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CASE REPORT

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A community pharmacist's intervention in antipsychotic drug-induced sexual dysfunction in a patient with schizophrenia

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Abstract

The community pharmacist interviewed a patient with sexual dysfunction (SD) and suggested a change in prescription. Early intervention by the community pharmacist ameliorated antipsychotic drug-induced SD timeously.

KEYWORDS

antipsychotic drugs, community pharmacy, sexual dysfunction

1 | INTRODUCTION

Sexual dysfunction (SD) is known to be a side effect of antipsychotic drugs, and the prevalence of SD has been reported to be 30%-80% in women and 45%-80% in men.[1] There are several types of symptoms of SD, including problems with sexual arousal, penile erection, orgasms, and ejaculation.[2] SD has also been reported to be one of the risk factors for decreased medication compliance[2]; in fact, 41% of men receiving antipsychotics stopped taking their medications due to SD.[3] Furthermore, SD is also related to poor relationships with partners as well as negative effects on social and personal life.[2] Therefore, improvement in sexual behavior of patients may lead to a restored sense of well-being, confidence, and dignity.

However, patients with SD tend to avoid discussions regarding sensitive problems, such as sexual function, owing to a weak relationship between patients and physicians. For example, 61.1% of patients with SD do not report their symptoms owing to the following reason: "the physician does not listen to my complaints."[4] Moreover, because of its personal nature, this side effect is difficult to share. In Japan, the community pharmacist's important role in checking and reporting side effects and recommending alternative treatment is well-known.[5] Therefore, early intervention by pharmacists may play an important role in the detection and treatment of SD induced by antipsychotic drugs. Here, we report the case of a 60-year-old man with schizophrenia whose SD was ameliorated after intervention by a pharmacist in our community pharmacy.

2 | DETAILS OF THE CASE

In our community pharmacy, a 60-year-old Japanese man with schizophrenia was first prescribed haloperidol by a psychiatrist in a psychiatric hospital, 11 years previously, and received the combination therapy of risperidone and haloperidol 5 years previously. Finally, his symptoms were stabilized with risperidone (4.5 mg/day) and haloperidol (3 mg/day). In another community pharmacy, he received antidiabetic drugs, including metformin (750 mg/day), gliclazide (20 mg/day), and alogliptin (25 mg/day), which were prescribed by the general practitioner in another hospital. The pharmacists in our pharmacy always asked him about his side effects. One day, he complained to the community pharmacist about his SD, including problems with erections, orgasm, and satisfying orgasms. He was already taking sildenafil, a drug to treat erectile dysfunction, but it had no effect on his SD. Thus, the pharmacist interviewed his symptoms of SD. He had the following problems: erection with difficulty, never reached an orgasm, or any satisfying orgasms. Therefore, the pharmacist immediately reported these symptoms to his prescribing psychiatrist and recommended a reduction in the

doses of risperidone and/or haloperidol because these drugs may be responsible for the induction of SD. Additionally, the pharmacist suggested switching from these drugs to aripiprazole which, among antipsychotic drugs, may have fewer SD-related side effects.

Following the pharmacist's suggestion, the doctor started prescribing 24 mg/day aripiprazole (day 0) (Figure 1), while the doses of risperidone and haloperidol did not change. As expected, his SD symptoms did not improve 14 days after the administration of aripiprazole. The dose of risperidone was then reduced from 4.5 to 3 mg/day (day 14). Three weeks after a reduction in the dose of risperidone, his SD symptoms still did not improve. Thus, the dose of haloperidol was reduced from 3 to 1.5 mg/day (day 35). Three days after the reduction in the dose of haloperidol, he engaged in sexual activity and acknowledged an improved erection, orgasm, and satisfying orgasm with somewhat difficulty (day 38). Furthermore, 22 days after the reduction of the haloperidol dose, his SD symptoms had alleviated more in terms of erection, and in reaching orgasm, and a satisfying orgasm, and he did not feel any problems with these symptoms (day 57). However, he complained to the community pharmacist about new symptoms such as ejaculatory dysfunction. Thus, the pharmacist suggested to the doctor to further reduce the doses of risperidone and/or haloperidol. The doctor decided to entirely stop the use of haloperidol (day 63), but his symptoms of ejaculatory dysfunction did not improve 28 days after stopping the administration of haloperidol (day 91). Alternately, the dose of risperidone was tapered and eventually withdrawn (day 147). Approximately 3 weeks after the withdrawal of risperidone, his ejaculatory disorder substantially improved (day 168). Before and after the complete withdrawal of haloperidol and risperidone, there were no new psychotic symptoms because there was no change in his prescription. With respect to the diabetes that was being treated at another hospital, no complications and similar levels of HbA1c before (6.7%) and after (6.5%) were observed.

