How to Choose Appropriate Ring Size for Shang Ring Children Circumcision with No Flip Technique

Li Fang, Department of Urology, Ningbo First Hospital,
Zhejiang China

Abstract

Background: To ascertain correct Shang Ring size for children circumcision with No Flip Technique. Material and Methods: 104 children participants aged 6-14 years were randomly assigned into three groups according to different ring-chosen methods for Shang Ring circumcision with no flip technique. Group A, the ring size was chosen according to the Shang Ring measuring tape; Group B, the ring size was consistent with the diameter of penis; Group C, the ring size was consistent with the diameter of glans. The operative time, foreskin dorsal slit rate, intra-operative and postoperative pain score, postoperative pain duration, and postoperative ring detachment duration, pain score of ring detachment, complications rate including postoperative edema, unsymmetrical foreskin, wound infection, wound dehiscence as well as postoperative satisfaction rate were compared.Results: Group A has the highest dorsal slit rate and the longest operative time. There were no significant differences in intra-operative pain duration, pain intensity, postoperative pain duration, postoperative ring detachment duration, and pain intensity during the ring detachment among three groups. The postoperative edema rate of Group A 40.62% was obviously higher than that of Group B 16.22% and Group C 2.86% ($p<0.001$). The unsymmetrical foreskin occurrence rates of three groups were 21.88%, 10.81% and 2.86% respectively, the difference ($p=0.051$) was obvious but not statistical at 0.05 level. Group C enjoyed the highest satisfaction rate and significant difference was found between Group A (97.14%) and Group C (75.00%). Further investigation showed that edema, unsymmetrical foreskin were increasing as the enlargement of difference between Shang Ring and glans, however, the satisfaction rate was decreasing simultaneously. Conclusion: The appropriate size of the Shang Ring device for children circumcision with no flip technique shall NOT be ascertained according to the reading of Shang Ring measuring tape, but the diameter of glans.

Image

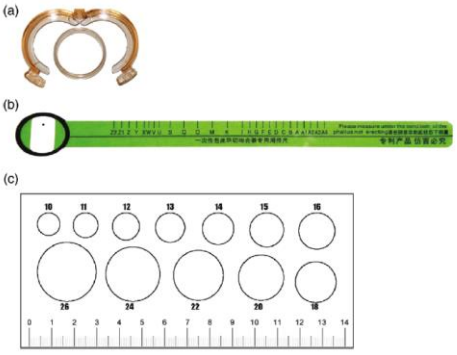


Fig. 1 Parts of the ShangRing apparatus. (a) Ring assembly. (b) Measuring tape (c) Self-designed scale plate of holes.

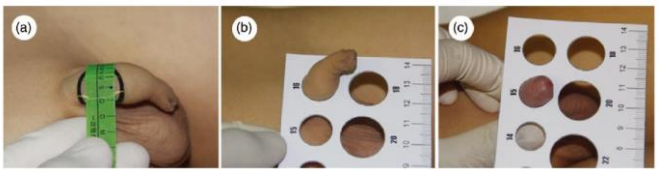


Fig. 2 Strategies for measuring ShangRing size. (a) The circumference of the penis is measured with a ShangRing measuring tape. (b) The diameter of the penis is measured using a self-designed scale plate of holes with the foreskin in its usual position over the glans. (c) The diameter of the glans is measured with a self-designed scale plate of holes after retracting the foreskin.

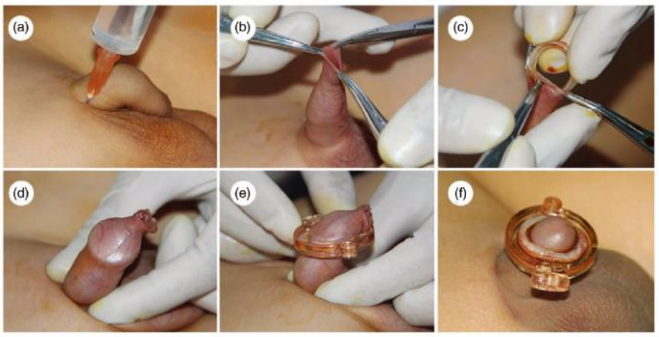


Fig. 3 Surgical procedure for child circumcision using the ShangRing with the no-flip technique. (a) Penile nerve block is performed at 2-, 6- and 10-o'clock positions. (b) Clamps are placed on the foreskin at 3-, 9- and 12-o'clock positions. (c) The inner ring is pushed into the foreskin cavity. (d) Base skin of the penis is pushed to the pubic symphysis. (e) The outer ring is completely clamped and shut after adjusting the remaining foreskin. (f) Foreskin is excised parallel to the outer ring.



Li Fang. Associate senior doctor. Doctor of urology. Specialized in diagnosis and treatment of urinary stone.
Li Fang has been a urologist for 8 years since accomplished doctor research in Wuhan university. He focus on urinary stone treatment and prevention since 2012. He attended annual conference of south Korea Urology Association as a speaker on behalf of new generation of Chinese urologists. He visited University College London in 2013. He popularizes database of flexible ureteroscopy in 15 hospitals in China. His main research directions are flexible ureteroscpe laser lithotripsy, complex stone treatment with multi-endoscopies, standardized operational process of lithotomy and flexible ureterscopic database establish. He is one of the principle members of Cheng Yue stone clinic.

Email: fangli@chengyuestone.com

Notes/Comments: