

Immediate post-operative PDE5i therapy improves early Erectile Function Outcomes after Robot Assisted Radical Prostatectomy (RARP)

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Introduction & Objectives: Erectile Dysfunction is a common problem post RARP, with incidence reported to be up to 68%. PDE5i therapy is a proven therapy to improve Erectile Function (EF), however there are no guidelines as to when PDE5i therapy should be initiated. To assess whether the timing of post-operative Phosphodiesterase Inhibitor (PDE5i) therapy after Robot Assisted Radical Prostatectomy (RARP) is associated with a change in early erectile function outcomes. Additionally, to determine whether there are differences in continence or safety outcomes.

Materials & Methods: Data was prospectively collected from a single surgeon in one tertiary centre and retrospectively evaluated. 158 patients were treated with PDE5i therapy post RARP over a two-year period. PDE5i therapy was started: immediately (day 1-2) post-op in 29%, early (day 3-14) post-op in 37% and late (after day 14) post-op in 34%. EPIC-26 Erectile Function (EF) scores were collected pre-op and post-op with a median follow-up time of 43 days.

Results: The median age was 64 and the median BMI was 27. 9% of the series had Charlson Co-Morbidities. There were no significant differences in pre-operative characteristics between the therapy groups. Patients that had bilateral nerve sparing had a mean drop in Erectile Function (EF) score by 5.4 compared to 8.8 in the unilateral group. Additionally, 34.9% of bilateral nerve sparing patients returned to baseline compared to 12.1% of unilateral. Drop in EF scores and percentage return to baseline for unilateral nerve sparing was respectively 9 and 11.1% of immediate therapy, 7 and 14.8% of early therapy and 9.7 and 9.5% of late therapy ($p=0.9$ and $p=0.6$). For bilateral nerve sparing this was respectively 3.5 and 42.9% immediate therapy, 5.5 and 35.5% early therapy and 7.3 and 25% late therapy ($p=0.017$ and $p=0.045$). Pad free and social continence was achieved in 54% and 37% of those receiving immediate therapy, 60% and 33% for early therapy and 26% and 54% for late therapy. There were no differences in compliance, complication or readmission outcomes.

Conclusions: In patients with bilateral nerve sparing RARP, immediate post-operative PDE5i therapy may protect EF. Early onset (3-14 days) may also provide a benefit compared to initiating PDE5i therapy later (after 14 days). Expediting therapy for patients undergoing unilateral nerve sparing may also provide a benefit; however, the differences are less pronounced. Immediate or early PDE5i therapy also improved early continence outcomes for patients with bilateral nerve sparing, compared to late therapy. There were no differences in compliance, complication or readmission rates between the groups. Therefore, immediate PDE5i therapy should be considered in patients following nerve sparing RARP in order to maximise functional outcomes, especially in those undergoing bilateral nerve spare.