PSYCHOSIS ASSOCIATED WITH GIGANTIC OVARIAN ADENOCARCINOMA
-CASE PRESENTATION-

Alina A. FRUNZA 1,2*, Mihnea C. MANEA1,2, Maria G. PUIU1,2, Bogdan E. PATRICHI1,2, Ioana Anca ANDREI1,2, Mirela MANEA1,2

1University of Medicine and Pharmacy "Carol Davila" Bucharest, Romania
2"Prof. Dr. Al. Obregia” Psychiatry Hospital, Bucharest, Romania;

ABSTRACT

The etiopathogeny of schizophrenia-like psychosis includes the more recent theory of excessive glutamate release determined by N-methyl-d-aspartate receptor (NMDAR) antibodies. Current literature describes cases of psychosis induced by ovarian malignancies through this mechanism. We report the case of a 44-year-old woman, suffering from a psychotic disorder concomitant with a gigantic intraabdominal ovarian tumor. The patient, with no prior history of psychosis, was brought to the Psychiatry Emergency Unit in January of 2013 with an acute psychotic disorder. The patient presented a massive abdominal mass but had a complete lack of insight of the psychiatric symptomatology but also of the somatic condition. Immediate transfer to the Surgery department was recommended, but the patient refused due to the severely distorted thought pattern and the complete lack of insight. In consequence, the patient was admitted to our department and treatment with antipsychotic medication was initiated. The laboratory assessments revealed several abnormalities, including elevated CA 125 levels, though not conclusive of the malignant nature of the tumor. The cerebral CT scan was normal. Under psychotropic drug treatment the psychosis was partially remitted and the patient gained partial insight of the medical condition. The psychiatric evaluation performed three weeks after the surgery concluded that the psychotic disorder was fully remitted. The hystopathological exam revealed that the tumor was a cystic ovarian mucinous adenocarcinoma. The patient was referred to an Oncology department for specific treatment. In view of recent literature findings, we speculate that the patient's psychotic symptoms could have been part of a paraneoplastic syndrome associated with anti-NMDARs, triggered by the ovarian malignant tumor.

Keywords: schizophrenia-like psychosis, ovarian malignant tumor, cystic ovarian mucinous adenocarcinoma.

INTRODUCTION

The etiopathogeny of schizophrenia-like psychosis includes several hypotheses, including the more recent excessive glutamate release determined by N-methyl-d-aspartate receptor (NMDAR) antibodies. Current literature describes cases of psychosis induced by ovarian malignancies through this mechanism [1-6]

*Corresponding Author: Alina Frunza, MD PhD, Specialist in Psychiatry, Psychiatry Department, “Prof. Dr. Al. Obregia” Psychiatry Hospital, Bucharest, Romania Address: Berceni street, no. 10-12, 041914, sector 4, Bucharest; email: alinafrunza@yahoo.com

It has been shown that patients suffering from paraneoplastic encephalitis associated with ovarian teratoma display antibodies for anti-N-methyl-D-aspartate (NMDA) receptors in CSF or plasma. Paraneoplastic encephalitis usually begins with a prodromal phase, followed first by prominent psychiatric symptoms or, less frequently, short-term memory loss, seizure, catatonia-like symptoms, dyskynesia and, secondly, by autonomic instability and central hypoventilation requiring intensive care [3]. Detailed studies of organic conditions inducing psychosis could provide important information regarding the general etiology of schizophrenia.
CASE PRESENTATION

We report the case of a 44-year-old woman, suffering from a psychotic disorder concomitant with a gigantic intraabdominal ovarian tumor.

The patient, with no prior history of psychosis, was brought to the Psychiatry Emergency Unit in January of 2013 with an acute psychotic disorder dominated by delusions of persecution, influence, dismorphophobia, delusional interpretations, delusions of bodily transformation, disorganized speech and behavior, slight cognitive impairment, severe social withdrawal, severely altered functionality with low capacity for self-care. The patient presented a massive abdominal mass, resembling an advanced pregnancy, although a pregnancy test done immediately on admission was negative. The patient had a complete lack of insight of the psychiatric symptomatology but also of the somatic condition.

