

DRUG INFORMATION

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SAFETY OF RECTAL GLYCERYL TRINITRATE (GTN) IN PREGNANCY

Question:

What is the safety of using rectal GTN (Rectogesic®) in a woman who is 20-22 weeks pregnant?

Answer:

We are not aware of any information describing the use of topical GTN to treat anal fissures in the latter stages of pregnancy^[1-4]. However, there is some data on systemic administration of GTN for treatment of gestational hypertension, myocardial infarction and premature labour^[1].

Information from a limited number of women suggests that the use of GTN to lower blood pressure may cause vasodilation in the umbilical circulation without significantly compromising of foetoplacental perfusion^[1]. However, the use of intravenous GTN infusions has been associated with changes in foetal heart rate (deceleration, bradycardia) secondary to decreased maternal blood pressure^[1].

GTN has been administered intravenously (50-1000mcg bolus) and transdermally (10-20mg every 24 hours) as a short-acting tocolytic agent. Changes in maternal blood pressure has been observed but no significant effects were observed in the newborns^[1].

Rectogesic® contains glyceryl trinitrate (GTN) 0.2% w/w (0.2g/100g cream). The manufacturer's instructions direct patients to use 1.0-1.5cm cream rectally three times daily. This probably equates to about 0.5-1.5g cream ie 1-3mg per dose.

We are not aware of any data describing how much GTN reaches the systemic circulation following rectal administration. However, headache is relatively common as a side effect, suggesting that systemic concentrations are not insignificant.

Conclusions:

The limited data describing the use of GTN in the latter stages of pregnancy suggests that a reduction in maternal blood pressure may occur without significant compromise of foetoplacental perfusion. However, changes in foetal heart rate have been observed. Assuming that maternal blood pressure doesn't change significantly during treatment with topical GTN, the risks would appear relatively low. As always, careful risk:benefit assessment is required prior to commencing any drug in pregnancy.

References:

1. Briggs GG *et al.* Drugs in pregnancy and lactation (5th ed), 1999
2. Drugdex, Micromedex database
3. Medline database 1966-2001
4. Embase database 1988-2001

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