

Efficacy of Novel Antidepressant Drugs in Comparison to Conventional Antidepressant Drugs

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Abstract

This case report is about a 63 year old female patient showing an exacerbation of major depression after a stressful life event. Three different antidepressant drugs were administered. The chronic antidepressant medication of citalopram was replaced by bupropion, which improved the decreased positive effects. Taking this chronic antidepressant medication, the patient succeeded in getting over another stressful life event, an anti-cancer therapy.

Keywords: Antidepressant drug; Bupropion; Citalopram; Clomipramine; Decreased positive effect; Major depression

Introduction

Major depression is treated by antidepressant drugs. These drugs are monoamine reuptake inhibitors and exert different therapeutic effects upon the depressant symptoms. In this case report, three different antidepressant drugs, i.e. clomipramine, citalopram and bupropion were prescribed [1]. Here, our aim is to point out the improved efficacy of the selective dopamine and noradrenalin reuptake inhibitor bupropion as a chronic medication in major depression [2].

Case Report

The clinical case report of a 63 year old female patient with a diagnosed major depression of a severe form is reported. She was working as a nurse in a children's hospital and was living with her father. She took over her father's care who was suffering from Alzheimer's disease. After her father's death, she developed symptoms such as a prolonged sadness and sleep disturbances with an early awakening and an improved mood in the evening, and she had more and more difficulties to perform her work as a nurse. When an acute exacerbation of her depressant symptoms occurred, the diagnosis of major depression was made and she was treated with an infusion of clomipramine (50 mg), a drive activating antidepressant drug. After the acute treatment, the patient was treated orally with citalopram (40 mg), a selective serotonin reuptake inhibitor, but she complained about sleepiness and a decreased drive. The patient showed weight gain, constipation, an increased Intraocular pressure and a prolongation of the QT segment in the ECG, which can be considered as adverse effects of the treatment with citalopram. She was prescribed eye drops, and yearly an E.C.G was registered. After one year, she failed a trial to work again as a nurse and hence she retired. She passed her time in a choir union. Then, she suffered from a systematic vertigo. An ultrasound diagnose of the brain vessels was made and it was negative. Consequently, a chronic administration of acetylsalicylic acid (100 mg) was recommended. Since the patient complained more and more about sleepiness and the decreased drive, the physician prescribed the novel antidepressant drug bupropion (150 mg per day), a selective dopamine and noradrenalin reuptake inhibitor. Bupropion was administered orally. The depressant symptoms improved. The sleepiness disappeared, although some days of insomnia occurred. Other possible adverse effects could be: psychosis, mania, increased blood pressure. The patient had no tendency to develop psychotic or manic symptoms. Hypertension was treated by an oral administration of ramipril (5 mg). The drive got better with this medication. This

medication was maintained, and in sum the depressant symptoms were improved. She was diagnosed with a colon carcinoma of the colon ascendens with the classification T3N2M0. She was treated with chemotherapy and an excision of the tumor was carried out. After the treatment, she remained continent. One year after the tumor therapy was finished, her depressant symptoms were stable and she went on taking the antidepressant medication with bupropion (150 mg per day). The patient is still well treated and has continued to take the bupropion medication.

Discussion

In this case report, three different antidepressant drugs were administered. In the phase of acute exacerbation of major depression, clomipramine, a tricyclic antidepressant drug which has a drive increasing effect was given as an infusion. Clomipramine improved the acute depressant symptoms. An adverse effect might be suicide attempts, but the patient showed a good compliance. Clomipramine is a serotonin and noradrenalin reuptake inhibitor with no specific effect [3]. As a chronic medication, the selective serotonin reuptake inhibitor citalopram was prescribed [1]. Citalopram had an antidepressant effect, however adverse effects appeared (sleepiness and decreased drive). The Hamilton Depression Rating Scale showed the persistence of depressant symptoms and decreased positive effects, i.e. the lack of motivation, drive and energy [4]. Citalopram showed a safe effect, because it exerted sedating properties. The question could be made whether the patient would have had the drive and the compliance to accept and get over the anti-cancer therapy, if the antidepressant pharmacotherapy with citalopram had not been replaced by bupropion and if she had continued suffering from sleepiness and the decreased drive. Since refractory symptoms remained, the novel antidepressant drug bupropion, a selective dopamine and noradrenalin reuptake

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inhibitor was administered [2]. The decreased positive effects, i.e. the lack of motivation, drive and energy were improved, and the Hamilton Depression Rating Scale had a better score. The patient was no longer sleepy and showed more activity. When the diagnosis of a colon carcinoma was made in the prevention examination, the patient showed a good compliance and performed all necessary therapies. During the therapies, the patient was active, and after a remission was diagnosed, the patient showed a satisfactory score in the Hamilton Depression Rating Scale. In this case report, major depression was aggravated by a stressful life event, the death of the patient's father. Bupropion ameliorated the depressant symptoms very much and improved the decreased positive effects so that the patient could get over another stressful life event, the anti-cancer therapy.

Conclusions

This case report shows the different therapeutic and adverse effects of three different antidepressant drugs. Besides, it emphasizes the clinical superiority of the novel selective dopamine and noradrenalin reuptake inhibitor bupropion, which showed better scores in the Hamilton Depression Rating Scale and improved drive, motivation and energy. In contrast to the selective serotonin reuptake inhibitor citalopram, the patient succeeded in recovering from another stressful life event, the anti-cancer therapy. After the anti-cancer therapy was finished and a remission was diagnosed, The depressant symptoms did not get worse. Bupropion, which ameliorated the decreased

positive effects, prevented an exacerbation of the disease when another stressful life event appeared [2,5]. The adverse effects of some days of insomnia could be managed by a slight hypnotic medication. The patient suffered from some adverse effects of citalopram, for example an increased intraocular pressure, constipation and E.C.G. changes. The possible adverse effects of bupropion, namely psychotic or maniac symptoms did not appear, hypertension was treated and controlled by an antihypertensive drug. Consequently, the patient had controlled adverse effects after taking bupropion and profitted from its therapeutic effect in coping with the anti-cancer therapy.

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