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Patient Satisfaction After Penile Prosthesis Implantation in Octogenarians: A Retrospective Comparative Study

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Abstract

Objective

To evaluate patient satisfaction following penile prosthesis implantation (PPI) in men aged 80 years and older, and to compare outcomes with those of patients aged 75–79 years.

Materials and Methods

Retrospective observational study conducted including men aged ≥ 75 years who underwent PPI for medically refractory erectile dysfunction between January 2015 and September 2025. Patients were stratified into two age groups: ≥80 years and 75–79 years. The primary outcome was patient satisfaction, assessed using a 5-point ordinal scale during postoperative follow-up. Secondary outcomes included functional device use and postoperative complications. Satisfaction scores were compared using the Mann–Whitney U test.

Results

Total of 36 patients included, of whom 13 were aged ≥ 80 years and 23 were aged 75–79 years. Mean patient satisfaction scores were 4.54 ± 1.13 in the ≥ 80-year group and 4.78 ± 0.52 in the 75–79-year group, with median scores of 5.0 in both groups. Satisfaction score of 5 was reported by 76.9% of octogenarians and 82.6% of patients aged 75–79 years. There was no statistically significant difference in satisfaction between groups (p = 0.67). Full functional device use was reported by 84.6% of patients aged ≥ 80 years and 95.7% of those aged 75–79 years. Overall complication rates were comparable between groups.

Conclusions

PPI in men aged 80 years and older is associated with high patient satisfaction, preserved functional outcomes, and acceptable complications. Satisfaction in octogenarians are comparable to those in slightly younger elderly patients, suggesting that advanced chronological age alone should not be considered a barrier to meaningful surgical benefit.

Introduction

Erectile dysfunction (ED) is highly prevalent in aging men and increases in both frequency and severity with advancing age. In older populations, ED is commonly refractory to first- and second-line therapies, including phosphodiesterase type 5 inhibitors and intracavernosal injections, making penile prosthesis implantation (PPI) the definitive treatment for restoring penetrative sexual function and improving quality of life.[1,2]

Although PPI has demonstrated high long-term reliability, functional outcomes, and patient satisfaction in the general population, the procedure remains underutilized in very elderly men.[3,4] This reluctance is largely driven by concerns regarding perioperative risk, postoperative complications, and perceived limited benefit in advanced age, rather than evidence-based contraindications.[1]

Available studies suggest that chronological age alone is not a reliable predictor of adverse outcomes following penile prosthesis surgery. Series including men aged ≥ 70 or ≥ 75 years have reported favorable satisfaction rates, high functional use, and acceptable complication profiles comparable to those observed in younger cohorts.[1,3] Large multicenter investigations have further demonstrated low infection rates and durable device survival, even in populations with significant comorbidity burden.[1,3,5] However, patients aged ≥ 80 years remain underrepresented in published literature, and data specifically addressing outcomes in this age group are scarce.[3]

In clinical practice, decision-making for PPI in octogenarians often relies on subjective assessments of frailty, comorbidities, and anticipated postoperative benefit. Yet aging is a heterogeneous process, and many elderly patients maintain functional independence and quality-of-life expectations that justify surgical intervention. Importantly, patient-reported outcomes such as satisfaction may represent a more clinically meaningful measure of success than traditional surgical endpoints when evaluating prosthesis outcomes in very elderly men.[6]

The present study was designed to evaluate outcomes of PPI in men aged ≥ 80 years, with patient satisfaction as the primary outcome. Outcomes in octogenarians were compared with those of patients aged 75–79 years to contextualize findings within an elderly surgical population. By focusing on satisfaction, functional use, and postoperative complications, this study aims to provide evidence to support informed counseling and individualized surgical decision-making for PPI in very elderly men.

Methods

Study design and setting

This study was conducted as a retrospective observational cohort study at a tertiary referral center. After obtaining approval of the local ethical committee medical records of patients who underwent PPI for medically refractory ED at a single institution were retrospectively reviewed (approval no: MRC-01-25-1294).

Study population

All male patients aged 75 years or older who underwent PPI between January 2015, and September 2025 were eligible for inclusion. Patients younger than 75 years or those with incomplete medical records were excluded. For comparative analysis, patients were stratified into two age groups: ≥80 years and 75–79 years, with outcomes in patients aged ≥ 80 years constituting the primary focus of the study.

Data collection

Data were extracted from electronic medical records and operative reports. Collected variables included patient demographics (age, body mass index), comorbidities (including diabetes mellitus, hypertension, coronary artery disease, chronic kidney disease, and prior prostate cancer), American Society of Anesthesiologists (ASA) score, and relevant geriatric parameters when available.

