

Late-Onset Manic Episode after Bariatric Surgery

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Introduction

A manic episode is a clearly recognizable period with an abnormally and persistently elevated, expansive or irritable mood, with an abnormal and persistently increased targeted activity of energy, present for a week and during the biggest part of the day [1]. The episode usually fits within a bipolar disorder, in which also depressive episodes occur. These episodes often precede the manic phase. When a first manic episode occurs at a later age without any personal history, a somatic cause must always be excluded. Late-onset mania is associated with increased somatic comorbidity in patients aged 50 years and older. [2]

In this case report we present a patient with a late-onset (occurring after the age of 50) manic episode, occurring 3 months after a gastric bypass operation. Bariatric surgical outcomes are associated with medical and psychological complications, like neuropsychiatric disorders. In the screening before surgery, it has been generally found that 66% have at least one axis I diagnosis [3]. A comprehensive presurgical approach with different disciplines and including psychiatric evaluation was developed by the National Institute of Health. There is no definitive guideline for post bariatric psychiatry evaluation, despite high post-surgical prevalence of psychiatric complications. [3,4]

Case Presentation

A 58-year-old male patient with a blank gastrointestinal and psychiatric history, suffered from morbid obesity since 5 years. Given the failure of conservative dietary measures, the patient consults for a bariatric procedure at a Body Mass Index of 51.2 kg/m². A nutritional anamnesis shows a high caloric intake and obesity also occurs in the family history. After psychological and endocrinological screening, which shows no particularities, the patient undergoes a laparoscopic Roux-and-Y bypass. No complications occurred during and after surgery.

The patient is hospitalized 5 months later at the psychiatric emergency department, with a serious depressive mood. Anamnesticly, it is clear that the patient gradually developed manic symptoms within 2 weeks after the gastric bypass procedure, which persisted and fluctuated for 3 months. In combination with increased mobility due to weight reduction, this leads to a complete manic episode with almost all the classically described characteristics: buying expensive gifts for the surgeon and complete strangers, an expansive mood with a bloated sense of self, chaotic thoughts, multiple start-up projects

such as real estate and new companies, a major increased libido towards partner and other women, making expensive purchases and a sharply reduced need for sleep.

The patient's current medication is omeprazole 40mg, vitamin B12 and a supplement Fe. Blood tests show no abnormalities. MRI brain imaging shows normal images (MTA score 0, GCA score 0 and Fazekas score 0). The patient's psychiatric history is completely blank, family history shows that mother and brother were diagnosed with bipolar disorder. Patient was transferred to a gerontology psychiatric ward, and symptomatology improved under mood stabilizer valproic acid, titrated to adjusted blood levels (50-120 Mg/L).

Discussion

Late onset manic episode is a rare but serious syndrome characterized by 2 necessary criteria. It consists of an episode of manic symptomatology as described according to DSM-V, but occurring above the age of 50, in combination with an absence of manic symptomatology in the individual history [1,2].

A first manic episode can have different causes. Although etiology and pathogenesis can be considered as a continuum, a distinction is generally made between primary manic symptomatology and secondary mania. A primary mania occurs when the manic episode is part of a bipolar disorder (both early and late onset), or when a depressive disorder changes to bipolar disorder in later life. A secondary mania occurs when it is caused by somatic factors (like neurological or endocrinological factors) or medication, and neuropsychiatric syndromes such as dementia and delirium [2].

A review of case reports with a first manic episode occurring above the age of 50, shows that this is in the majority of cases has an organic basis, which requires thorough somatic and psychiatric screening [5].

Diagnosis of secondary mania

A mania in the postoperative period was described through a number of rare case reports. A distinction must be made between a short postoperative psychotic or manic attack and a toxic-organic mania that often occurs in cerebrovascular lesions [6].

Krauthammer and Klerman first described a complete manic episode that occurs some hours or days after surgery and often even after discharge from hospital. Yet in these case studies, increased somatic

comorbidities, pharmacological causes and metabolic or neurological changes are seen, instead of merely bipolar pre-disposition. Medication and drug use must be excluded as possible underlying causes [7,8,9]. Somatic disorders as the cause of manic symptoms are described in the attached table [10].

Table1: Somatic causes for manic symptomatology

Central Nervous System	Cerebrovascular Causes
	Multiple Sclerosis
	Neoplasms of the Brain
	Post-Encephalitic Parkinsonism
	Temporal Lobe Epilepsy
	Trauma
	Pick's Disease
	Huntington's Disease
Hormonal and Metabolic Diseases	Hyperthyroidism
	Pellagra
	Vit B12 Deficiency
	Wilson's Disease
Uropoetic Tract	Hemodialysis
	Uremia
Infection Diseases	Influenza
Varia	Carcinoid Syndrome

Diagnosis of primary mania

A genetic risk in combination with acute (psychosocial) stressors is the main theoretical model. The monoamine hypothesis is being abandoned more and more in favor of supposed complex pathways of intracellular second messenger systems, inflammatory cytokines, oxidative stress and neurogenesis (progressive neuropathological processes). These biomarkers vary between early and late stages of bipolar disorder, and somatic comorbidity (cardiovascular and endocrine) and substance abuse interact with these crucial neuroprogressive processes. The impact on inflammatory and oxidative pathways is a common risk factor for psychiatric disorders [11].

Case diagnosis

We can speak of a primary mania, as part of a de novo bipolar disorder with late onset. A number of psychiatric disorders have already been described post-surgery, but a new manic episode after bariatric surgery is rare. The first case described in 2015 concerns a 57-year-old woman [4].

Just like in this case, secondary causes were excluded to decide on a primary mania and the anesthesia and laparoscopic procedure were without apparent complications. Electrolyte disorders, delirious symptoms, hormonal causes, central nervous system infection, drug abuse, stroke and other rare conditions such as micro nutrient deficiency were also ruled out in our case.

Treatment and prognosis

The old adage that prevention is the best treatment definitely is valid here. Guidelines concerning screening are already implemented, but there seems to be lack of long term follow-up [12,13,14].

The pharmacological treatment for late onset manic episode does not

differ from treating an early onset manic episode. In the acute phase it is best to use an antipsychotic, followed by a mood stabilizer. In addition, psychotherapy and possibly ECT also play a role in the treatment [15].

Conclusion

The manic episode usually fits within a bipolar disorder, and is an invalidating psychiatric disorder. In a de novo presentation after the age of 50 years, it is called a late onset mania.

Given no clearly identifiable underlying somatic factor in our case, secondary mania was excluded. The family burden and postoperative psychosocial stress, which affects oxidative and inflammatory pathways, are etiologically important to conclude to a primary manic episode, with a patient with genetic vulnerability for bipolarity. Nonetheless, primary and secondary mania can be considered as a continuum, and complex pathways are involved in both. The clinical distinction between primary and secondary mania is more important than the difference in pathogenesis, since the cause can and must always be treated in secondary mania. This applies even more in an elderly patient population.

It is therefore important to be attentive to prodromi or subtle symptoms of manic or psychiatric problems in the post operative phase, also in patients without known psychiatric problems after screening and without preoperative complications. Extra vigilance is also recommended in the following weeks and months after bariatric surgery, as this case shows and provides a long-term follow-up. Further investigation should be done to suggest guidelines regarding follow-up.

The cornerstone of treatment of a late onset manic episode remains first of all to exclude or treat underlying causes. Further treatment does not differ from the early onset mania.

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