

The Update of Adverse Effects of Sertraline

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Sertraline is considered the first-line antidepressant to manage major depressive disorder by potentiating the function of serotonin. Besides antidepressive usage, sertraline was approved by the Food and Drug Administration (FDA) to treat post-traumatic stress disorder, obsessive-compulsive disorder, premenstrual dysphoric disorder as well as social anxiety disorder, and panic disorder [1]. Moreover, there are also many off-label and expanding spectrum usages for utilization of sertraline, such as generalized anxiety disorder, binge eating disorder and premature ejaculation [1]. Considering extensive usages in many diseases, the adverse effects of sertraline need to be concerned and clarified. This article outlines the current study of adverse effects of sertraline in preclinic and clinic.

The clinical case showed that the patient who administrated sertraline for a long-term had nose bleeds which indicates sertraline can cause defects of platelet function [2]. Hypersensitivity pneumonitis is an allergic reaction of distal bronchioles and alveoli, which is mostly caused by extrinsic allergens and drugs, such as avian dust and carbamazepine [3]. Although selective serotonin reuptake inhibitors seldom induce hypersensitivity pneumonitis, a rare clinical case showed that sertraline could cause hypersensitivity pneumonitis [3]. This reminds the clinicians and patients to be aware that sertraline can be a pathogenic factor for hypersensitivity pneumonitis.

Although it is uncommon, sertraline occasionally leads to rare neurological disorders. A clinical case showed a rare adverse complication that abrupt cessation of sertraline led to delirium in an old patient [4], which might be due to the abrupt reduction of serotonin availability by sudden discontinuation of sertraline [4]. Serotonin syndrome is a rare and possibly fatal side effect of drug. Although selective serotonin reuptake inhibitors can induce serotonin syndrome, it seldom occurs in SSRI monotherapy [5]. However, clinical case recently showed that sertraline monotherapy induced serotonin syndrome, which updates our knowledge of adverse effect of sertraline treatment and suggests keeping high clinical suspicion and paying close attention for serotonin syndrome during the therapy of sertraline [5].

According to studies, sertraline can impair reproduction and development function. Long term sertraline administration can diminish male fertility by reducing sperm count and serum testosterone levels, increasing spontaneous contractions of distal cauda and sperm transit time [6]. As sertraline is one of the most frequently used antidepressants for pregnant women, the developmental toxicities of sertraline are seriously concerned. The preclinical study revealed that sertraline has teratogenic toxicity as it is embryotoxic as well as fetotoxic [7]. Moreover, another study in drosophila demonstrated that sertraline caused oxidative DNA impairment, which may account for sertraline-induced developmental defects [8].

Following the increasing usage of sertraline, the adverse effects of sertraline will be revealed gradually. This will guide the clinicians to utilize sertraline appropriately.

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