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Risperidone induced Amenorrhea; A case report

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Abstract

Background: Menstrual abnormalities associated with Risperidone is more prevalent nowadays. But they are often underestimated. This reproductive side effects contributes to the majority of medication non adherences among the treatment population. **Case presentation:**A 38 year old female patient with known psychiatric history was presented to the hospital with complaints of auditory hallucinations and delusion of persecution along with over talkativeness ,irritability, decreased need for sleep ,hyperactivity. She was diagnosed with schizoaffective disorder and was prescribed with oral Risperidone 1 mg once daily along with other drugs. She showed considerable improvements and was discharged after the therapy .After two months she was admitted again with the complaints of sleep disturbances , staring looks, mutism and was managed with oral Risperidone 3 mg once daily . After continuing the medications for a period of three months, she reported with not having periods (amenorrhea) .Her prolactin levels were checked and was found that she was experiencing with hyperprolactinemia possibly due to continuous administration of Risperidone. Risperidone got discontinued and replaced with oral olanzapine 10 mg once daily. Amenorrhea was resolved and the patient was stable on discharge. **Conclusions:** This case highlights the consequence of hyperprolactinemia induced by the Risperidone and also the importance of evaluating the prolactin levels while taking this medication. Even though it is very difficult to figure out these consequences in a population undergoing psychiatric therapy, managing these abnormalities may increase the medication adherence in patients.

Background

Sexual dysfunction associated with atypical antipsychotics are frequent ,but often neglected in clinical practice. High prevalence of these reproductive side effects contributes to a lionshare of non compliance reported regarding the treatment with antipsychotics. Among the atypical antipsychotics, Risperidone is having a high probability to develop these side effects. Prolactin is secreted by the lactotroph cells in the anterior pituitary .The binding of Dopamine to these cells inhibits the Prolactin secretion.Antipsychotics blocks Dopamine (D2) receptors which induce hyperprolactinemia. Even though atypical antipsychotics are serotonin-dopamine antagonists, Risperidone is described with higher affinity for D2 receptors and hence causes hyperprolactinemia which leads to menstrual abnormalities .The prevalence of Risperidone induced amenorrhea is less than 10% [1] and is very difficult to evaluate in psychotic patients. GnRH (Gonadotropin Releasing Hormone) released by the hypothalamus results in the secretion of LH(Luteinizing Hormone)as well as FSH(Follicle-Stimulating Hormone) from pituitary gland. The hypogonadism caused by the prolactin disrupts the hypothalamic –pituitary axis .The lack of GnRH progressively leads to an impaired LH and FSH secretion which prevents the normal ovarian response eventually leads to hypoestrogenic amenorrheic state [2-4].

Case presentation

The patient was a 38 year old female patient with a known psychiatric history of schizoaffective disorder. Initially she was presented to the hospital with psychotic symptoms such as auditory hallucinations and delusion of persecution along with over talkativeness ,irritability, decreased need for sleep ,hyperactivity . On detailed evaluation it was revealed that she had continuous illness for the past 10 years and also understood that she hadn't taken any medications in the last six months. On admission she was diagnosed with schizoaffective disorder and treated initially with oral lorazepam 2 mg and oral Risperidone 1 mg once daily. After two months she was again admitted to the hospital with the complaints of sleep disturbances for 3-4 days, staring looks and mutism. Then she was managed with Injection Haloperidol stat, injection promethazine stat, oral Risperidone 3 mg once daily ,oral Trihexyphenidyl 2 mg once daily ,oral Lorazepam 2 mg once daily, oral Sodium valproate

500 mg twice daily and got discharged on improvement of her condition.Although Risperidone worked well for her, after 3 months she was reported having no periods for four months due to hyperprolactinemia.As a result, Doctor decided to discontinue Risperidone and the patient was started on oral olanzepine 10 mg once daily. Her amenorrhea resolved and she got hemodynamically stable.

Conclusion

Secondary amenorrhea in pre-menopausal women due to hyperprolactinemia induced by Risperidone is relatively common. But it is very difficult to evaluate this in a population having psychiatric illness.This case point outs the consequence of hyperprolactinemia and also the necessity of evaluating the prolactin levels while taking Risperidone.Using Naranjo scale ,this case of Risperidone induced amenorrhea was rated as probable (score=6).Since amenorrhea in premenopausal women can mislead the patient that she had menopause ,may end up in unintended pregnancy and other complications.Although in clinical practice reproductive dysfunction caused by the antipsychotics are one of the major reasons for the non adherence to these medications,they often remain under recorded.

References

1. Hyperprolactinemia associated with psychotropics-a review. Madhusoodanan S,Parida S,Jimenez C.Hum Psychopharmacol.2010;25:281-297.
2. Atypical antipsychotics and sexual dysfunction:five case –reports associated with risperidone.Haefliger T,Bonsack C.Encephale.2006;32:97-105.
3. The relationship between prolactin response and clinical efficacy of risperidone in acute psychotic inpatients.Lee BH,Kim YK.Prog Neuropsychopharmacol Biol Psychiatry.2006;30:658-662.
4. Prolactin and Schizophrenia:clinical consequences of hyperprolactinaemia.Meaney AM,O'Keane V.Life Sci.2002;71:979-992.