



MP38-07 - Vascular, Neurologic, and Hormonal Abnormalities in Men with Persistent Sexual Dysfunction after Discontinuation of Finasteride



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INTRODUCTION

Persistent sexual side effects^(1,2,3,4) have been reported after discontinuation of oral finasteride (1 mg) indicated for male pattern baldness including:

- Erectile dysfunction (inability to attain and/or maintain)
- Decreased libido (HSDD)
- Orgasmic dysfunction
- Genital anhedonia/anesthesia

Khera et al.⁽⁵⁾ reported persistent physiologic sexual sequelae including penile vascular changes based on duplex Doppler ultrasound in 17 men (n=25) after discontinuation of finasteride

This study expands upon Khera’s research findings of men who report persistent physiologic sexual sequelae after discontinuation of finasteride in a larger population of men, adding Grayscale ultrasound and neurologic testing

METHODS

A retrospective review of charts (2015-2020) was performed of men who discontinued finasteride and had persistent sexual complaints

Inclusion criteria:

- Patients denied any problems with desire, erectile, or orgasmic sexual function prior to finasteride use
- Patients experienced bothersome changes in sexual function within 6 months of discontinuation of finasteride
- Changes persisted > 6 months

Exclusion criteria:

- Pre-existing sexual dysfunction
- Concomitant SSRI use
- Previous oral/topical 5-alpha-reductase inhibitor use

Table: 5-alpha-reductase inhibitors

Generic Name	Brand Name(s)
finasteride	Propecia, Proscar
dutasteride	Avodart
dutasteride/tamsulosin	Jalyn
minoxidil	Rogaine
isotretinoin	Accutane
saw palmetto	

Information collected included:

- Sexual function history
- Current symptoms
- Validated instruments (IIEF, SDS-R, PHQ-9, PSS, McGill Pain Score)
- Serum hormone panel values
- Grayscale ultrasound: 15.4 MHz probe; Aixplorer® Ultrasound
- Duplex Doppler ultrasound
- Quantitative sensory testing