Surgical variables included prosthesis type (inflatable or malleable), anesthesia type, operative duration, and intraoperative events. Postoperative outcomes were categorized as early or late complications and included infection, urinary retention, mechanical failure, revision, and explantation.

Outcomes

The primary outcome was patient satisfaction, assessed using a 5-point satisfaction scale documented during follow-up visits. Secondary outcomes included functional device use and postoperative complications. Follow-up duration was calculated from the date of surgery to the most recent documented clinical encounter.

Ethical considerations

This study was conducted in accordance with the principles of the Declaration of Helsinki. Due to its retrospective design and use of de-identified data, the requirement for informed consent was waived in accordance with institutional policy.

Statistical Analysis

Continuous variables were assessed for distributional characteristics and are presented as mean ± standard deviation (SD) or median with interquartile range (IQR), as appropriate. Categorical variables are reported as counts and percentages.

The primary outcome of interest was patient satisfaction, measured on a 5-point ordinal scale. Satisfaction scores were compared between patients aged ≥ 80 years and those aged 75–79 years using the Mann–Whitney U test, given the ordinal nature of the scale and the small sample size. Satisfaction was additionally summarized by the proportion of patients reporting the maximum score.

Secondary outcomes included functional device use and postoperative complications, categorized as early or late. Comparisons between age groups for categorical outcomes were descriptive due to limited event counts.

All analyses were restricted to patients aged ≥ 75 years, with individuals aged ≥ 80 years constituting the primary study cohort and those aged 75–79 years serving as an internal comparator. Statistical analyses

were performed using standard statistical methods, and a two-sided p value < 0.05 was considered statistically significant.

Results

Study population

After exclusion of patients younger than 75 years, a total of 36 men who underwent PPI were included in the analysis. Patients were stratified into two age groups: ≥80 years (n = 13) and 75–79 years (n = 23). Baseline demographic and clinical characteristics are summarized in Table 1. The ≥ 80-year group had a higher prevalence of diabetes mellitus, whereas other comorbidities, ASA scores, and prosthesis type distribution were broadly comparable between groups. Median follow-up duration was 5.5 months (IQR 2.8–20.0) in patients aged ≥ 80 years and 11.0 months (IQR 2.0–13.5) in those aged 75–79 years.

Primary outcome: patient satisfaction

Patient satisfaction scores were high in both age groups (Table 2). Mean satisfaction was 4.54 ± 1.13 in patients aged ≥ 80 years and 4.78 ± 0.52 in those aged 75–79 years. Median satisfaction scores were 5.0 (IQR 5.0–5.0) in both groups. A satisfaction score of 5 was reported by 76.9% of patients aged ≥ 80 years and 82.6% of patients aged 75–79 years. There was no statistically significant difference in satisfaction between groups (Mann–Whitney U test, $p = 0.67$).

Secondary outcomes

Full functional device use was reported by 84.6% of patients aged ≥ 80 years and 95.7% of those aged 75–79 years. Any postoperative complication (early or late) occurred in 23.1% of patients aged ≥ 80 years and 17.4% of patients aged 75–79 years. Early infection was observed in one patient in the 75–79-year group and in none of the patients aged ≥ 80 years. Late mechanical failure and revision occurred only in the 75–79-year group, whereas one explantation (7.7%) occurred in the ≥ 80-year group. Detailed perioperative and postoperative outcomes are presented in Table 2.

Table 1
Baseline characteristics (Age ≥ 75)

Variable	≥ 80 (n = 13)	75–79 (n = 23)
Age (years), mean ± SD	84.31 ± 3.92	76.96 ± 1.52
BMI (kg/m²), mean ± SD	29.58 ± 3.80	30.23 ± 3.85
ASA score, median (IQR)	2.0 (2.0–3.0)	2.0 (2.0–3.0)
Hypertension, n (%)	11 (84.6%)	19 (82.6%)
Diabetes mellitus, n (%)	12 (92.3%)	18 (78.3%)
CAD, n (%)	2 (15.4%)	5 (21.7%)
CKD, n (%)	1 (7.7%)	2 (8.7%)
Prostate cancer history, n (%)	1 (7.7%)	2 (8.7%)
Prosthesis: IPP, n (%)	8 (61.5%)	17 (73.9%)
Prosthesis: malleable, n (%)	5 (38.5%)	6 (26.1%)
Follow-up (months), median (IQR)	5.5 (2.8–20.0)	11.0 (2.0–13.5)

