



UTILIZATION OF PRE-OPERATIVE PENILE STRETCH TEST AS A PREDICTOR OF ERECTION AND TOTAL IMPLANT LENGTH

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Background

- Inflatable Penile Prosthesis Placement is considered the gold standard treatment for refractory erectile dysfunction.
- Penile length shortening has been reported in 30-70%.
 - Perception of shortening → 43% of men

?predict the length an counsel

In spite of many advances → Paucity of data remains an issue.

Montorsi F et al Eur Urol 2000;37:50–5.

Palma PC et al J Urol 1990;143:

764

Montorsi F et al Int J Impot Res. 1996 Jun;8(2):81-5;

Literature Review

- Osterberg et al. Jul 2014:
- “Pharmacologically induced erect penile length and stretched penile length are both good predictors of post-inflatable prosthesis penile length.”
 - Peyronie's disease were excluded
 - prospective study examining penile lengths before and after IPP surgery in 20 patients
 - All patients underwent implantation with a three-piece inflatable Coloplast penile prosthesis.

Literature Review

- Median post-prosthesis penile length (13.5 ± 2.13 cm) was smaller than preoperative pharmacologically induced length ($P=0.02$) and preoperative stretched penile length ($P=0.01$).
- (70%) had a decrease in penile length (median loss 0.5 ± 1.5 cm)
- $<50\%$ of patients reported decrease in length.

Literature Review

- Wang et al. reported a decrease in penile length after IPP.
- Pre IPP measurements after intracavernosal injections were taken in 11 patients.
- Post IPP measurements were taken at 6 weeks, 6 months and at 1 year.
- There were 0.83 ± 0.25 , 0.75 ± 0.20 and 0.74 ± 0.15 cm decreases in erect penile length respectively $p < 0.05$.

Objectives

- Prediction of the erection and total corporal length prior to inflatable penile prosthesis (IPP) surgery is of great benefit
 - surgeon
 - patient
- For the patient, estimation of the post-operative result → realistic expectations.

Objectives

- We sought out to look for reproducibility thereby predicting cylinder size and post op length.
- The ability to accurately calculate the range of the total implant length utilizing a penile stretch test
- → could focus the amount of inventory shipped for an individual procedure.
 - Decrease in Cost
 - Higher Satisfaction rate

Materials and Methods

- Fifty-three consecutive virgin IPP patients were performed by a single surgeon over 30 days.
- ✓ Coloplast Titan® IPP through an infrapubic approach
- ✓ pre-operative stretch test
 - ✓ Furlow along the dorsal aspect of the penis from the mons pubis to the tip of the glans
- ✓ Intraoperatively, the same measurements were repeated
 - ✓ after induction of normal saline artificial erection
 - ✓ after implantation and inflation of the device

