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# Volume measurement on the AMS 800™ peri-bulbar occlusive cuff after pressurization with the pressure-regulating balloon: a prospective single center study.

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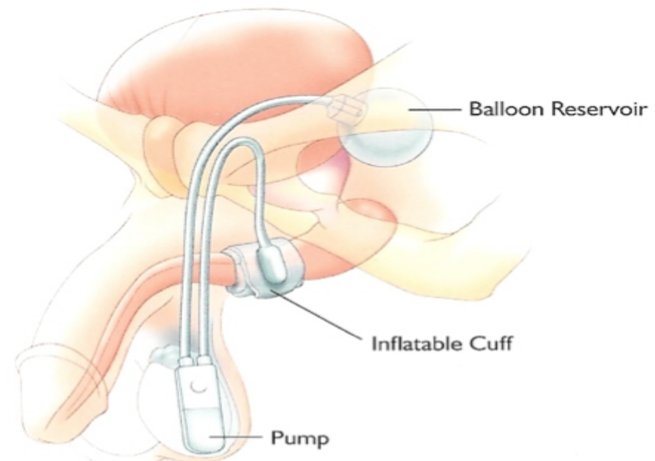
## Conclusions

Our study showed that the larger the cuff, the more volume it would accommodate after pressurization in order to fit the urethra.
However this volume did not exceed 1 cc. The following step will consider long-term erosion rates related to cuff volume and its consequent impact.




## Introduction

The manufacturer recommends that pressure-regulating balloon (PRB) should be filled with 22 cc of the filling solution at the time of implantation, whilst the occlusive cuff (OC) is empty. In order to maintain the desired pressure range, OC pressurization is an optional step allowing subsequent OC filling with at least 2cc of solution remaining in the PRB. However, the exact volume required is unknown.

## Aim

to measure the volume on the AMS 800™peri-bulbar OC after pressurization with the PRB at the time of implantation. This would determine the exact PRB filling volume required to deliver the adequate pressure and understand the functioning of the system, such as it is known today.

## Methods

A prospective, single center, intra-operative OC volume measurements of implanted AMS 800™ after pressurization with the PRB was conducted between October 2016-November 2018. Ethical approval and informed consent were obtained and the study followed institutional protocol. The procedure was performed using a 5 ml Luerlock seringe and the 15-gauge blunt needle provided in the implantation kit, connected to the OC tubing after pressurization.

## Results

A total of 67 peri-bulbar OC were implanted in men, aged 40 - 88 years old, by 4 surgeons. All selected PRB were 61-70 cm H2O.

Implanted OC cuff sizes measured with the cuff sizer were: 3.5 cm (n=1), 4cm (n=29), 4.5 cm (n=26), 5 cm (n=9), 5.5 cm (n=1) and 6 cm (n=1).

The measured OC volumes ranged between 0.05 - 1cc, with a median volume of 0.30 cc (+/SD=0.19) and a mean volume of 0.34 cc (figure 1.)

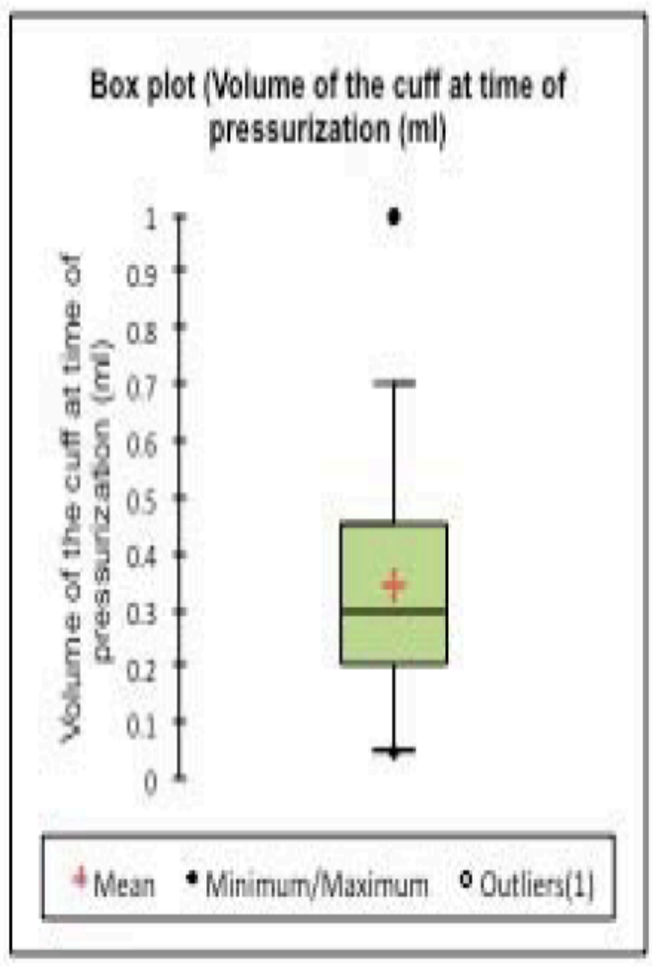



Figure 1. Peri-bulbar occlusive cuff volumes measured after PRB pressurization

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