Letter to the editor

Jose Valdes, Pharm.D.¹ Jose A. Rey, Pharm.D., BCPP²

¹PGY-2 Psychiatric Pharmacy Practice Resident Nova Southeastern University College of Pharmacy ²Associate Professor Nova Southeastern University College of Pharmacy

In reading a recent article titled, "<u>Use of Antidepressants</u> <u>during Pregnancy and Lactation</u>" we enjoyed the summary that Dr. Norris has written and published; however, upon reading we recalled a particular antidepressant missing from the review.

Approved December 1st, 1980, maprotiline (Ludiomil), which is currently only available by Mylan Pharmaceuticals, is classified as a tricyclic antidepressant, though technically a tetracyclic in structure. The FDA has given maprotiline a pregnancy risk category rating of "B", the only one in the class of antidepressants with this distinction. Adverse teratogenic effects were not seen in animal reproduction studies performed in female rabbits, mice, and rats at doses up to 9 times the maximum daily human dose. There was no evidence of harm to the fetus, or impaired fertility; however, there are no well controlled studies in pregnant women, leaving one to only use maprotiline in pregnancy if the benefits to the mother outweigh the possible risks to the fetus.

According to the manufacturer, maprotiline is excreted into breast milk and caution is recommended when administering the drug during breast-feeding. At steady state, the concentration in milk is similar to that in serum. Adverse effects in nursing infants are currently unknown; however, administering structurally similar compounds like doxepin have led to reports of difficulty in sucking and swallowing, as well as muscle hypotonia, apnea, weight loss, drowsiness, and vomiting. Some SSRI's (e.g., fluvoxamine, paroxetine, sertraline) as well as bupropion and duloxetine are known to have undetectable plasma concentrations in infants which leads one to believe the benefits of continuing breastfeeding while taking an antidepressant previously mentioned may outweigh the risk. Stopping the medication is not advisable as the risk of relapse is a serious concern.

While the data behind the utilization of antidepressants during pregnancy are inconsistent, few are generally

considered safe in pregnancy and lactation. Psychotherapy is recommended by the American Psychiatric Association (APA) and the American College of Obstetricians and Gynecologists (ACOG) as the first line treatment option for mild to moderate depression in patients not on an antidepressant. Electroconvulsive therapy (ECT) is also relatively safe and effective for patients with severe depression. For those requiring pharmacologic treatment, sertraline has evidence supporting its use in pregnancy and lactation as well as others, though even sertraline may eventually prove problematic given the increase in legal advertisements specific to it. We would suggest, based on previous data and the current FDA pregnancy category of "B", that consideration be given to maprotiline as well for the treatment of depression in pregnancy as a rarely recognized, or remembered, treatment alternative.

REFERENCES

- 1. Norris MM. Use of Antidepressants during Pregnancy and Lactation. Ment Health Clin. 2013;3:65
- 2. Ludiomil (maprotiline hydrochloride) package insert. Summit, NJ: Ciba-Geigy Corporation; 1996 Nov.
- Frey OR, Scheidt P, von Brenndorff AI. Adverse effects in a newborn infant breast-fed by a mother treated with doxepin. Ann Pharmacother. 1999;33(6):690-3. PubMed PMID: 10410181.
- Reiss W. The relevance of blood level determinations during the evaluation of maprotiline in man. In Murphy JE, ed. *Research and Clinical Investigation in Depression*. Northampton, England: Cambridge Medical Publications, 1980;19–38.
- Esaki K, Tanioka Y, Tsukada M, Izumiyama K. Teratogenicity of maprotiline tested by oral administration to mice and rats. (Japanese) CIEA Preclinical Report 1976;2:69–77. As cited in Shepard TH. *Catalog of Teratogenic Agents*. 6th ed. Baltimore, MD: Johns Hopkins University Press, 1989:384.

How to cite this editor-reviewed article

Valdes J, Rey JA. Letter to the editor. Ment Health Clin [Internet]. 2013;3(5):271. Available from: http://dx.doi.org/10.9740/mhc.n178409