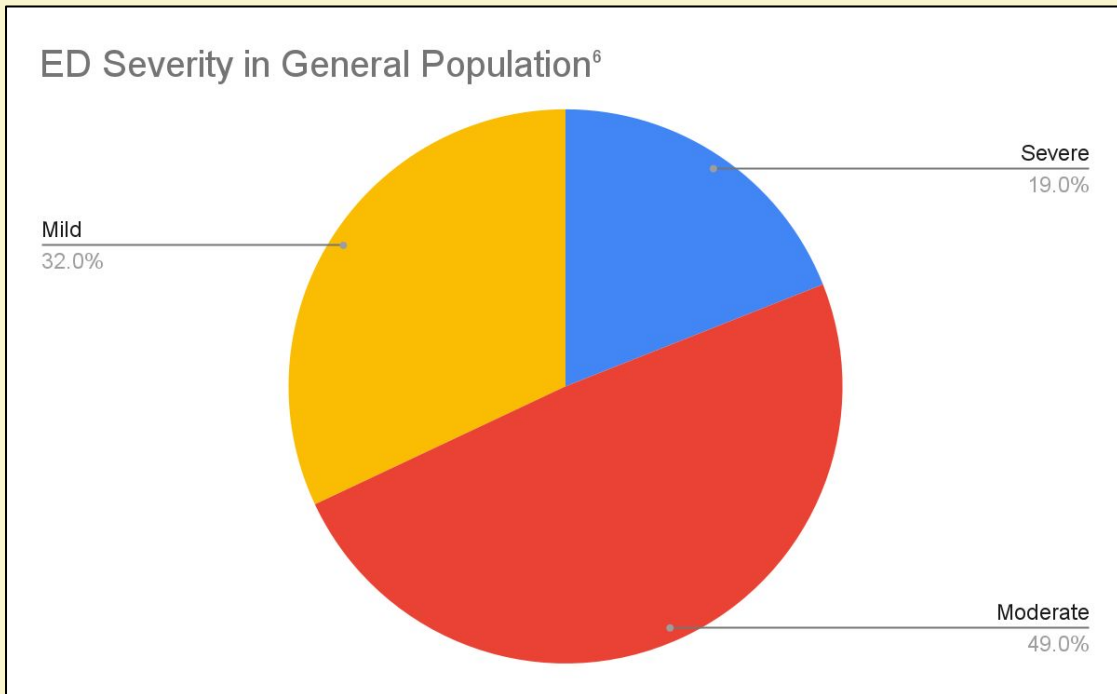
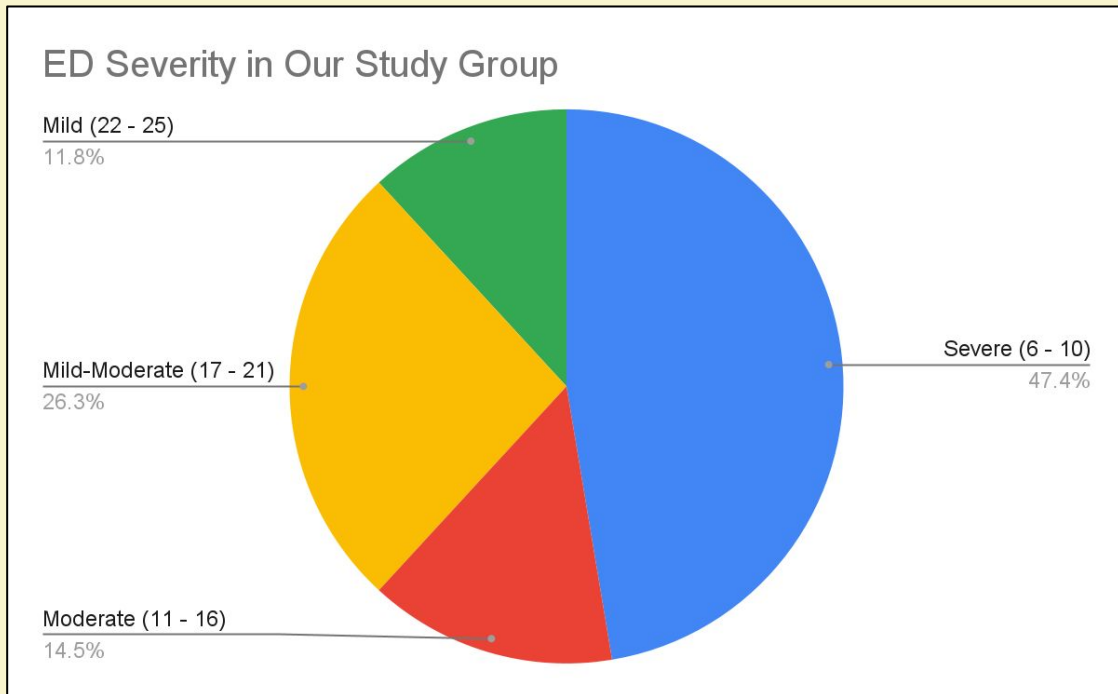
RESULTS

1000 Clinic patients from 2015-2020 evaluated

- A total of 96 met inclusion criteria (study group)
- Median age: 39 (IQR 32-46) years

Erectile dysfunction

- 92 men (96%) of the study group self-reported ED
- Mean IIEF-EF score of those with ED (IIEF-EF <26) (76 of 86 completers): 12.20 ± 7.37/30
 - Severe: 47%
 - Moderate: 15%
 - Mild-moderate: 26%
 - Mild: 12%

