Neuropsychiatric outcome in attempted hanging: A case report

Factors involved in causation of death by hanging include carotid and vertebral artery occlusion, jugular venous compression, tracheal obstruction, stimulation of carotid sinuses, and the parasympathetic and sympathetic nervous systems.[1] Survivors of attempted hanging may manifest a range of neuropsychiatric sequelae. We report a young male who survived a suicidal attempt by hanging but had prominent neuropsychiatric sequelae.

A 29-year-old male survivor of suicidal hanging was brought to the psychiatric outpatient unit with complaints of forgetfulness, persistent and pervasive low mood, decreased social interaction, reduced interest in work as well as his daily routine, and disturbed appetite. He did not remember the hanging incident and also the past year. About 4 years back, following a breakup with his girlfriend, he developed low mood, reduced interest in work as well as his daily routine, anhedonia, getting tired easily, disturbed sleep, pessimistic views of future, and ideas of hopelessness and worthlessness, and attempted suicide by drinking poison. Luckily, his mother found him in the act and stopped him. His family members got him married in the next three months, thinking that it would help him, but his condition worsened. He began consuming alcohol at the age of 20 years, but has been consuming daily for the past 3 years. One day, he came back home drunk, and after a minimal provocation by his mother, he went into his room and locked the door. Sensing it to be unusual, they went to the window and found him hanging by a ligature tied to the ceiling fan. The family members brought him down. He had turned blue and was gasping at the time of rescue and was admitted to a nearby hospital. He remained in coma for 72 h. There was no evidence of hypoxic/ischemic changes in the brain on neuroimaging. In the initial 3–4 days of regaining consciousness, he remained disoriented to time and place but recognized relatives who visited him. He did not remember the hanging episode as well as events of almost 6 months preceding the attempted suicide. One and a half years after the incident, antero/retrograde amnesia still persisted. Although he was able to take care of self, he lacked initiative, remained apathetic, had unprovoked anger outbursts, and occasionally wept profusely. On physical examination, icterus was present. Mental status examination revealed restricted affect, impaired immediate, recent and remote memory, poor attention span, impaired insight, and judgment. His mini mental status examination score was 20. Magnetic resonance imaging (MRI) brain revealed frontal lobe atrophy. His memory scores on verbal retention for dissimilar pairs, mental balance and visual retention to be in the lowest quartiles, a below-average performance quotient, and severe visuospatial disturbance. He was started on tablet mirtazapine 15 mg, which leads to improvement in his symptoms.

At the time of presentation, the patient had apathetic behavior, retro/antegrade amnesia, and mood symptoms, which made it difficult to diagnose. MRI changes and history of alcohol further led to a diagnostic dilemma between primary amnesic syndrome versus Korsakoff’s syndrome. Since the patient also had a long history of low mood symptoms, he showed a significant improvement after treatment with antidepressant. Soon after, his memory, low mood features, and social interaction improved. Thereafter, the final diagnosis was made as depression with pseudodementia.

Coma of more than 24 h duration carries a risk of severe neuropsychiatric defect on recovery of consciousness. The greater the duration of unconsciousness, more is the chances of irreversible damage. Hanging leads to hypoxic /anoxic injury, due to obstruction of airway. Hanging also leads to ischemia, due to occlusion of blood flow and is significant in causing cerebral necrosis.[2,3] Furthermore, there is a selective vulnerability in different brain regions to undergo hypoxic–ischemic injuries such as hippocampus, striatum, thalamus, globus pallidus, and third layer of cerebral cortex.[4] Survivors of cerebral anoxia due to suicidal hanging may present with diverse neurological deficits and psychiatric symptoms or syndromes such as acute and chronic amnestic syndromes, dementia, Korsakoff’s syndrome, and even hysteria. An analysis of the neuropsychiatric features found in hanging survivors highlights the diagnostic difficulty, which may lead to hypoxic symptoms being misjudged for hysterical disturbance.[4]

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form, the legal guardian has given his consent for images and other clinical information to be reported in the journal. The guardian understands that names and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.
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There are no conflicts of interest.

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