Case Report

# Urinary retention triggered by dimenhydrinate: A case report

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## Abstract

The antihistamine dimenhydrinate as the trigger of acute urinary retention has not been reported. A 35-year-old female with a long-term history of depression treated with sertraline (150 mg/d) since years developed acute urinary retention after having received 100 mg dimenhydrinate intravenously for excessive, postural vertigo. Urinary retention required placement of a disposable catheter, which halted 1.6 liter of urine. Since urinary retention persisted, she received a permanent catheter, which initially halted another 1.2 liter of urine. Urinary retention resolved spontaneously within 48 hours, and the patient was discharged with her previous medication. This case shows that intravenous dimenhydrinate can trigger the development of acute urinary retention in patients under long-term treatment with sertraline, which is why it should be given with caution in this group of patients.

**Keywords:** Adverse reaction, dimenhydrinate, hesitancy, sertraline, side effect, urinary retention

## Introduction

The antihistamine dimenhydrinate is usually given for vertigo.[1] Though generally well tolerated, it may occasionally exhibit side effects, such as drowsiness, hyperactivity, headache, dizziness, blurred vision, ear ringing, dry mouth, or coordination problems.[2] Dimenhydrinate as the trigger of acute urinary retention has not been reported. The following report is relevant for the primary care physician not only because dimenhydrinate is not only frequently applied, but it is also frequently the primary care physician who is confronted with side effects of this compound.

## Case Report

The patient is a 35-year-old non-smoking, HIV-negative female—height 174 cm, weight 80 kg—with a long-term history of depression since age of 18 years, being treated with the selective serotonin reuptake inhibitor (SSRI) sertraline (150 mg/d) since years, which was well tolerated. In addition to sertraline, she was regularly taking only a contraceptive. The patient presented to the emergency ward with severe postural vertigo. Clinical neurologic exam was normal. Blood tests showed mild hyperlipidemia, hypoprolactinemia, and hypoparathyroidism. Liver and renal function parameters were normal. On admission, the patient received an infusion with dimenhydrinate (50 mg). As this infusion was ineffective and vertigo persisted, she received a second infusion with dimenhydrinate (50 mg) four hours later. One hour after the second infusion, the patient developed acute urinary retention requiring placement of a disposable catheter for voiding 1.6 liter of urine. Since urinary retention persisted, a permanent catheter was placed which emptied another 1.2 liter of urine six hours after the first retention. A second clinical neurologic exam revealed sore neck muscles but was otherwise normal. MRI of the brain was non-informative. Urinary retention resolved spontaneously within 48 hours. She was discharged with her previous medication she was taking prior to hospitalization.

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## Discussion

The described patient under long-term treatment with sertraline is of interest for acute urinary retention triggered by 100 mg of dimenhydrinate. Such a side effect has not been previously reported and is therefore a novel observation. Whether dimenhydrinate alone or the combination of dimenhydrinate with sertraline caused urinary retention remains speculative. Sertraline has previously been reported to cause urinary retention or hesitancy.[3] Urinary retention has also been reported for the serotonin–noradrenalin reuptake inhibitor (SNRI) milnacipran.[4] Urinary retention has also been reported in a patient taking sertraline, haloperidol, and clonazepam.[5] Urinary retention has been also reported in an elderly men with prostate hyperplasia taking the SSRI escitalopram.[6] There is also a report of two cases who developed urinary hesitancy after taking the SNRI L-milnacipran.[7] Urinary hesitancy could be resolved by discontinuing L-milnacipran.[7] If reducing the dosage or stopping the drug is ineffective, alpha-1A antagonists, such as tamsulosin, should be administered.[7] It is therefore conceivable that sertraline played a contributory role in the index patient's acute urinary retention. However, the fact that the index patient has been taking high-dose sertraline for years speaks against a causal role for sertraline in the urinary problem. A further argument is that there was no intoxication, over-dosage, or disturbed metabolization and excretion of sertraline. Thus, more plausible is that either dimenhydrinate alone or the combination of dimenhydrinate plus sertraline was responsible for urinary hesitancy. An argument in favor of dimenhydrinate having played a causative role is that urinary retention or hesitancy did not recur after discontinuation of dimenhydrinate, and that she had never developed urinary hesitancy during the years before when she was regularly taking sertraline. The report of the index patient is relevant to the primary care physician not only because dimenhydrinate is commonly used by primary care physicians, but also because the primary care physician is often confronted with side effects of this compound.

## Conclusion

This case demonstrates that intravenous dimenhydrinate can induce the development of acute urinary retention in patients on long-term treatment with sertraline. For this reason, dimenhydrinate should be administered with caution in patients regularly taking sertraline, but it cannot be ruled out dimenhydrinate alone may cause urinary hesitancy in isolated cases.

### 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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Nil.

### Conflicts of interest

There are no conflicts of interest.

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