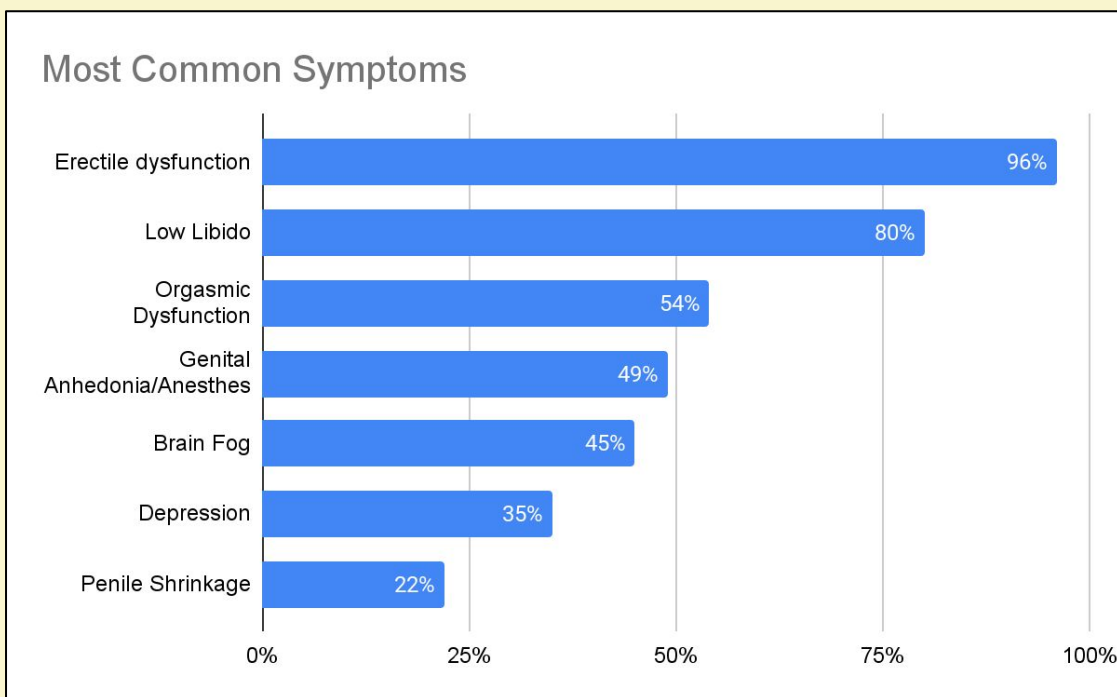


Quantitative sensory testing

- 83% (n=66) abnormal

Serum hormone panel

- 28% DHT ≤30 ng/dl
- 15% testosterone (T) ≤350 ng/dl
- 8% calculated free T ≤ 6 ng/dl

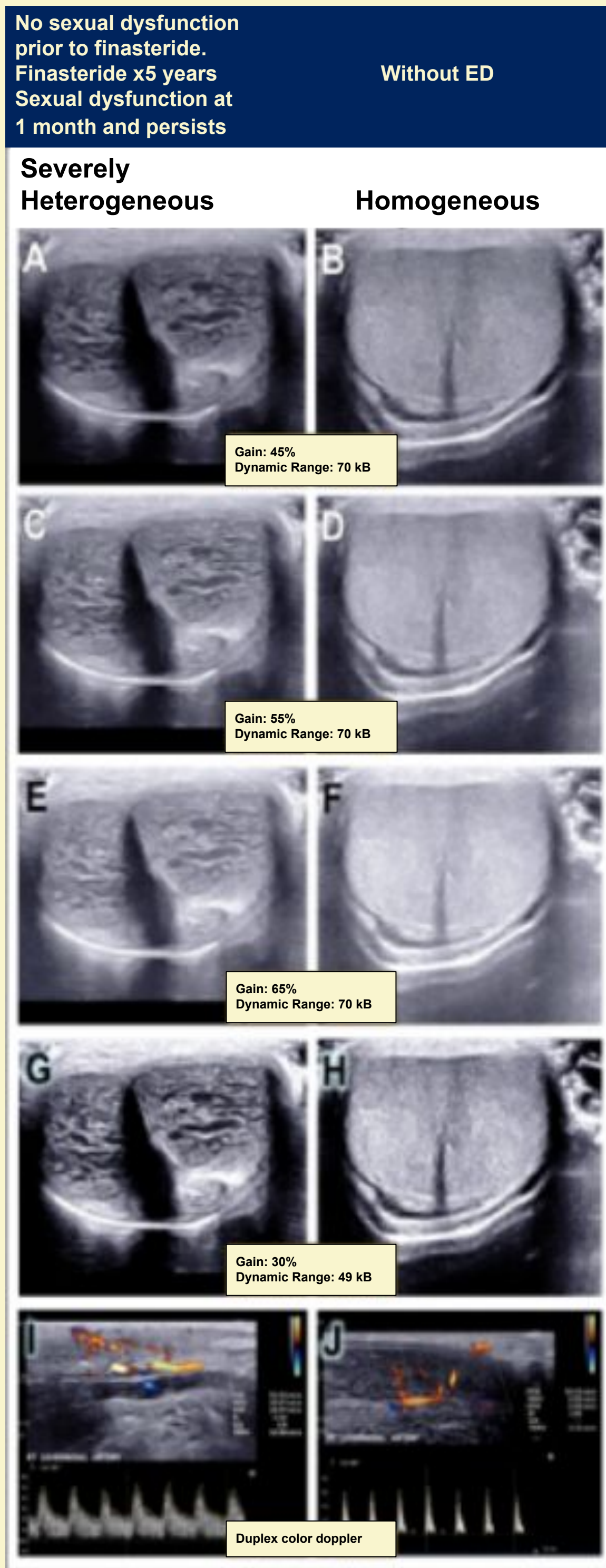


Erect (3-4/4 EHS) duplex Doppler (n = 62)

