EMORY UNIVERSITY SCHOOL OF MEDICINE

Women's Mental Health Program

Department of Psychiatry and Behavioral Sciences

EMORY WMHP BLOG

Hale's Breastfeeding Safety Ratings: Part 3 – Mood Stabilizers & AEDs

Thomas Hale's *Medications and Mothers' Milk*, now in its 14th edition, has become the standard reference for the breastfeeding safety of medications. In this series, we provide a summary of Dr. Hale's ratings and recommendations for the major classes of psychiatric medications. In this entry in the series, we summarize Dr. Hale's findings regarding the safety of ***Mood Stabilizers & Antiepileptic Drugs (AEDs)*** during breastfeeding.

Lactation Category	Generic Name	Brand Name(s)	Medication Class	Relative Infant Dose
L2 - SAFER				
L2	Acetazolamide	Diamox, Dazamide	AED	2.2%
L2	Carbamazepine	Tegretol, Carbatrol	AED	3.8% - 5.9%
L2	Fosphenytoin	Cerebyx	AED	Not reported
L2	Gabapentin	Neurontin	AED	6.6%
L2	Olanzapine	Zyprexa, Symbyax	Atypical Antipsychotic	1.2%
L2	Phenytoin	Dilantin	AED	0.6% - 7.7%
L2	Quetiapine	Seroquel	Atypical Antipsychotic	0.07% – 0.1%
L2	Valproate	Depakene, Depakote	AED	1.4% - 1.7%
L2	Ziprasidone	Geodon	Atypical Antipsychotic	0.1% - 1.2%
L3 – Moderately Safe				
L3	Aripiprazole	Abilify	Atypical Antipsychotic	0.9%
L3	Clozapine	Clozaril	Atypical Antipsychotic	1.4%
L3	Ethotoin	Peganone	AED	Not reported
L3	Lamotrigine*	Lamictal	AED	9.2% - 22.8%
L3	Levetiracetam	Keppra	AED	3.4% - 7.8%
L3	Lithium*	Eskalith, Lithobid	Lithium	12% - 30.1%
L3	Oxcarbazepine	Trileptal	AED	Not reported
L3	Phenobarbital*	Luminal	AED	23.97%
L3	Pregabalin	Lyrica	AED	Not reported
L3	Primidone	Mysoline	AED	8.4% - 8.6%
L3	Tiagabine	Gabitril	AED	Not reported
L3	Topiramate	Topamax	AED	24.5%
L3	Vigabatrin	Sabril	AED	Not reported
L4 – Possibly Hazardous				
L4	Ethosuximide*	Zarontin	AED	31.5%
L4	Felbamate*	Felbatol	AED	Not reported
L5 - Contraindicated				
L5	Zonisamide*	Zonegran	AED	33.2%
Unrated				
Unrated	Asenapine	Saphris	Atypical Antipsychotic	
Unrated	Ezogabine	Potiga	Atypical Antipsychotic	
Unrated	Iloperidone	Fanapt	Atypical Antipsychotic	
Unrated	Lurasidone	Latuda	Atypical Antipsychotic	
Unrated	Paliperidone	Invega	Atypical Antipsychotic	

**Complications Reported: Ethosuximide – poor feeding, sedation, "hyperexcitability"; Felbamate – none reported but caution urged due to risk of aplastic anemia; Lamotrigine – one case of apnea; Lithium – abnormal EKG, respiratory difficulty (cyanosis), hypothyroidism, poor muscle tone; Phenobarbital – sedation, withdrawal symptoms; Zonisamide – extremely high levels.*

Additional Thoughts from the Emory WMHP

- **Carbamazepine Safety & Laboratory Monitoring** – Despite Hale's favorable L2 rating, it should be remembered that carbamazepine can impair liver function and suppress bone marrow function. Therefore, we recommend that laboratory testing (blood counts, liver function tests) should be routinely performed for nursing infants whose mothers are taking carbamazepine. If an nursing infant exposed to carbamazepine develops a fever, (s)he should be taken immediately to an ER to rule out agranulocytosis.
- **Clozapine Safety Rating** – Given the significant potential for clozapine to suppress bone marrow function and cause aplastic anemia, we disagree with Hale's L3 rating and believe that it should be rated L4 at best. Clozapine should be avoided during breastfeeding in our opinion. For nursing infants exposed to clozapine, regular laboratory monitoring of blood counts is required. If an nursing infant exposed to clozapine develops a fever, (s)he should be taken immediately to an ER to rule out agranulocytosis.
- **Lithium Safety & Laboratory Monitoring** – Due to the significant dangers posed by lithium toxicity, we disagree with Hale's L3 rating and believe that it should be rated L4 at best. We recommend avoiding lithium during breastfeeding. For nursing infants exposed to lithium, regular laboratory monitoring (lithium level, thyroid function tests, kidney function tests) should be performed. In addition, it must be repeatedly stressed that nursing infants exposed to lithium should never be treated with ibuprofen (Children's Motrin) or other NSAIDs.
- **Valproate Safety & Laboratory Monitoring** – Despite Hale's favorable L2 rating, it should be remembered that valproate can impair liver function and lower platelet levels. Therefore, we recommend that laboratory testing (blood counts, liver function tests) should be routinely performed for nursing infants whose mothers are taking carbamazepine.
- **Valproate & Child Development** – It has been a consistent research finding that children who were exposed to valproate during pregnancy have higher rates of cognitive impairment. Possible cognitive effects of valproate exposure during breastfeeding have not been studied. Although the level of valproate exposure is markedly lower via nursing than during pregnancy, potential developmental consequences of nursing exposure warrant concern.

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