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LETTER TO THE EDITOR

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Behavioural disinhibition associated with miller fisher syndrome occurred after a surgery for pulmonary hydatid cyst

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Dear Editor,

Miller Fisher syndrome (MFS) is a rare variant of Guillain-Barré syndrome (GBS) characterized by the acute development of areflexia, ophthalmoparesis, and ataxia. The less frequent symptoms consist of blepharoptosis; limb dysesthesia; face, bulbar, and pupillary palsies; micturition disturbance; and motor weakness. The psychiatric symptoms could accompany MFS due to the neurological interaction [1]. Here, we present a male patient who was diagnosed with MFS that occurred after a surgery for pulmonary hydatid cyst and led to behavioural abnormalities.

A 25-year-old male patient was admitted to Adiyaman University Training and Research Hospital psychiatric outpatient clinic complaining of irritability, agitation, abusive speech, decreased need for sleep, sudden movements such as hitting people around him, and tearing off his own clothes. Four months prior to admission, the patient had a surgery for pulmonary hydatid cyst. After surgery, he had been followed-up with the complaints of ptosis, bilateral ophthalmoplegia, truncal ataxia, and slurring of speech and diagnosed with MFS. The patient was managed by intravenous immune globulin and steroids and had a significant clinical improvement. During ongoing treatment at the department of neurology, the patient exhibited a series of abnormal behaviours and referred to a psychiatry clinic. His past medical history was not significant except for pulmonary hydatid cyst and MFS. The family history was non-contributory. He had 10 pack years of cigarette smoking and denied alcohol use, or drug abuse. Results of standard blood tests, urinalysis, thyroid stimulating hormone, and electrocardiogram were normal. There were no abnormal spine and brain findings on the magnetic resonance imaging (MRI) and computed tomography (CT). The patient was re-evaluated with the neurology specialist who diagnosed the patient as MFS. He was managed by risperidone 2 mg daily and quetiapine 100 mg daily and came to our outpatient clinic 3 weeks after the introduction of risperidone with decreased symptom severity. The patient continued medications at the same doses for 6 more weeks and came to control again. He was still complaining of behavioural disinhibition (BD) symptoms and was not complaining of sleep disturbance; therefore, the quetiapine was stopped and the risperidone was continued. Partial remission in behavioural abnormalities also sustained during follow-up. Written informed consent was taken from the patient in order to publish his data.

The diplopia (78%), ataxia (48%), and both (34%) are the presentations of MFS. Upper respiratory tract infection can trigger these symptoms in 56-76% of the patients [2]. Haemophilus influenza and Campylobacter jejuni are the most common pathogens. Mycoplasma pneumonia, cytomegalovirus, Staphylococcus aureus, Coxiella burnetti, varicella zoster, and mumps virus are also found to be associated [3]. Clinical history, cardinal symptoms, normal findings on MRI and CT, albuminocytologic dissociation in the cerebro-spinal fluid may suggest MFS. Anti-GQ1b antibody is not unique to MFS, but relates to the disease activity and can be used as a diagnostic marker. Patients with MFS usually have good recovery and no residual deficits [4]. BD is characterized by an inability to resist expressing inappropriate or restricted behaviour. The studies have focused on the role of the serotonin (5-hydroxytryptamine (5-HT)). It was generally assumed that lowered brain 5-HT function and dopaminergic neurotransmission are associated with increased impulsivity. BD can be caused by using of a wide range of medications such as antipsychotics, mood stabilisers (e.g. lithium), and antidepressants. Anabolic-androgenic steroids have

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been associtaed with irritability, agitation, and agression [5].

The cause of MFS after pulmonary hydatid cyst operation is believed to be caused by an immunological response to infection. Although it happens rarely, MFS-like neuropathy could be caused by various drugs. In our case, the patient underwent a possible antecedent upper respiratory infection after the period of surgery, his MFS was probably induced by the immunoreac¬tion associated with this infection. Peripheral nervous system involvement is thought to have a systemic mechanism to cause central nervous system complications. In our patients, the behavioural problems that appear are more likely due to the side effects of the drug or the systemic effects of the disease agent (virus, etc.). Our patient underwent intravenous immunoglobulin therapy and steroids. This medications were thought to be a possible cause of BD. After initiation of the treatment, his neurological symptoms improved, but while the treatment continued, the patients had psychiatric symptoms. Risperidone decreased the symptoms generally, but irritability and agitation persisted in the six month of the treatment. We reported a patient who experienced MFS as an adverse event of chest surgery for hydatid cyst and believed that this is the first case of an association between MFS and behavioural disinhibition. We hope, this case increases awareness among physicians.

Competing interests
The authors declare that they have no competing interest

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