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# Aspiration pneumonia as a complication of severe mania

Though fatal exhaustion has been reported in acutely manic patients [1], little else has been described on the medical complications of mania. We report a case of severe mania unresponsive to conventional psychotropic medications, which resulted in a case of severe aspiration pneumonia.

## 1. Case report

## 1.1. Circumstances of admission

Mr. B, a sixty-eight year old, white, male with a known diagnosis of Bipolar I Disorder was re-admitted to the Acute Inpatient Psychiatric Unit for the second time in two months in a manic episode.

The patient had been relatively stable in a supported community setting for many years; per informant history, a few days prior to re-admission, patient was noted to be increasingly intrusive, disinhibited, neglecting his personal hygiene and grandiose.

## 1.2. Previous psychiatric history

Mr. B was diagnosed with Bipolar I Disorder twenty-eight years earlier. He had been managed effectively as an outpatient for this time on a combination of psychotropic medications. His admission two months earlier had also been for a manic episode. His baseline Abnormal Involuntary Movement Scale score was zero. MRI of the brain completed around this time showed Mr. B to have diffuse microvascular disease. Mr. B had no known family history of mental illness.

## 1.3. Past medical history

Mr. B had a history of Crohn's disease and skin psoriasis. Both of these conditions were in remission for many years.

## 1.4. Mental status examination upon admission

At admission Mr. B was floridly manic; hyperactive; disinhibited, grandiose and sexually preoccupied. Of particular note his speech was pressured, incoherent and incessant. He talked continuously during clinical interviews; when by himself and even more worrisome, while eating. Concentration and memory were impaired. Thought process was loose and his insight was poor. Level of consciousness was consistently alert.

## 2. Treatment

At the time of admission Mr. B was taking Lithium 450 mg. po BID. This dose was titrated to 1200 mg/day with a therapeutic serum level of 0.87 mEq/L. Despite this and trials of other psychotropic medications by the third week of hospitalization there was little to no attenuation in his mania.

At this time Mr. B became acutely short of breath. Hypoxic, his pulse oximetry fell to 70% despite 3.5 L of oxygen delivered via nasal cannula. He was tachypneic, hypertensive and tachycardic. Ausculation of lungs revealed harsh bronchial breath sounds anteriorly. Patient was afebrile but CBC showed elevated WBC with elevated bands. Chest X-ray showed bilateral fluffy infiltrates. EKG and cardiac enzymes were normal.

The patient was transferred to the Intensive Care Unit. A clinical diagnosis of aspiration pneumonia was made by the treating medical team, iv antibiotics were started and nasal gastric tube feedings were instituted.

Psychotropic medications at the time of this event consisted of Divalproex 1500 mg/day (with a therapeutic blood level of 85 ug/mL) and Seroquel 75 mg/day.

# 2.1. Technical investigation

Speech therapy consult done a few days after Intensive Care Unit admission showed a profound degree of impairment in the patient's swallow. Mr. B was found to have "profound oropharyngeal dysphagia." During the oral stage patient was observed to propel material to the posterior oral cavity with his tongue, however he was observed to be talking through this oral stage. This talking resulted in loss

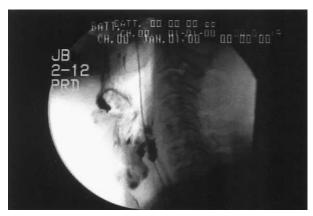


Fig. 1. Mr. B's swallow study while acutely manic.

of material anteriorly through his lips and loss of material over the base of the tongue into the pharynx. No pharyngeal response was elicited; this resulted in 100% of the bolus remaining in the pharynx. The test material was observed to enter the airway with significant aspiration. (See Figure 1).

Recommendations at that time were to keep the patient NPO until his hyperverbosity had resolved.

#### 3. Outcome

Refractory to various psychotropic medication regimens the patient's acute mania was finally resolved with seven ECT treatments over a two week period. As ECT progressed, the dysphagia improved significantly. (See Figure 2).

Repeat swallow assessment done after ECT and return to euthymia revealed a mild degree of impairment. At this repeat assessment the patient presented with mild oropharyngeal dysphagia. His oral tongue coordination was improved significantly. The patient was viewed to be safe to resume oral intake at this time.



Fig. 2. Mr. B's swallow study after resolution of mania.

#### 4. Discussion

The swallow studies illustrated and described in this report support our proposed hypothesis that Mr. B developed a life threatening aspiration pneumonia secondary to aspirating on food contents because of his mania related inability to cease talking while eating.

The improved swallow study observed with resolving mania (i.e., after ECT treatments) further supports our hypothesis as this being the mechanism for mania related dysphagia. Mr. B's mild swallowing difficulty at baseline may be secondary to his mild underlying cerebral vascular disease noted on neuroimaging.

Though hyperverbal speech is a hallmark of mania, we found no other case reports in the literature of mania induced dysphagia or aspiration pneumonia associated with mania. This may be because our patient's hyperverbosity was strikingly severe.

## 5. Recommendations

In light of this case we recommend:

- Swallow testing should be considered in these susceptible patients who are especially pressured in speech to reduce the risk of developing this potentially fatal complication.
- More aggressive use of ECT in cases of bipolar mania with especially severe hyperverbosity may also be indicated.

Shaili Jain, M.D.
Richard H. Gibson, M.D.
Patty J. Guedet, M.D.
Jon A. Lehrmann, M.D.
Carol I. Tsao, M.D.
Mental Health Division
Zablocki VA Medical Center
Milwaukee, WI, 53226

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