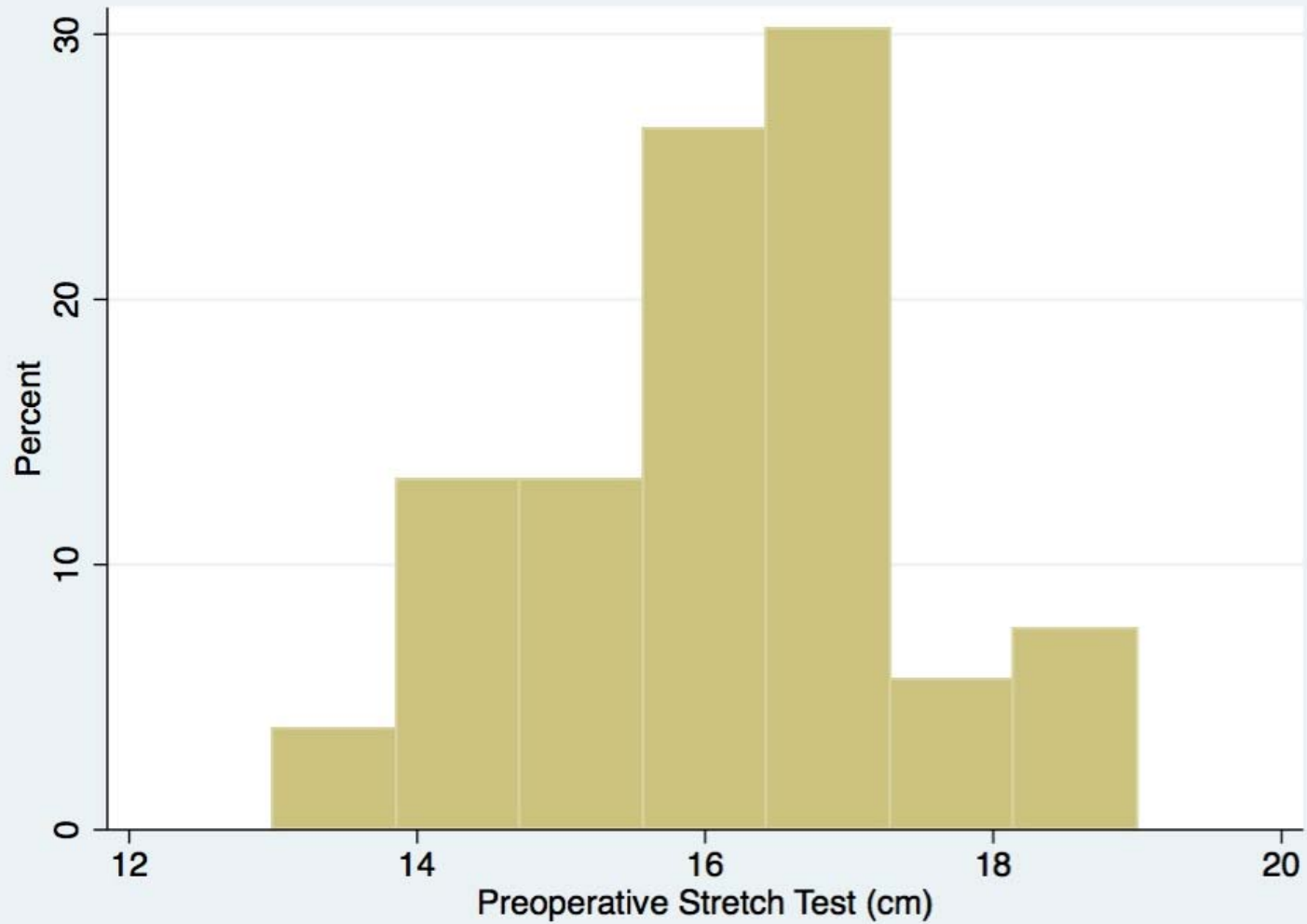
Materials and Methods

- Bilateral total device length (cylinder \pm rear tip extenders) were documented.
- Formulas based on the stretch test were constructed to predict the total device length [stretch test + ($x\%$) stretch test].
- Descriptive statistics, paired significance testing and linear regression were performed using Stata 13.

