Rapid Training and Implementation of a Safe and Effective Newborn Circumcision Procedure, in a Low-Resource Setting

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BACKGROUND

• Male circumcision is highly protective against urinary tract infections, inflammatory conditions of the penis, sexually transmitted infections, and urogenital cancers.
• Male circumcision has been found to reduce the susceptibility to heterosexually-acquired HIV infection by over 60%.
• The CDC and the AAP concluded that the health benefits of newborn male circumcision outweigh the risks.
• Port-au-Prince, Haiti has a considerable burden of preventable urogenital infections, sexually transmitted infections, and low circumcision rate.
• We aimed to re-introduce newborn male circumcision through the creation of a training program in Port-au-Prince, Haiti and to evaluate the outcomes of a rapid newborn male circumcision training program.

METHODS

• The training was performed at the GESHIKO Health Centers in Port-au-Prince, Haiti, a large, non-governmental clinic offering comprehensive pediatric and adult health services.

Data collection
• Doctors and nurses completed surveys in English and French. Nurses conducted short interviews of the parents in either French or Creole. The surveys assessed satisfaction of the parent of the patient, complications, and how well the various steps of the newborn male circumcision technique were followed.

Ethics statement
• The collection and analysis of the programmatic health services data were approved by the GESHIKO Ethics Committee.

The Pollock Technique
• For this low-resource setting, the Pollock Technique of newborn male circumcision, a procedure that utilizes the Mogen clamp, was selected due to its expediency and association with minimal bleeding and pain.

RESULTS

Inclusion criteria
Male infant born within the last 60 days Parents able to provide informed consent

Exclusion criteria
HIV-positive newborn Abnormal clotting or bleeding tests

Contra-indications
Urogenital abnormalities

• Upon training completion, one of two obstetricians achieved procedural competence.
• The obstetricians and nurses reported that they were very satisfied with the training program.
• The team circumcised 92 newborns.
• Among the parents, 100% reported they would recommend newborn male circumcision to their friends and 100% reported that they were satisfied with the cosmetic result.
• The nurse-collected survey indicated that 100% of the procedures followed the Pollock Technique protocol, with no moderate or severe complications.
• Since the rapid newborn circumcision training program concluded, the GESHIKO Health Centers have dedicated two days a week to perform newborn male circumcisions, averaging 14 patients per week.

Table 1: Outcomes of newborn male circumcision procedures, GESHIKO Health Centers, Haiti, 2014-2015

<table>
<thead>
<tr>
<th>Question</th>
<th>Percentage</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with the training program</td>
<td>Very Satisfied (100%)</td>
<td></td>
</tr>
<tr>
<td>Confidence to perform the procedure</td>
<td>Very Satisfied (100%)</td>
<td></td>
</tr>
<tr>
<td>Number of procedures necessary to achieve satisfactory results</td>
<td>11-30</td>
<td></td>
</tr>
<tr>
<td>Number of procedures necessary to achieve satisfactory results</td>
<td>3-14</td>
<td></td>
</tr>
<tr>
<td>Nurse response (N:5)</td>
<td>Very Satisfied (90%)</td>
<td></td>
</tr>
<tr>
<td>Confidence to assist with the procedure</td>
<td>Very Satisfied (96%)</td>
<td></td>
</tr>
<tr>
<td>Number of procedures necessary to achieve satisfactory results</td>
<td>23-32</td>
<td></td>
</tr>
<tr>
<td>Parent (or guardian) response (N:62)</td>
<td>Very Satisfied (94%)</td>
<td></td>
</tr>
<tr>
<td>Acceptability of the procedure</td>
<td>Acceptable (99%)</td>
<td></td>
</tr>
</tbody>
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Table 2: Physician, nurse, and parent satisfaction, GESHIKO Health Centers, Haiti, 2014-2015

Figure 1. Newborn male circumcision inclusion, exclusion criteria and contra-indications, GESHIKO Health Centers, Haiti, 2014-2015

DISCUSSION

• Introduction of a newborn male circumcision training program was feasible, achieving an acceptable rate of procedural competency and high quality services.
• The success of the training project was largely based on community support, the experience of the trainers and a dedicated and capacitated local non-governmental health organization. Prior models for teaching newborn male circumcision procedures exist, but often long-term, international training programs are not feasible due to difficulties obtaining travel visas, identifying patients and finding suitable mentors. The greatest challenges in enacting our training program were (1) transferring equipment, materials and supplies, (2) coordinating physician-trainers’ schedules with those of local staff and (3) ensuring an adequate number of eligible newborns were available for the procedure during the training period.
• Permanent resources now exist in Haiti to train additional providers to perform newborn male circumcisions.

ACKNOWLEDGEMENTS

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