

# Peer Review File

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## Reviewer A

### Comment 1

This is a well-designed study.

The title of the paper is misleading. The impression the title gives is that you will study the ischemic changes that occur during tourniquet placement. But you don't what so ever. Focusing in on what is good about your paper versus Rolle: you had worse Peyronie's disease, you had pre and post op Doppler studies, and you had this slight modification- use that and think of a less deceptive title. Plus almost ten years of data. Something along the lines:

"Clinical and penile doppler outcomes using a modified, touniquet free, nesbit plication for severe peyronie's disease".

### Reply 1

We agree with the reviewer's proposed title: "Clinical and penile doppler outcomes using a modified, touniquet free, nesbit plication for severe peyronie's disease".

### Comment 2

The images that are hand drawn are not acceptable- they are poorly done, and hard to follow. There is a webpage called fiverr.com and you can literally pay someone 5 dollars to draw you medical text grade diagrams. All over the world.

### Reply 2

We agree and attached the new hand drawn images made by a designer of fiverr.com.

### Comment 3

You do a great job in the discussion focusing on the strengths of this article. No comment on sensation changes. Anytime someone talks about elevation of the NVB I think you need to discuss sensation, delayed orgasm and anorgasmia.

### Reply 3

We did not report these sensation changes because we did not found patients problems like those you describe, probably because we excluded from our study serious curvatures and other penile complex deformities.

## Reviewer B

### Comment 1

Thank you for this interesting manuscript evaluating the described modified approach for corporoplasty.

The technique is reasonable.

pt. number and statistic work is sufficient.

To me pts. with congenital penile deviation should not be mixed with pts. having Peyronie's d.

as these diseases are totally different.

#### Reply 1

We agree with the reviewer that congenital penile deviation is completely different from Peyronie's disease. However, since the number of patients with congenital penile deviation was low (n=11) to be considered as a separate group in the evaluation of the severity of erectile dysfunction through IIEF-5 and PSV. However, we considered them separately when we performed the logistic regression analysis.

#### Comment 2

But major downside of this work is the main outcome measurement with IIEF5 as this is not sufficient for comparison of pre and post erectile function in pts undergoing corporoplasty.

Pts. should only be considered for corporoplasty if intercourse is considerably impaired due to penile curvature. Corresponding to this 59.4% of study pts. are having "difficulty in penetration".

Item 2-5 of IIEF5 are only ratable, if penetration or intercourse is possible.

#### Reply 2

We agree with the reviewer that item 2-5 of IIEF5 are only ratable, if penetration or intercourse is possible. Our patients had preoperative difficulties to perform sexual intercourse but they were still able to have penetrative intercourse and vaginal intromission. More of them had sexual discomfort, partner's discomfort, pain during vaginal intromission and performance anxiety. Moreover, all patients of our study had spontaneous erection or erectile dysfunction that responds to oral therapy and we excluded patients with complex penile curvatures with an angle of 90°.

#### Comment 3

Or the other way around: typically pts. with congenital penile deviation do not have preop. erectile dysfunction; in the study pts. evaluated by IIEF5 preop. do. They are just having problems having intercourse due to deviation!

#### Reply 3

In our study 63.6% and 36.4% of patients with CPC had no-ED or mild ED, respectively. Furthermore, none of the patients CPC had abnormal PSV because these cases of mild ED probably had sexual discomfort due to psychogenic cause, such as performance anxiety.

#### Comment 4

So IIEF5 just does not work for evaluation of the difference of erectile function pre- and postop. corporoplasty.

#### Reply 4

We agree with reviewer that IIEF need for further validation, although it is already widely used in the evaluation of patients with ED and Peyronie's disease, and the outcome of different modes of treatment. The IIEF can be useful to give information about patients with Peyronie's disease who are often affected by ED or have difficulties to perform sexual intercourse. Moreover, IIEF is a suitable as a screening instrument for ED in various sexual disorders including Peyronie's disease when during follow-up patients need only a short time (less than 10 min) to complete the questionnaire (EAU Guidelines 2020 on penile curvature; Leuret T *et*

*al. Extracorporeal shock wave therapy in the treatment of Peyronie's disease: experience with standard lithotripter (Siemens-Multiline). Urology 2002; 59: 657–661; Cavallini G et al. Oral propionyl-L-carnitine and intraplaque verapamil in the therapy of advanced and resistant Peyronie's disease. BJU Int 2002; 89: 895–900).*

#### Comment 5

Second main downside of outcome measurement is the consideration of peak systolic velocity only as value of erectile dysfunction.

Especially pts. with erectile dysfunction after corporoplasty often have a venous leakage, therefore it is inevitable to evaluate enddiastolic velocity and calculated resistance index as well. PSV is just not sufficient alone.

#### Reply 5

We evaluated enddiastolic velocity but we omitted this data because we didn't have postoperative venous leakage. Furthermore, we excluded from our work patients with preoperative ED due to venous leakage.

#### Comment 6

The operation time would be interesting. This is important as you consider tourniquet for a long time can result in problems in regard of nerve damage and harms of erectile tissue. Normally tourniquet for Nesbit's procedure does not need a tourniquet for more than 20 min even in complicated cases.

#### Reply 6

We agree with you but we must consider also ischemia-reperfusion injury. It is thought to be due to a cascade of events, most likely initiated by the release of oxygen free radicals into the ischemic tissue after the restoration of blood flow. Reperfusion injury begins when blood flow is restored after an ischemic period of more than about 10 min. and application of penile tourniquet also induces similar complications. (Bozkurt NB, Moralioglu S, Vural IM, Sarioglu Y, Pekiner C. Does tourniquet application alter the nitregeric responses of rabbit corpus cavernosum penis? A functional study. World J Urol. 2008 Apr; 26(2):191-6).

#### Comment 7

Length measurement should be evaluated in stretched flaccid state, as measurement in erect penis with relevant deviation up to 90° is not exact enough.

#### Reply 7

We agree with you, indeed we took into consideration penile length in stretched flaccid state during preoperative physical examination for statistical analysis. We also measured erect penile length during artificial erection to check the degree of curvature. Really, we did not found statistical differences from the two groups of measurements and for simplicity, we reported in our work just "measurement in erect penis".

#### Comment 8

BTW: degree of curvature partly is given in %...should be °!

#### Reply 8

I am so sorry but I found just one error on line 145, where I omitted the sign °

Comment 9

Was there any considerable palpable scar?

Reply 9

At 6 and 12 months, no palpable subcutaneous indurations were detected.

Comment 10

Was there a correlation of plaque size and erectile function?

Reply 10

The size of the plaques ( $<1$  cm vs  $\geq 1$  cm) was not associated with the presence of ED ( $p=0.21$  and  $p=0.38$ , respectively) or PSV ( $p=0.90$  and  $p=0.62$ , respectively).