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Reglan for breast milk augmentation

Metoclopramide stimulates the motility of the upper gastrointestinal tract without stimulating gastric, pancreatic or biliary secretions. It increases the tone and amplitude of gastric contractions, relaxes the pyloric sphincter and the duodenal bulb, and increases peristalsis of the duodenum and jejunum, resulting in accelerated gastric emptying and intestinal transit. It has little, if any, effect on the motility of the colon or gallbladder. It also increases the resting tone of the lower esophageal sphincter.

It's mode of action is not clear. Metoclopramide appears to sensitize tissues to the action of acetylcholine. It's antiemetic properties are the result of antagonism of central and peripheral dopamine receptors. Onset of action after an oral dose is 30-60 minutes, with 85 % being excreted in the urine. It is 30 % protein bound with a high volume of distribution, indicating good tissue penetration.

Metoclopramide induces the release of prolactin from the anterior pituitary by blocking dopamine's action as an inhibitor of prolactin secretion, and causes a transient increase in circulating aldosterone levels. Prolactin levels have been measured at 3-8 times normal within 1 hour of an orla dose and can remain elevated for up to 8 hours.

Metoclopramide, sulpiride, chlorpromazine, and thyrotropin-releasing hormone, have been shown to successfully induce lactation. Metoclopramide has been used preferentially due to its safety and relative lack of side effects when compared to the other known galactogogues.

About 10 % of all patients treated with metoclopramide report nervousness, somnolence, fatigue, and lassitude. Less than 1 % report insomnia, headache, bowel disturbances, and less than 0.2% report an acute dystonic reaction. In studies where metoclopramide is used as a galactogogue, side effects are extremely rare. Kauppila reported occasional tiredness, headache and nausea in the treatment group, and tiredness, dizziness and sweating in his placebo control group. No side effects were noted by Gupta or Kauppila . Ehrenkranz reported no side effects in 21 of 23 treated women, with one woman reporting diarrhea and nervousness, and another increased tiredness. Kaupplila showed no change in maternal TSH, T3 or T4.

Metoclopramide is transferred into breastmilk. Kauppila et al reported it's concentration was generally higher in breastmilk than in maternal plasma. Although the estimated intake of metoclopramide was calculated at 1-5% of the recommended therapeutic dose for children (0.5 mg/kg/d), it was detected in the plasma of only one of the 5 neonates studied. No side effects were noted, and plasma thyrotropin remained within the normal range. Metoclopramide has been given directly to preterm infants to improve gastrointestinal function and is commonly used in NICU's to treat gastroesophageal reflux .

Ertl demonstrated that metoclopramide augmented milk production without having any effect on the prolactin and sodium concentration of human "mature" milk. The plasma prolactin of newborns of mothers treated with metoclopramide did not differ from the values of the control babies. deGezelle noted a shift in amino acid composition occuring earlier in the treatment group suggesting that metoclopramide enhances the rate of transition from colostrum to mature milk. The effect of metoclopramide therapy on the composition of preterm human milk is not known.

Reglan®(Metoclopramide) is usually taken as a 10 mg tablet orally, three or four times a day for a week, then tapered off over the next week. Cost for 30 tablets is approximately $33 for the brand name Reglan® and $12-15 for the generic brand which is just as effective. Milk supply usually increases within 2-4 days of starting the medication and pumping 6-8 times per 24 hours.

It is essential the breasts be emptied, with a breastpump or by the infant, frequently and regularly, even at night.