

ASSOCIATION OF PSYCHIATRIC MEDICATIONS WITH INFERTILITY AND SPERMATOXICITY

Avoiding Toxins Including Spermatotoxic Medications

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Semin Reprod Med. 2013;31(4):286-292.

http://www.medscape.com/viewarticle/807177_12

Tricyclic Antidepressants

Studies examining the link between sexual dysfunction and tricyclic antidepressants have noted an overall rate in sexual dysfunction was approximately 30% of men on these medications.¹ He noted that the overall rate in sexual dysfunction was approximately 30% for men taking imipramine. A more recent study estimated the overall rate of sexual dysfunction from tricyclic antidepressants at 60%. One exception to the effects characteristic of this class of medications is trazodone, which may actually improve libido in both men and women, without other mood effects. The mechanism for the effect of these medications on male sexual function is unknown, but may be related to increased sympathetic tone.

Selective Serotonin Uptake Inhibitor

Selective serotonin uptake inhibitors (SSRIs) are well-studied medications with respect to sexual dysfunction and infertility. A recent study observed worsening erectile function in 35% of patients taking these medications. Paroxetine and sertraline are most commonly associated with sexual dysfunction, decreased libido, and delayed or absent ejaculation. Indeed, at lower doses than that used to treat clinical depression, these medications are used to treat premature ejaculation.

There is more recent evidence of an effect of SSRI on semen quality. In a study of men who discontinued SSRI use, sperm counts

improved within several weeks, suggesting a target of sperm transport, and not necessarily sperm production. This has been supported by animal studies in which epididymal segments exposed to fluoxetine and venlafaxine showed decreased contractility compared with controls. More recently, changes in sperm DNA fragmentation have been seen with continued ingestion of SSRIs, which may influence natural fertility and fertility with assisted reproduction.

Lithium

Lithium has been associated with erectile dysfunction. This dysfunction resolved with discontinuation of the medication or placebo substitution. In small studies, decreased libido has also been reported, possibly due to decrease in serum testosterone or decreased dopamine within the central nervous system.

Antipsychotics

Psychotropic medications are thought to influence male fertility by impairing ejaculation. A direct effect of these medications on spermatogenesis has not been reported. When mild, these effects may mimic partial ejaculatory duct obstruction and cause low-normal ejaculate volumes with normal sperm concentrations with low sperm motility. The effects should be reversible if the medications are discontinued. A recent meta-analysis also examined the rates of sexual dysfunction, specifically libido, among men taking antipsychotics and showed divergent results. Quetiapine, ziprasidone, perphenazine, aripiprazole, olanzapine, risperidone, haloperidol, clozapine, and thioridazine were noted to have a negative effect on libido. However, this was not consistently observed with clozapine, perphenazine, aripiprazole, and thioridazine. Rates of sexual dysfunction were much lower for olanzapine, quetiapine, and risperidone. These differences in effects are consistent with the fact that some agents are prolactin raising and affect libido, while others are prolactin-sparing antipsychotics and may not affect libido.