DISSOCIATIVE IDENTITY DISORDER, SELF-RECOGNITION AND ABNORMALITIES OF THE CORPUS CALLOSUM: A CASE REPORT AND LITERATURE REVIEW

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INTRODUCTION:

Dissociative identity disorder (DID) can be sometimes difficult to diagnose as well as to treat. The underlying pathophysiology is not well elucidated, but the accompanying self-recognition disruption could be related to abnormalities of the corpus callosum and/or other abnormalities of the white matter.

CASE REPORT

We report the case of a 26-year-old female Asian patient with no known medical or psychiatric history, in whom dysgenesis of the corpus callosum was incidentally discovered on an MRI of the brain performed during a hospital stay for psychogenic non-epileptic seizures. The patient was later admitted to the psychiatry ward for active suicidal thoughts. Throughout her stay, she claimed that she could not recognize herself, and acted as if she was another character called “Y”, with a different body, distinct thoughts, and a separate personality from hers. The patient’s Dissociative Experience Scale-II (DES-II) score was 70.7%, suggesting the diagnosis of DID.

Figure 1 : Dysgenesis of the corpus callosum, with non-visualization of mid, posterior body, and splenium.

Table 1: Neurocognitive assessment

Cognitive area	Scores	Conclusions
Cognitive Efficiency Mini Mental State (MMS)	29	Conserved
PM38 (Wechsler, 1938)	IQ 106	Average General Intelligence
Working Memory Digit span	5/4	Average
Episodic Memory Cued recall (Grober & Buschke, 1987)	Total free recall: 34/48 Total free & cued recall: 48/48 Total free delayed recall: 14/16 Total free & cued delayed recall: 16/16 Recognition: 32/32	Good skills in free and cued recall
Executive Function Frontal assessment battery	15/18	Mild deficit
Language Set test (Isaacs et Kennies, 1973)	Verbal fluency: 19/20 Phonemic fluency: 10/10	Excellent
Visuospatial skills Complex Figure of Rey-Osterieith (1959)	Type I	Good copy

DISCUSSION:

Studies on corpus callosum agenesis showed that acallosal patients generally exhibit difficulties in social cognition and social behavior, with adults showing impairment in understanding others’ mental states and in recognizing emotions. Poor social self-awareness, and mild theory of mind deficits, were also found in these patients.

Studies of individuals with complete or partial corpus callosum lesions have revealed a complex story of representations of the self in the brain, especially the studies on split-brain patients which suggest an essential role of the corpus callosum in the self-consciousness experience. There are two aspects of the self: The physical aspect and the psychological one. Physical aspects of the self are often examined in studies of self-face recognition, agency, and perspective taking, whereas psychological aspects of the self are often operationalized with studies examining autobiographical memory or other types of self-knowledge.

In our case, the DID condition itself also entails a lack of self-coherence which may contribute to errors in visual self-recognition.

CONCLUSIONS:

Structural alterations in the corpus callosum and other abnormalities of the white matter were reported in the literature as potentially associated with psychiatric conditions in general, but very few mentioned dissociative identity disorder, despite the fact that the corpus callosum may be involved in self-recognition.

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