

Penile Plication for Severe Peyronie's Disease Deformities: A Retrospective Review of Patient Characteristics and Surgical Outcomes

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Background and Objective: Peyronie's disease (PD) is a fibrotic disorder of the penile tunica albuginea leading to penile curvature, pain, and reduced quality of life. Penile plication (PP) is an established surgical procedure to correct curvatures up to 60 degrees. However, data on outcomes for more severe curvatures remain limited, largely due to concerns about penile length loss or inadequate curvature correction. Current options to correct severe curvature, such as plaque incision/excision with grafting or penile prosthesis, require highly trained surgeons and carry increased complication risks. Our study aimed to assess the efficacy and safety of PP for severe PD deformities.

Methods: We conducted a retrospective chart review of patients who underwent PP for severe curvature, defined as either uniplanar curvature ≥ 60 degrees or biplanar curvature ≥ 35 degrees. Patient demographics, comorbidities, satisfaction, and post-operative outcomes were analyzed.

Results: Fifty-one heterosexual men, with a median age of 58 years, underwent PP for severe PD deformity. Concomitant PD and erectile dysfunction (ED) were present in 61% of cases. Preoperatively, the median primary curvature was 70 degrees, and for the twenty-five patients with biplanar deformity, the median secondary curvature was 20 degrees. Postoperatively, both the median primary and secondary curvatures were 0 degrees, with a median change from baseline of 65 and 20 degrees, respectively. At a median follow-up of 7 months, 92% of patients reported satisfaction with surgical outcomes. Penile shortening was subjectively reported by 6 patients, and 3 developed new-onset ED. Curvature recurrence occurred in 3 patients, with a mean time to recurrence of 6.3 months.

Conclusion and Impact: PP is a safe and effective procedure for men with severe PD curvature, yielding high patient satisfaction, excellent curvature correction and low complication rates. These findings reinforce the role of PP as a valuable surgical option for severe PD deformities.