3 | DISCUSSION

Previous studies have reported that a patient's SD is associated not only with side effects from the medication but also from several types of diseases, such as psychiatric disease, diabetes, and cardiovascular disease.[6] Since the patient in the present case suffered from both schizophrenia and diabetes, it is possible that these diseases would have contributed in part to the induction of SD. However, the patient's SD improved upon switching from haloperidol and risperidone to aripiprazole without any exacerbation of schizophrenia or diabetes, indicating that his SD was caused mainly by haloperidol and/or risperidone.

The mechanism of SD induced by antipsychotic drugs remains unclear, but it is generally accepted that the blockade of monoaminergic receptors such as dopamine may induce SD.[7] For instance, dopamine receptor blockade leads to decreased libido, erection, and ejaculation, due to a dysfunctional reward and motivation system. In addition, hyperprolactinemia due to dopamine receptor antagonism has also been associated with the induction of sexual dysfunction.[7,8] In fact, both haloperidol and risperidone, which induce hyperprolactinemia, have been shown to increase the risk of SD as compared with other antipsychotic drugs.[9] In particular, 71.1% of patients receiving haloperidol over 12 months had SD.[10] Furthermore, 67.8% of patients taking risperidone for over 1 year also complained of symptoms of SD, such as reduced libido, erection dysfunctions, and amenorrhea.[10] On the other hand, aripiprazole, which is classified as a prolactin-sparing drug, has been reported to impart a lower risk of SD than other prolactin-sparing antipsychotic drugs.[9] The British Association for Psychopharmacology guidelines state that switching to a prolactin-sparing drug is a prudent strategy to manage plasma prolactin elevation associated with SD.[11] As in the present report, a previous study showed that switching from other antipsychotic drugs to aripiprazole resulted in improved levels of prolactin and the amelioration of SD without affecting efficacy.[12] These results suggest that prolactin levels are closely correlated with the induction of SD.

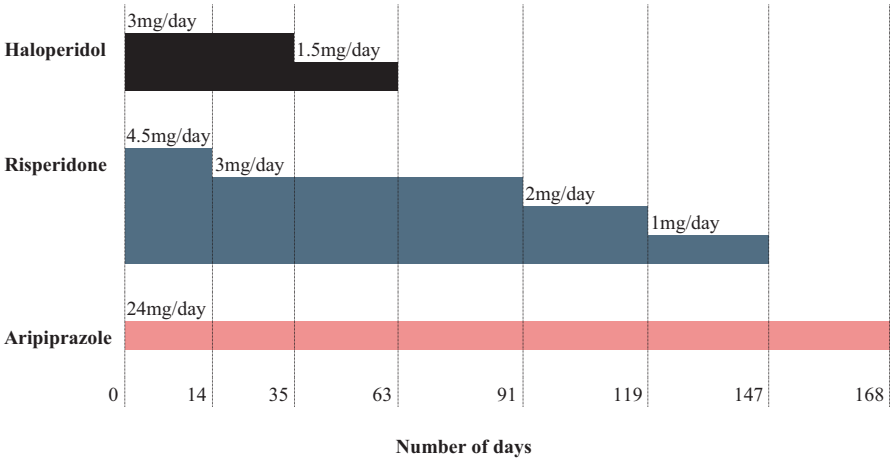

FIGURE 1 Medication schedule in this case report. Patient was started on aripiprazole on day 0. The dose of risperidone was reduced from 4.5 to 3 mg/day on day 14. The dose of haloperidol was reduced from 3 to 1.5 mg on day 35. The dose of haloperidol and risperidone was withdrawn on day 63 and day 147, respectively

The present report also showed that the ejaculatory dysfunction of patients dramatically reduced after the withdrawal of risperidone. Previous case reports have indicated that risperidone causes ejaculatory disorder, possibly through its adrenaline receptor antagonism.[13-15] Blockage of the adrenaline receptor by antipsychotic drugs may be partially responsible for the induction of the ejaculatory disorder.

There is no previous report showing a community pharmacist's intervention in antipsychotic drug-induced SD in a patient with schizophrenia. It is difficult for clinicians to assess all symptoms of the patient's SD during a medical examination for several reasons, such as the short visit duration. Therefore, clinical pharmacy services in community pharmacies could provide patients with more opportunities to report their symptoms, even SD. The present report showed that the patient taking antipsychotic drugs complained of SD only to the community pharmacist who interviewed the patient's symptoms of SD in detail, reported them to the patient's prescribing doctor, and recommended a change in prescription, resulting in dramatically alleviated symptoms of SD. These results demonstrate the importance of the community pharmacist's intercedence between the clinician and patient in maintaining the appropriate medication and drug compliance in patients receiving antipsychotic drugs. The results also suggested the important role of pharmacists in changing prescriptions in everyday practice.

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CONFLICT OF INTEREST

We have no conflict of interests.

AUTHOR CONTRIBUTIONS

MM and SM: contributed equally to the work.

ETHICAL APPROVAL

None.

PATIENT CONSENT STATEMENT

We obtained written informed consent from the patient for publication of this case report.

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