

Self-limiting diarrhea in an infant exposed to sertraline in breast milk

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ABSTRACT

Sertraline is widely used to treat postpartum depression. Though studies found detectable levels of sertraline in infant blood, very few adverse effects are reported. Reporting hereby is a case of an infant who developed self-limiting diarrhea, probably due to exposure to sertraline in breast milk.

Keywords: Adverse drug reactions, diarrhea, sertraline

Introduction

Postpartum depression occurs in approximately 14.5% of women who give birth and is associated with substantial morbidity in mothers and their children.^[1] Selective serotonin reuptake inhibitors (SSRIs) including sertraline are widely used to treat this condition. Studies have found detectable levels of sertraline in infant blood when breastfed by mothers on sertraline.^[2,3] The Australian Adverse Drug Reaction Advisory Committee received two reports of side effects possibly related to sertraline exposure via breast milk; a 4-month-old infant experienced benign neonatal sleep myoclonus and a 5-month-old infant reportedly had agitation that spontaneously resolved.^[4] Reporting hereby is a case of an infant who developed self-limiting diarrhea while breastfeeding by mother who was on sertraline.

Case Report

A 35-year-old married female, who delivered her third child 3 months back, presented with low mood, reduced interest, somatic symptoms, death wishes, disturbed sleep, and decreased appetite of 1-month duration. On mental status

examination, depressed affect and depressive cognitions were elicited. A diagnosis of postpartum depression according to the International Classification of Diseases-10 criteria was made and she was prescribed antidepressant tablet sertraline 50 mg in the morning and olanzapine 1.25 mg in the night for disturbed sleep. The patient who came for the first follow-up after 2 weeks reported not much improvement. Hence, sertraline was hiked to 75 mg/day (25 mg in the morning and 50 mg in the night), and olanzapine was continued at the same dose.

Five days after hiking the dose, the patient informed over telephone that her breastfeeding infant was having diarrhea. The diarrhea was greenish and happened only in immediate postfed state (within 15 min after breastfeeding), and there were 4–5 stools in excess of normal stool frequency, without any constitutional features. She was breastfeeding the infant only 1–2 h after taking the medication. Two independent pediatricians were consulted, both after clinically ruling out the common causes of diarrhea, and they suggested the possibility of maternal drugs as the causative factor. The patient was advised over phone to stop medicines and report to hospital for changing the drugs. Contrary to medical advice, the patient continued the same medicine as she felt significant reduction in her symptoms. Three weeks later, during her next follow-up, she showed marked improvement in symptoms. The

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patient reported that the diarrhea in infant was treated by oral rehydration solution and resolved within 2 weeks.

Discussion

Serotonin is an important gastrointestinal (GI) signaling molecule involved in the regulation of gastric motility. It is a paracrine messenger utilized by enterochromaffin (EC) cells, which function as sensory transducers.^[5] Serotonin activates intrinsic and extrinsic primary afferent neurons to, respectively, initiate peristaltic and secretory reflexes and to transmit information to the central nervous system (CNS). The primary targets of the serotonin that is secreted by EC cells are the mucosal projections of primary afferent neurons. These include extrinsic nerves, which transmit sensations of nausea and discomfort to the CNS, and the mucosal projections of intrinsic primary afferent neurons (IPANs); submucosal IPANs initiate peristaltic and secretory reflexes, while myenteric IPANs initiate giant migrating contractions.^[5] Acute administration of SSRIs, such as sertraline, has shown to prolong the availability of physiologically released serotonin, thereby enhancing the effects of serotonin released from the GI tract and producing nausea and diarrhea in adults,^[5] which is often self-limiting.^[6]

Studies have confirmed that infants exposed to sertraline through breast milk can have detectable drug levels, ranging from 0.42% to 4.81%, of maternal drug dose in blood.^[2] In our case, the infant was having diarrhea immediately after breastfeeding, suggesting a hypermotility state of the gut. Moreover, the peak plasma concentration of sertraline was achieved 3–8 h after taking the drug, suggesting that the mother might be feeding the infant when plasma concentration was maximum and more drug might get transferred to the infant. The other drug, olanzapine, usually causes constipation due to its affinity for M1 receptor. Thus, considering the facts that sertraline can pass through breast milk and can cause transient diarrhea and bloating in children, according to Naranjo algorithm with a score of 5, the diarrhea occurring in our case was probably due to sertraline. We hypothesize that acute exposure of sertraline in the infant might have increased the serotonergic activity in the

gut, which exacerbated the peristalsis movements, resulting in self-remitting diarrhea. To our knowledge, there are no reports of sertraline-induced diarrhea in infants exposed through breast milk.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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