



## Pregnancy and Glaucoma

By  
Said M. Shalaby M.D.

Tanta University

## Why this subject

- Although glaucoma usually occurs above 40 years ...

**But**

It may be:

- 1-Congenital or anterior segment dysgenesis
- 2-Juvenile onset
- 3-Secondary glaucomas as:  
Pseudophakic&uveitic&neovascular

- Late marriage due to low economic status

## Personal experience:

- Abortion due to certain antiglaucoma medications.
- Some written prescriptions of alfa-agonists for breast feeding ladies.

- Glaucomatous women should plan their glaucoma management before becoming pregnant.
- Better to do ALT or SLT before pregnancy to eliminate or to decrease the need for glaucoma medications.

- If any topical medications are needed during pregnancy, she must do punctal occlusion and lid closure for 5 minutes after instillation of the drug.

- If surgery is needed side effects of anesthesia must be considered.
- Labour must be C.S.in advanced glaucoma.

## CHANGES OCCUR DUE TO:

- **Hormonal fluid retention, circulatory blood, immunologic and metabolic changes.**

## CHANGES OCCUR DUE TO:

- Changes in all systems of the body mostly physiological, but may be pathological.
- Pathological changes may occur for the first time changing the course or worsening an already existing disease.

## I.O.P.

↓ During pregnancy .

19.6% for normal IOP 24.4 % for ocular hypertension.

**Mechanism** : ↑ Aqueous outflow .

↓ Episcleral V. pressure

↓ Scleral pressure .

General acidosis .

But , due to side effects of drugs on pregnant woman and her fetus please , plane for ALT or SLT before the patient plane to become pregnant .

## VISUAL FIELD

Changes may occur due to pituitary gland enlargement

## MEDICATIONS USE DURING PREGNANCY

FDA classified drugs according to the severity of potential teratogenic effects into (A, B, C, D and X)

- **Category A :**  
**Safest**

- **Category B :**

No risk in animal studies but no adequate studies in pregnant women. Adverse effects in animal studies, no risk to the fetus (Can be used if necessary)

- **Category C :**

Adverse effects in animals & well controlled studies in humans have not been conducted. Potential benefits may justify the use of the drug despite the potential risk.

## **Category D :**

**Evidence indicating risk. Potential benefits may justify the use .**

**Use with caution if mother and fetus face together greater risks from not using it.**

- **Category X**

- **Studies → fetal abnormalities, risk which outweigh the potential benefits .**

## AS A GENERAL RULES

- Lowest dose .
- ↓ Systemic absorption of eye drops and toxicity by punctual occlusion.

## GLAUCOMA MEDICATIONS

- Systemic CAI (X) are contraindicated  
Teratogenic & hepatorenal effects
- Beta blockers (C)  
Use with caution in first trimester,  
discontinued few days before birth (may  
neonatal → B blockade).  
Not used in lactating woman .

- Prostaglandins analogues .
- Topical CAI
- Miotics
- Beta blockers

(C)

- Prostaglandins may → early delivery or miscarriage
- Alpha -2 against ( B)

Only during pregnancy ..... but :

contraindicated during lactation can → apnea and bradycardia in newborn ( less than 20 kg & less than 6<sup>th</sup> years ).

## Take home message

- Women with glaucoma who want to become pregnant must be in close contact with her eye doctor.
  - [Take a permission]
- Better to do ALT or SLT before pregnancy
- Think well for every drug during pregnancy and postpartum for breast feeding women.

## Take home message

- Prostaglandins and oral CAIs are absolutely contraindicated during pregnancy.
- Alfa -2 agonists are absolutely contraindicated during labour and breast feeding.