Table 2
Satisfaction + key outcomes (Age ≥ 75)

Outcome	≥ 80 (n = 13)	75–79 (n = 23)
Patient satisfaction (1–5), mean ± SD	4.54 ± 1.13	4.78 ± 0.52
Satisfaction (1–5), median (IQR)	5.0 (5.0–5.0)	5.0 (5.0–5.0)
Satisfaction score = 5, n (%)	10 (76.9%)	19 (82.6%)
Functional use: full, n (%)	11 (84.6%)	22 (95.7%)
Any complication (early or late), n (%)	3 (23.1%)	4 (17.4%)
Early infection, n (%)	0 (0.0%)	1 (4.3%)
Late mechanical failure, n (%)	0 (0.0%)	2 (8.7%)
Revision, n (%)	0 (0.0%)	1 (4.3%)
Explantation, n (%)	1 (7.7%)	0 (0.0%)

Discussion

In this retrospective cohort study of men aged 75 years and older undergoing penile prosthesis implantation, we found that patient satisfaction was high and comparable between octogenarians (≥ 80 years) and patients aged 75–79 years. Satisfaction scores clustered at the upper end of the scale in

both groups, with more than three-quarters of octogenarians reporting the maximum satisfaction score. Importantly, advanced chronological age was not associated with reduced satisfaction, diminished functional use, or a clear increase in postoperative complications.

These findings are consistent with prior reports demonstrating favorable outcomes of PPI in elderly men. Previous studies focusing on patients aged ≥ 70 or ≥ 75 years have shown high satisfaction rates and acceptable complication profiles, suggesting that age alone should not preclude surgical intervention.[1,3] However, data specifically addressing men aged ≥ 80 years remain limited.[3] By isolating octogenarians as the primary cohort and using satisfaction as the principal endpoint, the present study adds clinically relevant evidence to this underrepresented population.

In very elderly patients, traditional surgical outcomes such as device survival or revision rates may not fully capture treatment success. Quality-of-life–centered outcomes, particularly patient satisfaction, may be more meaningful in this age group, where expectations, functional goals, and remaining lifespan differ from those of younger patients. The high satisfaction observed among octogenarians in our cohort suggests that PPI can meet patient expectations even in advanced age, provided that appropriate patient selection and counseling are undertaken.

Concerns regarding perioperative risk and postoperative complications frequently influence decision-making in octogenarians.[7] In the present study, complication rates were numerically higher in patients aged ≥ 80 years but remained within ranges reported in elderly cohorts and were based on very small absolute event numbers. No early infections occurred in the octogenarian group, and functional device use remained high. These findings reinforce prior observations that comorbidity burden, glycemic control, and biological fitness may be more relevant than chronological age when assessing surgical risk.[2,8]

The comparison with patients aged 75–79 years provides important clinical context. Despite a slightly higher prevalence of diabetes mellitus in the ≥ 80-year group, satisfaction and functional outcomes were similar between groups. This suggests that, among carefully selected elderly patients, advancing age beyond 80 years does not necessarily translate into inferior patient-reported outcomes. Such data may help address age-based bias and support shared decision-making when counseling very elderly men seeking definitive treatment for erectile dysfunction.

Several limitations of this study should be acknowledged. Its retrospective design and relatively small sample size limit statistical power, particularly for detecting differences in uncommon adverse events. Follow-up duration was modest, especially among octogenarians, which may underestimate late mechanical complications. Satisfaction was assessed using a single, non-validated ordinal scale documented in routine clinical practice, rather than a formal patient-reported outcome measure. Finally, as a single-center experience, the findings may not be fully generalizable to all practice settings.

Despite these limitations, this study provides focused data on a population that is often excluded from surgical series. The strengths of the study include a clearly defined elderly cohort, an internal comparator

group, and an emphasis on patient-centered outcomes. Taken together, the findings support the notion that PPI can achieve high patient satisfaction in carefully selected octogenarians, and that advanced age alone should not be considered a contraindication to surgery.

Conclusion

PPI in men aged 80 years and older is associated with high patient satisfaction, preserved functional device use, and acceptable complication rates. Satisfaction outcomes in octogenarians were comparable to those observed in patients aged 75–79 years, suggesting that advanced chronological age alone does not preclude meaningful benefit from surgery. With appropriate patient selection and counseling, PPI represents a viable and effective treatment option for ED in very elderly men.

Declarations

Acknowledgments:

None

Ethical Approval

approval of the local ethical committee obtained before starting the studty (approval no: MRC-01-25-1294).

Competing Interests:

None

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