Late results after a new corporoplasty based on stratified structure of the tunica albuginea for the treatment of congenital penile curvature in adolescens

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Late Results after a new corporoplasty based on stratified structure of the tunica albuginea for the treatment of congenital penile curvature in adolescents

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Introduction & Objectives: After operations by Essed-Schroeder method many recurrences appear (10 - 15%). After operations by Nesbit or Yachia methods recurrence rate is lower but invasiveness is greater (corpora cavernosa are opened). In 2006 authors proposed less invasive procedure in which corpora cavernosa are not opened, only elliptic fragment of external layer of tunica albuginea is excised (internal layer is preserved) and both layers of tunica are sutured over invaginated internal layer.

Material & Methods: From 2007 to 2012 authors operated on 11 adolescents aged from 15 to 18 years old with congenital penile curvature (CPC). Only patients in whom stretched penile length was 14 cm or more were included into study. In 10 patients downward penile shaft curvature was detected (range from 30 to 90 degrees) including 2 patients with concomitant glans curvature (45 and 90 degrees, respectively) and 5 patients with associated lateral curvature (from 20 to 30 degrees). In one patient lateral curvature (40 degree) was detected. In 2 patients downward curvature was associated with coronal hypospadias.

Operative technique: Skin was incised longitudinally on convex surface of curvature (in patients with hypospadias circular subcoronal incision). After compressing base of penis with tourniquet artificial erection was produced (saline injection into cavernous body) and top of the angle of curvature was marked. Tourniquet was then relieved; next steps of operation were done on penis in flaccid state. In downward curvature dorsal neuro-vascular bundles were separated from tunica albuginea and on dorsal penile surface bilaterally (after stretching it by finger placed on ventral penile side) elliptic fragments of external layer of tunica albuginea were excised. Tunica albuginea was sutured with single absorbable sutures which went through both layers of approximating the edges of its external layer and invaginating internal layer. In all patients straightening of penis was always checked by artificial erection. If curvature was still present next excisions of external and plication of internal layer were done until penis was straight. In lateral penile curvatures convex penile surface was shortened using above mentioned method.

Results: In all patients penis was straightened during operation. Follow-up was from 2 to 7 years. In all patients during control examinations (with photo of penis in time of erection) penis was straight. Ten patients lead normal sexual life, one (17 y.o.) didn’t have sexual intercourse yet. Disorders of superficial sensation on the glans, erectile dysfunction or disturbances of micturition were not detected in any patient.

Conclusions:
1. Excision of elliptic fragment of external layer of tunica albuginea with subsequent invagination of internal layer of the tunica is effective method in treatment of congenital penile curvature giving good short and long-term
2. Operation is little invasive because cavernous bodies are not opened, which diminish potential risk of complications, especially intra- and postoperative bleeding.