She was immediately referred to a Surgical Department where the clinical and imagistic examinations revealed a gigantic tumoral cystic formation, probably ovarian, occupying the entire abdominal cavity and pelvis and exerting a compressive effect on the surrounding organs. Immediate transfer to the Surgery department was recommended, but the patient refused due to the severely distorted thought pattern brought on by the psychosis and the complete lack of insight. In consequence, the patient was admitted to our department and treatment with antipsychotic medication was initiated.

The patient is a non-smoker, with unfinished higher education, divorced mother of one 18 year old child, with no documented history of mental or somatic illness. Information gathered from the family revealed that the apparent onset of the psychosis had taken place 4 to 5 years ago, according to the husband at the time. He states that he tried to convince her to seek out psychiatric care, but the patient refused. Finally, the husband decided to abandon the family home with the child, leaving the patient alone. The mother stated that the first signs of abdomen growth were visible about three years prior to admission, but were neglected due to the patient’s refusal to address to medical professionals.

The psychiatric examination upon arrival in our department revealed: Slightly disorganized attire, precarious hygiene, facial and body expression consistent with delusional state, uncooperative, partially coherent, partially oriented in time and space, apparently without perception disorders, highly suspicious, accelerated verbal rhythm, disorganized speech, low spontaneous attention, flattened affectivity, irritability, multiple delusions with bizarre content, severely altered behavior, significant social isolation, very low executive functioning and altered capacity for self-care associated with the gigantic tumor, mixed insomnia and altered eating behavior due to both the delusions and the somatic condition. Also, the patient had a complete lack of insight into the psychotic episode and also into the somatic condition, which was interpreted through delusional patterns.

The positive first axis diagnosis was set to organic delusional disorder due to a general medical condition, the gigantic ovarian tumor. Not enough data was presented to sustain a second axis diagnosis. On the third axis the gigantic ovarian policystic tumor of unknown origin was set. The Global Assessment of Functioning scale was rated at 20/100.

A medical interdisciplinary arbitration committee was called in to assess the need for immediate surgical intervention and the patient’s capacity to decide in her best interest. It was decided that the medical condition was life threatening and that, due to the psychotic disorder, the patient’s consent was not required for the surgical intervention. A signed informed consent from the patient’s next of kin (mother) was considered sufficient.

The laboratory assessments revealed several abnormalities, including elevated CA 125 levels, though not conclusive of the malignant nature of the tumor. Also, the patient suffered from anemia, early stage renal failure, inflammatory syndrome, leucocytosis, thrombocytosis and abnormal electrolyte values in plasma.

The cerebral CT scan was normal.

Under psychotropic drug treatment with a typical antipsychotic (Zuclopentixol, initially 50mg/3 days, then the Depot 200 mg fi.), and sedatives (Diazepam and Levomepromazine),
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the psychotic symptoms were partially remitted and the patient gained partial insight of the medical condition.

The patient consented to the surgical intervention and was transferred to the Surgical department, where she underwent surgery with the successful removal of the tumor. The psychiatric evaluation performed three weeks after the surgery concluded that the psychotic disorder was fully remitted. Also, the patient suffered from no recurrence until present.

The hystopathological exam revealed that the tumor was a cystic ovarian mucinous adenocarcinoma. The patient was referred to an Oncology department for specific treatment.

CONCLUSIONS

In view of recent literature findings, we speculate that the patient's psychotic symptoms could have been part of a paraneoplastic syndrome associated with anti-NMDARs, triggered by the ovarian malignant tumor. These antibodies seem to cause an inhibition of NMDARs in presynaptic GABAergic neurons and consequently a reduction of GABA release with the disinhibition of postsynaptic glutamatergic transmission in the prefrontal and sub-cortical structures, which could explain our patient's schizophrenia-like symptoms [3, 4].

REFERENCES