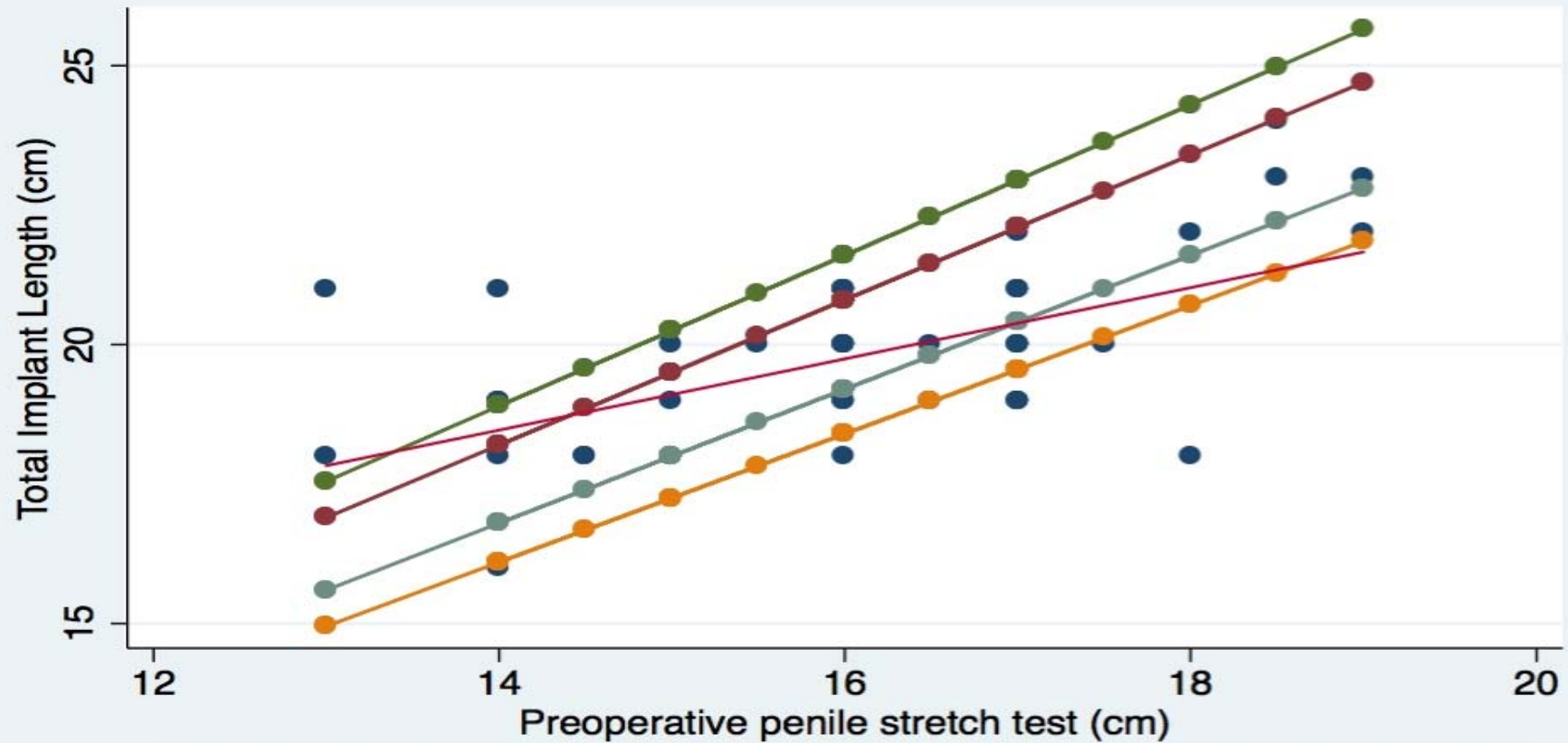
Patient Demographics

# of patients= 53	Mean	Standard Deviation	Min-max
Age	67.4 Years	7.04	40-83
Stretch Test	16.10 cm	1.40	13-19
Erection Test	15.51 cm	1.40	11-19
Intra-op Measurement	16.02 cm	1.32	12.5-19.5
Implant size	19.32 cm	1.41	16-22

Patient Demographics



Analysis



Analysis

Formula	% correct prediction of implant length within the range (stretch test – calculated value)
Stretch + (.15) Stretch (cm)	43%
Stretch + (.20) Stretch (cm)	71%
Stretch + (.30) Stretch (cm)	94%
Stretch + (.35) Stretch (cm)	96%

Conclusion

- The stretch test is a risk free, cost free reproducible test that helps predict
 - IPP cylinder size
 - Post operative penile length.
- This is of paramount importance to prosthetic surgeons and patients as it aids in decreasing the cost of an operation
 - typically not covered by insurance or Medicare.
- It also provides a better estimation of post-operative penile length
 - thus contributing to better patient expectations and satisfaction.

THANK YOU