- Mean cavernosal artery PSV/EDV values:
 - Left: 29.74 ± 17.70/0.70 ± 2.75 cm/sec
 - Right: 29.98 ± 15.01/0.56 ± 1.82 cm/sec

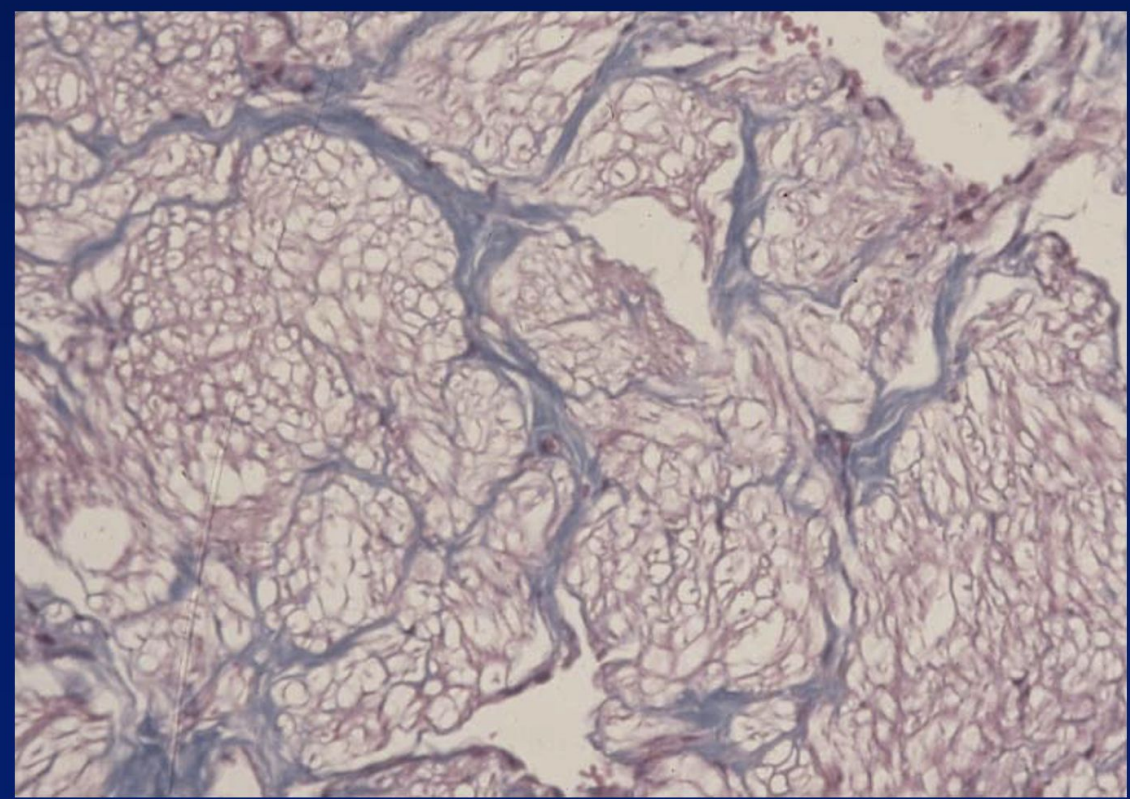
Erect (3-4/4 EHS) grayscale ultrasound (n = 62)

