THE EXPERIENCE OF A WHO TARGETED AGE GROUP (10-29 YEARS) FOR HIV PREVENTION WITH THE SHANGRING MALE CIRCUMCISION DEVICE

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ABSTRACT

Background
The World Health Organization (WHO) has established a target of 27 million male circumcisions (MC) by the year 2021 for HIV prevention in sub-Saharan Africa, with an emphasis on individuals aged 10 to 29 years. MC devices have been proposed as a viable tool to achieve this target. However, a potential disadvantage of in-situ MC devices is the retention of the device following the procedure. The ShangRing (SR) is the only WHO-prequalified MC device in use for HIV prevention in sub-Saharan Africa. We aimed to assess the experience of males aged 10-29 with the SR in place following circumcision.

Methods
Males aged 10-29 were enrolled in a study of no-flip SR circumcision in Kenya. The no-flip SR technique involves the insertion of an inner ring under the foreskin, followed by an outer ring to secure the foreskin and provide hemostatic occlusion. The foreskin distal to the device is then excised. The SR is left in place for a minimum of 7 days following the procedure. At the first follow-up visit on day 7 post-circumcision, patients were asked to quantify the number of days before they were able to return to work or school, the degree of interference on a scale of 0 (none) to 10 (complete interference) with various activities, the degree of pain during erection from 0 (no pain) to 10 (worst pain), and difficulty with erections while having the SR in place.

Results
A total of 520 males underwent successful no-flip SR circumcision. All participants had the device in place at the time of visit (day 7). Participants were able to return to work or school after a mean of 1.62±1.15 days from device placement. A total of 75 (14.5%) participants experienced interference with walking, 81 (15.6%) with sleeping, 107 (20.7%) with work or school, and 94 (18.2%) with general activities. The mean level of interference with all activities was less than 1. Only three (0.6%) participants reported difficulty with erections out of the 470 that had an erection while the device was in place. Mean score of highest pain felt during an erection was 1.56±1.32.

Conclusion
The SR does not significantly impede everyday activity and is generally not bothersome with erections while in place. This aspect can further increase acceptability of the device among the WHO targeted age group, which in turn can increase scale up of MC services in sub-Saharan Africa.

Introduction

- The WHO has established a target of 27 million male circumcision by the year 2021 for HIV prevention in sub-Saharan Africa with emphasis on individuals aged 10 to 29 years.
- Device-assisted male circumcision has been proposed to achieve this target.
- We aimed to assess the experience of males aged 10 to 29 years with the ShangRing in place following circumcision.

Methods and Study Design

- Males aged 10-29 years were enrolled at two sites in Kenya.
- Participants underwent no-flip ShangRing circumcision by trained health care providers.
- At the first follow-up visit on day 7 post-circumcision, participants were asked to quantify the following while having the ShangRing in place:
  - Number of days they were able to return to work or school
  - Degree of interference on a scale of 0 (none) to 10 (complete interference) with various activities
  - Degree of pain during erection from 0 (no pain) to 10 (worst pain)
  - Difficulty with erections while having the ShangRing in place

Results

- 520 males underwent successful no-flip ShangRing circumcision and had recorded responses.
- All (100%) participants had the device in place at the time visit (day 7 post-circumcision).
- Participants were able to return to work or school after 1.62±1.15 days from device placement.
- Mean level of interference with all activities was <1.
- Interference experienced by participants with various activities:
  - 75 (14.5%) with walking
  - 81 (15.6%) with sleeping
  - 107 (20.7%) with work or school
  - 94 (18.2%) with general activities
- Only 3 (0.6%) participants reported difficulty with erections out of the 470 that had an erection while the device was in place.
- Mean score of highest pain felt during an erection was 1.56±1.32.

RESULTS

All patients, n = 520	
Mean number of days in which participants returned to work or school following the procedure (SD)*	1.62 (1.15)
Min number of days	0
Max number of days	7
Interference with walking**	
n (%)	75 (14.48)
Mean score of interference (SD)	0.21 (0.63)
Min score of interference	0
Max score of interference	5
Interference with sleeping**	
n (%)	81 (15.64)
Mean score of interference (SD)	0.26 (0.77)
Min score of interference	0
Max score of interference	7
Interference with work (job, school, work at home)**	
n (%)	107 (20.66)
Mean score of interference (SD)	0.36 (0.89)
Min score of interference	0
Max score of interference	9
Interference with general activities**	
n (%)	94 (18.15)
Mean score of interference (SD)	0.31 (0.77)
Min score of interference	0
Max score of interference	5
Participants who had an erection while the device is in place, n = 470**	
Participants who had difficulty having an erection, n (%)**	3 (0.01)
Mean score of highest pain experienced while having an erection (SD)***	1.56 (1.32)
Min score of highest pain experienced	0
Max score of highest pain experienced	7

*Data missing from 2 patients; **Data missing from 3 participants; ***Data missing from 4 participants

Conclusion

- The ShangRing does not significantly impede everyday activity and is generally not bothersome with erections while in place.
- This aspect can further increase acceptability of the device among the WHO targeted age group, which in turn can increase scale up of MC services in sub-Saharan Africa.