Psychotropic-induced Galactorrhea

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Psychiatric disorders are one of the most common health problems among different communities including Iran. According to the latest national-width survey, the prevalence of psychiatric disorders among Iranian general population is 23.44% by (1). Therefore, psychotropics, which are prescribed by psychiatrists, other specialists, and general practitioners, are among the most popular and best-selling medications.

Galactorrhea is one of the noticeable side effects of some psychotropics, which can be annoying, especially, for young women. Galactorrhea is defined as the secretion of breast milk without being pregnant or breast feeding. It is a common manifestation of hormonal dysregulation which can be induced by medications or pituitary adenomas. Other causes such as hypothyroidism, pregnancy and renal failure should also be considered. Several symptoms like amenorrhea, decrease in sexual desire and infertility may be present in patients with galactorrhea. This complication may be diagnosed by surgeons, internists or gynecologists (2).

As rates of prescription of medications which can cause galactorrhea continue to increase, it is important for specialists to have knowledge about this side effects.

Antipsychotics, used in a broad range of disorders such as schizophrenia, bipolar disorders and depression, are a common cause of prolactin increase and galactorrhea. They decrease dopamine which inhibits prolactin through tuberoinfundibular pathway. This agents are divided into two main groups: First Generation Antipsychotics (FGAs) and Second Generation Antipsychotics (SGAs). The main effect of FGAs like haloperidol, chlorpromazine, trifluoperazine, perphenazine, thiothixene, thioridazine and fluphenazine includes the reduction of D2 level, a subtype of dopamine, and therefore it causes increasing of Prolactin which may cause decreased sexual desire, amenorrhea and infertility. It is important for physicians to take the drug history because some of these medications have long-acting injectable forms which are injected every 2-4 weeks. (3)

SGAs such as risperidone, clozapine, olanzapine, quetiapine, aripiprazole act in a different way on neurotransmitters. Risperidone inhibits both D2 and 5-hydroxy-tryptamine 2A (5HT2A) receptors and is mostly likely to cause sexual side effects as well as galactorrhea among antipsychotics (3, 4). Other SGAs have lower risk of this adverse effect due to less affinity to dopamine. Interestingly aripiprazole, which is a dopamine partial agonist, can reduce prolactin and, subsequently, cause relative improvement of galactorrhea (5).

Antidepressants, which are one the most popular psychiatric medications, do not have significant effects on dopamine receptors, so, they don’t cause, usually, dysregulation of prolactin or galactorrhea (6). Nevertheless, there are several case reports of galactorrhea induced by some antidepressants such as paroxetine, citalopram, venlafaxine and duloxetine.

Other psychotropics like lithium, sodium valproate, carbamazepine, buspirone and sedative agents such as benzodiazepines rarely show galactorrhea as an adverse effect, therefore consideration of other causes is a plausible approach to galactorrhea and use of these medications concurrently. (6)

Finally, evaluation of serum prolactin level as well as thyroid hormones, renal function and possibility of pregnancy should be considered as cause of galactorrhea among psychiatric patients. Subsequently, if results of laboratory test show abnormal findings, referring to endocrinologist for further investigations and treatments as well as neurosurgeon to more assessment and perform Magnetic Resonance Imaging (MRI), more specifically, in probable pituitary adenomas cases should be considered (2). Whereas, there is an absolute suggestion that reduction or replacement of causative agents should be performed by psychiatrist, more specifically, about patients who suffer from major psychiatric disorders such as schizophrenia, bipolar disorder and depression.

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