

## Unusual Triggers of the Depression and Anxiety Episodes

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### Abstract

The authors present two cases of sparking the episodes or mental disorders by the events, which may be preventable. In the first case the cause of immediately relaps of depression was the extensive tattoo, in the second the panic attack was triggered by elevation of peroral antidiabetic metformine dose.

**Keywords:** *Depression; Panic disorder; Triggers; Tattoo; Glucose metabolism dysbalance*

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### Introduction

The majority of psychic disorders have an unknown, unclear aetiology and a chronic course. The episodes of diseases are alternated by remissions, partly spontaneous, partly considered as a result of particular treatment. In connection with these findings we have little chance for preventive measures. One of them is the knowledge of potential triggers and application of activities directed to minimalization their influences [1,2].

There are a lot of events counted as the triggers of the concrete relapse: the spring and autumn equinoxes in BAP and depression, traumatic life events according to The Holmes-Rahe Life Stress Inventory, substance use, loss of sleep, traumatic brain injury, somatic disorders, especially with the inflammation component, and many others.

The aim of our letter is to point out to two triggers, which we observed immediately before serious worsening of clinical pictures and which we assume to be reliable (and preventable) causes of the eruption of the episode of depression in the first case and the panic attack in the second.

### Cases Presentation

Ms. XY, young woman, 25 years, single, diagnosed two years ago as BAD, lamotrigine 50 mg bid., in good mental state, serene stable mood, well adjusted in personal life and in a moderately demanding job, visited a tattoo parlour one summer afternoon for a small picture. But the owner persuaded her for a “great deal” and the result was a picture on her back measuring cca 40 cm × 40 cm (=16 inches ×16 inches).

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She slept badly, the next morning she was tired and irritated, she had chills and sub-febrility, her fatigue rose and her mood started to be depressive. The following day, she was unable to manage her standard agenda; she skipped her work duties and called her outpatient psychiatrist. When we met, she was tearful, inhibited, her tempo was slow, she had problems with concentration, she was pessimistic, hopeless, lacking perspective. There were no suicidal ideas. She had pain in her “illustrated” back, in muscles and joints. She accepted the recommendation for psychiatric hospitalization. Pharmacotherapy with 20 mg citalopram was initiated, but she had calmed down immediately after her arrival to the department. She spent a few days there but because she was a very heavy smoker, was unable to handle the regime and asked for dismissal. She went home, where her mother took the care of her. The depression has subsided within three weeks, the antidepressant pharmacotherapy was terminated in three months and the remission lasted ten months. The character of the next episode was manic.

Mr. YZ, 65-years, retired, former businessman with very turbulent working and drinking history. His travels from Prague to Shanghai and back three times a month for about ten years were terminated five years ago due to outbreak of panic disorder and a mild form of diabetes mellitus II. He closed his business and he began to live in the best way possible. The panic disorder was tamed within several months by combination seropram 20-40-20-10 mg and alprazolam in case of need from 0.5 mg to 2 mg and then the patient lived with the maintained dose 10 mg seropram a day for the next four years. In summer 2017 we successfully tried a “drug holiday” and then he was drug-free and his only medications were peroral antidiabetics. His diabetes was also well monitored.

In April 2018, a new doctor started in the patient’s general practice surgery and he doubled the dose of metformin for no reason. In a few days time, the patient got palpitations and rising anxiety. He had a panic attack the following week. Successful former pharmacotherapy (citalopram + alprazolam) was given and within two weeks, the patient was symptom-free. But up until now (four months), we are unable to discontinue pharmacotherapy due to emerging anxiety after dose-lowering.

## **Discussion**

As far as the first case is concerned, there is longtime known link between production of pro-inflammatory cytokines and depression [3,4]. We don’t claim depression as an inflammatory disease “per se”, but we suppose strong influence of cytokines on signaling pathways, changes in monoamine, glutamate and neuropeptide systems and decrease of BDNF. The immunic overload from 40 cm × 40 cm damaged skin tissue was probably sufficient for adequate response in the vulnerable central nervous system.

In the second case, we presume the toxic influence of lactate as the cause of provocation of panic attacks after several calm years. This connection is known from the beginning of existence of panic disease diagnosis [5-7]. There are not hypoglycemia’s after overdose but the rise of serum lactic acid as the major side effect of higher doses of metformin [8]. We are sure that this mechanism led to provocation of panic attack in our patient.

## **Conflict of Interest**

No conflicts of interests.

## **References**

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