**Early life adversity induced third ventricular enlargement in young adult male patients suffered from major depressive disorder**

**--A study of brain morphology**

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**Abstract:**

***Background:*** Early life adversity (ELA) is not uncommon in Major Depressive Disorder (MDD) patients. Childhood trauma has been reported more frequently in adult MDD patients relative to healthy control. Recent researches have demonstrated that ELA could result in changes in brain morphology which might be an etiological factor of MDD development.

***Materials and methods:*** We recruited 40 young adult patients suffered from MDD and made CT scan. Subjects were divided in two groups: MDD patients with ELA experience (E+D) vs MDD patients without ELA experience (E-D) according to Chinese version-Childhood Trauma Questionnaire (CTQ). 17-item Hamilton Depression (HAMD) Scale and Neuropsychiatric Inventory (NPI) were also examined. Student’s t-test was used to compare the HAMD scores, NPI scores, CTQ subcomponents scores, Third Ventricular (TV) width and volume of patients from E+D and E-D groups.

***Results:*** Findings demonstrated that ELA might result in Third Ventricular (TV) enlargement, furthermore, there was a correlation between Physical Neglect (PN) and third ventricular volume.

***Conclusions:*** These findings supported the hypothesis that ELA could induce changes of structure around the TV, which might undermine the etiology of MDD.

**Key words: Early life adversity, Major depressive disorder, Third ventricle, CT scan**