- 23% erectile tissue homogeneity
- 77% erectile tissue inhomogeneity



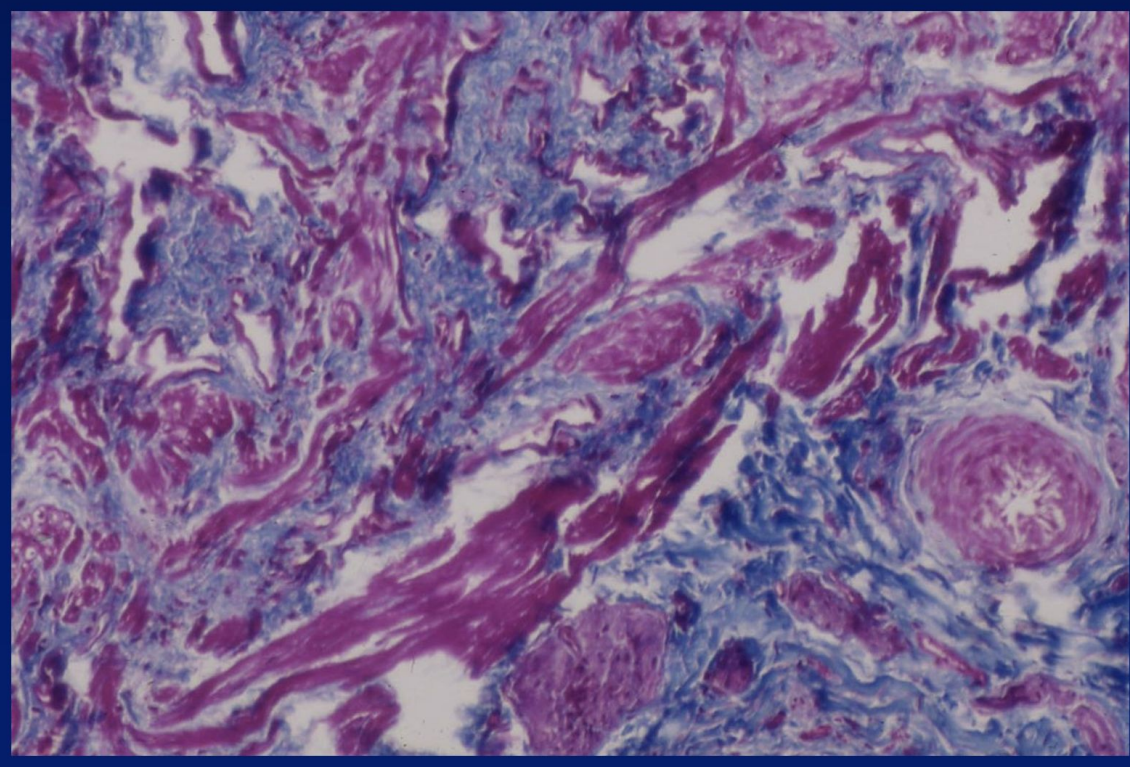
Normal Anatomy

50% Smooth Muscle - RED Color
50% Connective Tissue - BLUE Color



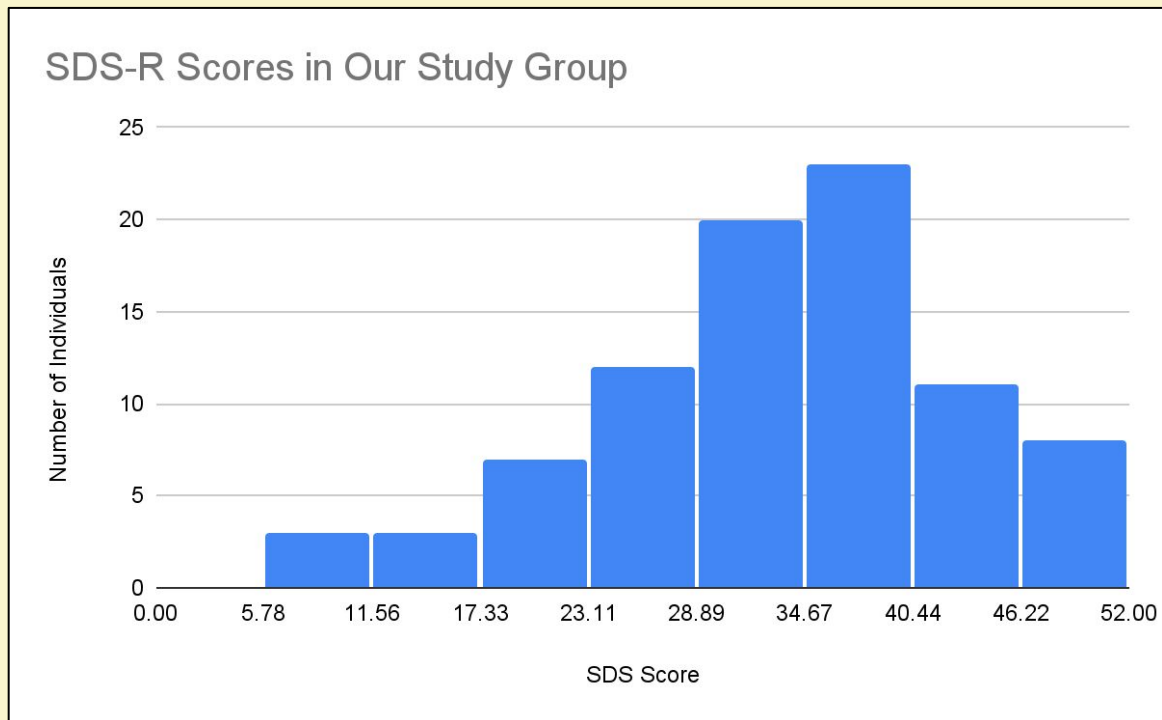
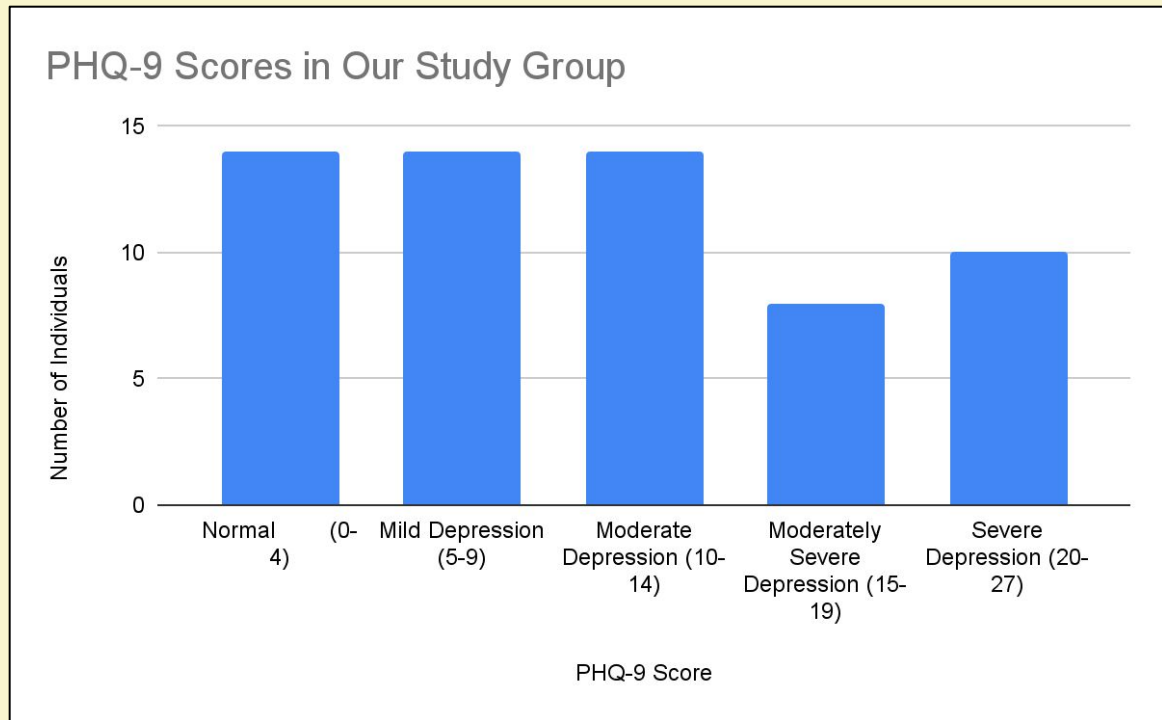
Abnormal Anatomy Corporal Fibrosis

25% Smooth Muscle - RED Color
75% Connective Tissue - BLUE Color



Depression and sexual distress

- Mean PHQ-9 score: 11 ± 7.63/30 (n=60) (moderate depression)
- Mean SDS-R score: 35 ± 9.6/52 (n=88) (severe distress)



CONCLUSIONS

- This large series (**96 patients vs 25 patients**) expands upon Khera’s findings of persistent physiologic sexual sequelae in men after discontinuation of finasteride
- First study to document erectile tissue inhomogeneity on grayscale ultrasound in men with ED after discontinuation of finasteride - **we hypothesize that deprivation of DHT leads to apoptosis of erectile smooth muscle cells**
- First time to document abnormal neurological findings (QST) in men with ED after discontinuation of finasteride
- Significant levels of depression (PHQ-9) and sexual distress (SDS-R) regardless of erectile dysfunction severity
- **ED was severe, with high prevalence of vascular, neurologic, hormonal pathologies in our population** (general population studies show severe ED 19%, moderate 49%, mild 32% with traditional cardiovascular risk factors)⁽⁶⁾
- More research is needed

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