***Abstract***

***Introduction:*** Penile curvature (PC) is not uncommon disorder in men and it can be corrected by either corporoplasty or plication techniques.These techniques can be complicated by recurrent or residual PC, erectile dysfunction, penile shortening and painful/palpable suture knots.

***Aim:*** To avoid the complications of corporoplasty and plication techniques using a new technique.

***Methods:*** Two groups (1&2) were operated upon, group 1 using a new technique and group 2 using the 16 dot technique. In the new technique the superficial layer of tunica albuginea was transversely incised (3-6 mm) at the first and last dots. Ethibond 00 passed through the interior edges plicating the intermediate 2 dots, then tightened and ligated. Vicryl, passed through the exterior edges of the incisions, was ligated to cover the ethibond knot.

***Main outcome measures:*** post-operative: shortening, erectile dysfunction, residual/recurrent curvature and palpable knots.

***Results:*** Erectile function was normally maintained. The postoperative shortening was doubled in the 16-dot technique but with no significant difference between both groups. Residual curvature <10° reported in 3 cases (7.7%) and recurrence in one case (2.5%) at the 18th month postoperatively with no significant difference between both groups. Significant difference was found regarding palpable knot sensation in the favor of new technique P value = 0.005. Twelve participants from 2nd group (57.1 %) felt palpable knot while no cases reported this complication from the 1st group.

***Conclusion:*** The new technique for correction of PC was superior to the 16 dot technique in properly selected cases.