Newborn Male Circumcision

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Overview

- Who
- Why/not
- How
- Common problems
Figure 2. Percent of newborn males with circumcisions performed in short-stay hospitals by region.
Source: CDC, National Inpatient Sample
Who Performs Circumcisions

- 70% of Obstetricians
- 60% of Family Physicians
- 35% of Pediatricians
Why?

- Tribal Rite
  - Originated in Egypt 15,000 yrs ago?
  - Developed independently in multiple civilizations
    - Native American circumcision
- Today
  - Belonging to a group
  - “Look like dad”
  - Strong religious connotations
Why?

Judaism, Islam and Christianity

"This is My covenant that you shall observe between Me and you and your children after you, to circumcise your every male. You shall circumcise the flesh of your foreskin, and it shall become the sign of a covenant between Me and you" (Genesis 17:10-11).
Benefits

- Group membership
- Prevent need for adult circumcision
- Cancer
- Infection
Cancer²

- Penis
  - Rare in US
  - NNT = 600+
- Cervix
  - No clear association
STDs²

- Does the foreskin harbor disease?
  - Possibly syphilis, chancroid, HSV
  - Possibly HIV
  - NNT = 10 - 20
UTI²

- Neonatal UTI occurs mainly in uncircumcised males
- NNT = 90 - 190
Contraindications

- Younger than 12 – 24 hours of age
- Family history of bleeding disorders
- Penile abnormality
  - Hypospadius
  - Epispadius
  - Megaurethra
  - Abnormally short penile shaft
- Sick or premature
Anesthesia?

“Less than half of US doctors administer anesthesia when circumcising infant boys, researchers say, despite growing evidence that the pain induced by the procedure can produce long-term emotional harm.”

Ruters, 2004
Anesthesia Use

- Obstetricians (25%)
- Family physicians (56%)
- Pediatricians (71%).

Stange et al, 1998
Anesthesia

- Dorsal Penile Nerve Block
- Ring Block
- EMLA Cream
Dorsal Penile Block

- 85% of MDs
- Method
  - 1% lidocaine
  - .8 ml total
  - SC @ base of penis
- 25 seconds to perform
- 5 minute wait
Ring Block$^{4,5}$

- Method
  - 1% lidocaine
  - .8 ml total
  - SC midshaft circumferentially
- 48 seconds to perform
- 5 minute wait
EMLA Cream

- A eutectic mixture of local anesthetics
  - 2.5% lidocaine and 2.5% prilocaine in an oil-in-water emulsion

Method

- Apply to base and lower half of penis under occlusive dressing
- Wait

Risk: Methemoglobinemia

- Limit use to 1 gram
Anesthesia Comparison

- Examined heart rate, cry and methemoglobin levels in 52 infants undergoing newborn circumcision comparing
  - EMLA
  - DPNB
  - Ring block
  - Placebo

- 3 hypotheses
Anesthesia Hypothesis I

- Newborns receiving placebo will have greater distress during and following circumcision than newborns receiving EMLA, dorsal penile nerve block, or ring block.
- TRUE
  - HR increase greatest for placebo
  - Crying longest for placebo
Anesthesia Hypothesis II

- Application of a topical agent will cause less distress among newborns than infiltration of anesthetic for dorsal penile nerve block or ring block.
- TRUE
  - HR increase during drug administration: Ring > DPNB > EMLA
  - Crying 92 sec after injection vs 63 sec after cream
Anesthesia Hypothesis III

Distress caused by an unanesthetized circumcision will be greater than that caused by infiltration of the anesthetic. TRUE

Thus, heart rate change was greater and lasted longer with an unanesthetized circumcision compared with the effect of and time for infiltration of a block.
Methods

- Mogen Clamp
- Gomco Clamp
- Plastibell
Gomco Clamp

Crush/shield
Surgical excision

Advantages
Instant
Good cosmesis
Custom fit
Widely used

Disadvantages
Higher rate of shaft denudation
More time
More complicated
Mogen Clamp

Crush/shield
Surgical excision

**Advantages**
Speed
Instant
Less complicated

**Disadvantages**
Fewer experienced operators
Plastibell\textsuperscript{6}

Crush/shield
Necrosis

**Advantages**
Ease of use
Widely available

**Disadvantages**
Slight increase in infection
Final result takes days
Circumcision

1. An incision is made in the top of the foreskin.

2. The plastibell is placed over the head of the penis and the foreskin is pulled over the plastibell.

3. A suture is tied around the foreskin over the tieing groove in the plastibell. Excess skin beyond the suture is trimmed away. The plastibell falls off 3-7 days later.
Complications

- Bleeding
- Infections
- Not enough or too much foreskin
- Urethral trauma
- Mortality 1/500,000
Common Problems

- Not enough
  - Adhesions
  - Phimosis
  - Cosmetic “turtle neck”
Common Problems

- Too much
  - Concealed penis
  - Denuding
References


References Continued

