

Phosphodiesterase-5 inhibitor use's impact on erectile and sexual function after stereotactic body radiotherapy- A preliminary report

David Habibian ¹, Jonathan Haas ², Kaitlin Kosinski ³, Seth Blacksburn ⁴, Matthew Witten ², Aaron E. Katz ⁵

1. Radiation Oncology, Winthrop University Hospital 2. Department of Radiation Oncology, Winthrop University Hospital 3. Radiation Oncology, Winthrop 4. Radiation Oncology, NYU Winthrop Hospital 5. Winthrop University Hospital

✉ **Corresponding author:** David Habibian, dhabibian@winthrop.org

Categories: Radiation Oncology, Urology

Keywords: stereotactic body radiosurgery, prostate cancer, phosphodiesterase-5 inhibitor, erectile function, sexual function

How to cite this abstract

Habibian D, Haas J, Kosinski K, et al. (June 16, 2016) Phosphodiesterase-5 inhibitor use's impact on erectile and sexual function after stereotactic body radiotherapy- A preliminary report. Cureus 8(6): a105

Abstract

Objectives: Stereotactic body radiation therapy (SBRT) is a contemporary treatment modality for clinically localized PCa, with numerous studies reporting excellent oncologic control and biochemical recurrence free survival. Several series have published health related quality of life outcomes following SBRT, however none have specifically examined phosphodiesterase-5 inhibitor's (PDE5i) effect on erectile function after SBRT treatment. In this preliminary review, our objective is to measure PDE5i's influence on erectile function and sexual satisfaction in SBRT men in a single institution using validated questionnaires.

Methods: Winthrop University Hospital prospectively maintains an IRB approved database of patients who received SBRT via Cyberknife from February 2012 to October 2015 and consented to participate in a questionnaire study comparing quality of life in various treatment modalities for prostate cancer in this institution. Expanded Prostate Cancer Index Composite (EPIC), International Index of Erectile Function (IIEF), and International Prostate Symptom Score (IPSS) surveys were anonymously completed every 3 months. Men were stratified into 3 categories: no use PDE5i (control), use of PDE5i (experimental), and postponed use of PDE5i. In the "postponed use" cohort, we chose to group pre-PDE5i scores into the control group and post PDE5i scores into the experimental group. Primary outcomes included EPIC sexual summary, IIEF overall sexual satisfaction scores, erectile, orgasmic, sexual desire, and intercourse satisfaction scores. Secondary outcomes included EPIC urinary and bowel scores, and IPSS scores. Patient's demographic information and disease characteristics were catalogued. Men who underwent previous urological treatment(s) or had a history of androgen deprivation therapy (ADT) were removed from this study.

Results: In our cohort of 88 men, that participated in this study 60 (68%), reported use or no use of PDE5i, and 28 (32%) declined to answer this field. 44 (73%) men reported no use of PDE5i, 11 (18%) reported use of PDE5i, 5 (8%) initially reported no use, but began using PDE5i at some point during the study. The mean age (range, median) was 68 (52-82, 68). There was no significant difference in age between our cohorts. Both cohorts had equal EPIC sexual, IIEF orgasmic function, sexual desire, and intercourse satisfaction scores immediately following SBRT, however the control group had greater baseline overall sexual satisfaction and erectile

Open Access

Abstract

Published 06/16/2016

Copyright

© Copyright 2016

Habibian et al. This is an open access article distributed under the terms of the Creative Commons Attribution License CC-BY 3.0., which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Distributed under

Creative Commons CC-BY 3.0

function scores. EPIC sexual and IIEF orgasmic function scores remained equal at 3 months. While the experimental group fared better in sexual desire and intercourse satisfaction, the control cohort had higher erectile function and overall sexual satisfaction scores at 3 months. Patients who reported use of PDE5i saw increases in each domain and had scores greater than that of the control cohort in each primary domain by 6 months. There was no significant difference in urinary, bowel, or IPSS scores throughout the course of the study. Only the initial and 3-month differences in overall sexual satisfaction were found to be statistically significant.

Conclusions: In this study, PDE5i inhibitors were shown to increase all sexual and erectile domain scores in men following SBRT. SBRT patients may regain sexual function over time after administration of PDE5i, however further prospective studies are necessary to validate their role in SBRT patients.