Research updates on innovations in PPH diagnosis and management

Jill Durocher
Gynuity Health Projects
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PPH realities and key lessons

- Think beyond universal prophylaxis – it is not 100% effective
- When PPH occurs, “referral” rarely happens and is inadequate as a primary PPH management strategy
  - Task-sharing can enable administration of treatment to women who otherwise would have no access
- PPH as “first aid” should be available wherever women deliver – all levels of birth attendants can safely offer PPH first aid
- Precision and blood measurement are not necessary in diagnosing PPH - simple triggers will suffice
- PPH is rare at the community level, but systems need to be equipped to adequately treat women when it does happen
PPH Care Pathway

POSTPARTUM MONITORING / PPH RECOGNITION

Mat used to trigger secondary prevention/early treatment in Egypt

350 mL
500 mL

PPH MANAGEMENT: EARLY TREATMENT / FIRST AID WITH UTEROTONICS

REFERRAL TO HIGHER LEVEL CARE?

NEW TOOLS: TXA IV, UBT, NASG

EMERGENCY / SURGICAL PROCEDURES

Shock index (SI) ratio: Heart rate / Systol. BP
New models for managing PPH with misoprostol

- **Early treatment / secondary prevention**
  - Treatment dose of misoprostol to women with early signs of possible PPH (e.g. 350-500ml blood loss)

- **Treatment as ‘first aid’**
  - In progress: new model on ‘family first aid’

- **Universal prophylaxis followed by treatment if PPH occurs** (with same or different uterotonic if available)

- **Adjunct treatment of misoprostol (800mcg SL) with oral tranexamic acid upon PPH diagnosis**
  - In progress: Individual placebo-controlled RCT
PPH Management: Beyond uterotonics

- Promising technologies for lower levels of care
  - Tranexamic acid (TXA)
    - Study on oral formulation in progress
  - Anti-shock garment (NASG)
  - Uterine balloon tamponade (UBT)

**UBT research:** Studied in tertiary centers in high resource countries
  - Case series and case reports
  - Bakri balloon used (most expensive device)

Included in FIGO and WHO guidelines for PPH management (evidence quality ‘low’).
Evaluating UBT for PPH in 3 countries

- **Countries:** Egypt, Senegal, and Uganda
- **Sites:** 18 secondary/district level hospitals (6 per country)
- **Aim:** Assess effectiveness and safety of introducing UBT
- **Intervention:** Training on and introduction of UBT use for management of PPH
  - **Training:** In collaboration with Massachusetts General Hospital and local partners, half-day training, train the trainers model
  - **Condom catheter balloon kits:** using locally available materials
- **Design:** Prospective, cluster-randomized, stepped wedge trial
  - Outcomes: rate of invasive procedures for PPH (including hysterectomy), maternal mortality due to PPH, rate of blood transfusion, postpartum infection, pain experienced
UBT study progress

- 15 month study duration
  - 1st step (baseline): done
  - 2nd step: in progress
    - 9/18 sites trained on UBT
  - 3rd step: Sept/Oct ’17
    - Remaining 9 sites to train

- Evaluations to understand facilitators and barriers to effective and high quality PPH care
Integrating PPH strategies into practice: Niger’s program

- All facilities supplied with:
  - Prevention doses of misoprostol
    - Includes ante-natal distribution
  - Treatment doses of misoprostol
  - NASG
  - UBT (except health huts)

- Gynuity invited to evaluate:
  - Program’s feasibility, service coverage, acceptability and knowledge of components among women and providers
Methodology (May ‘16 to Nov. ‘17)

- Facility assessments
  - Sample size includes 69
- Provider interviews
  - 59 conducted in phase 1
- Interviews with women
  - 455 conducted in phase 1
- Documentation of PPH cases and how managed (ongoing)
- PPH maternal death reviews (ongoing)
In summary:

- Promising new models of care and technologies to add to the arsenal of PPH management
- Introduction of interventions provides opportunity to rethink:
  - How we diagnose PPH, what should trigger action, and whose responsibility it is to manage? Training needs?
  - How and where we offer new interventions (i.e. as part of bundles of care) for maximum impact and cost effectiveness?
  - What types of adjustments (i.e. facility or system-wide) are needed to improve effectiveness and quality of PPH care?
- Implementation research & evaluation key to understanding how to scale up services/technologies along continuum of care
“We did not have resources before. Women used to die. We did not have access to roads. There were no medicines or doctors available. Now we have medicines. We provide medicines to women to manage PPH”

Zainura, Community Health Worker, Nusai, Afghanistan, in “Using Misoprostol to Manage Postpartum Hemorrhage: Experiences from Badakhshan, Afghanistan”
Thank you!