| 7 | F | 25.5 | C | 16 | Right | 26.2 | TA | 3 lowest 8 highest in 24hrs |
| 8 | F | 45.0 | C | 14 | Right | 256.1 | TA |  |
| 9 | M | 32.5 | AA | 14 | Right | 7.1 | Assault | 15 |
| 10 | F | 18.3 | H | 12 | Right | 9.3 | TA |  |
| 11 | M | 21.6 | C | 14 | Right | 11.3 | TA |  |
| 12 | M | 25.3 | AA | 18 | Right | 56.4 | TA |  |
| 13 | M | 57.7 | C | 16 | Right | 229.5 | TA | Delayed LOC |
| 14 | M | 17.5 | AA | 11 | Right | 3.5 | TA | 7 |
| 15 | F | 21.8 | C | 13 | Right | 2.2 | TA | 3 |
| 16 | M | 37.8 | AA | 12 | Left | 3.1 | Assault |  |
| 17 | F | 29.8 | C | 18 | Left | 10 | TA |  |
| 18 | M | 24.9 | C | 15 | Right | 24.2 | Assault |  |
| 19 | F | 19.3 | C | 12 | Right | 4.2 | TA | 7 |
| 20 | F | 18.9 | A | 11 | Right | 5.2 | TA | 6, then improved to 13 |
| 21 | M | 19.8 | C | 13 | Right | 25 | Fall | 6 |
| 22 | F | 19.3 | C | 13 | Right | 7.1 | TA | 12 |

Note: M=Male. F=Female. C=Caucasian. AA=African American. H=Hispanic. A=Asian. TA=Traffic accident. LOC=Loss of consciousness.

**Supplemental Table 1 (continued): Neuroimaging characteristics of participants with TBI**

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| --- | --- | --- | --- |
| Patient ID | Acute imaging findings | Chronic imaging findings | Total lesion volume (cm3) |
| 1 | SDH, SAH, epidural hemorrhage, IVH, extra-axial hematoma | mild bihemispheric changes consistent with DAI, small white matter lesion in left superior frontal gyrus |  |
| 2 | ICH | mild bihemispheric changes consistent with DAI |  |
| 3 |  | modest left anterior superior frontal gyrus white matter loss with small region of encephalomalacia, small left superior thalamic lesion; mild bihemispheric changes consistent with DAI | 0.4 |
| 4 | IVH, corpus callosum hemorrhage | lesion of mid-body of corpus callosum; moderate bihemispheric changes consistent with DAI | 1 |
| 5 |  | moderate bihemispheric changes consistent with DAI |  |
| 6 | small extra-axial left frontal area artifact vs. small chronic SDH | bilateral superior paretal white leisons with moderate bihemispheric changes consistent with DAI  | 0.2 |
| 7 |  | small lesion on posterior body of corpus callosum; bilateral right greater than left superior frontal gyrus white matter lesions with mild bihemispheric changes consistent with DAI | 0.5 |
| 8 |  | left middle frontal gyrus white matter lesions and posterior right deep and posterior periventricular white matter abnormalities; moderate bihemispheric changes consistent with DAI | 0.1 |
| 9 | left temporoparietal ICH, traumatic SAH | patchy abnormal white matter signal in white matter of right inferior and middle frontal gyri  |  |
| 10 | contusions, SAH | mild bihemispheric changes consistent with DAI |  |
| 11 |  | mild left superior frontal gyrus superficial cortical damage; moderate bihemispheric changes consistent with DAI | 0.1 |
| 12 | SAH, DAI | moderately severe bilateral frontal inferior and right anterior temporal white matter signal abnormalities |  |
| 13 | SAH, IVH | ventricular shunt track on left, left posterior frontal cortical thinning; moderate bihemispheric changes consistent with DAI |  |
| 14 | contusion, SDH; MRI showed DAI | moderate white matter changes consistent with DAI |  |
| 15 | multiple ICH, IVH, DAI | right thalamic lesion, moderate right anterior temporal cortical/white matter lesion, moderate white matter changes consistent with DAI | 0.3 |
| 16 |  | moderate bihemispheric changes consistent with DAI |  |
| 17 | IVH (EVD done), DAI | moderate bihemispheric changes consistent with DAI; corpus callosum irregularities; small area of encephalomalacia in left frontal lobe; right frontal calvarial burr hole | 0.3 |
| 18 |  | changes in corpus callosum and mild changes consistent with DAI |  |
| 19 | ICH; MRI showed DAI | lesions in white matter of the right anterior superior frontal gyrus and bihemispheric but right greater than left changes consistent with DAI | 0.2 |
| 20 | CT negative; MRI showed shearing injury, DAI, lesion in corpus callosum | mild bihemispheric changes consistent with DAI; lesion in body of corpus callosum | 0.1 |
| 21 | negative | mild bihemispheric changes consistent with DAI, thinning of corpus callosum |  |
| 22 | SAH | mild bihemispheric changes consistent with DAI |   |

Note: SDH=Subdural hematoma. SAH=Subarachnoid hemorrhage. IVH=Intraventricular hemorrhage. ICH=intracerebral hemorrhage. EVD=Extraventricular drain.