

P R E S E N T E D A T

34th World Congress of Endourology (WCE)

■ A N N U A L C O N G R E S S ■

November 8 - 9, 2016 ■ Cape Town, South Africa

Presentation Title: HEAD-TO-HEAD DURABILITY TRIAL COMPARING THE NGAGE AND NOVEL DAKOTA STONE RETRIEVAL BASKETS

Author Block: Abbott JE, DiMatteo AD, Sur RL

Introduction and Objective

Stone retrieval baskets are commonly utilized instruments in endourology to engage, reposition, release or extract stones. Several “open-faced” stone retrieval devices have emerged on the market and gained popularity among urologists, including the NGage™ Basket (Cook Medical, Bloomington, IN, USA). The objective of this study was to compare the durability of two similar open-faced baskets, the NGage basket with the novel Dakota™ Basket (Boston Scientific, Marlborough, MA, USA), following repetitive stone capture and release in a simulated bench test.

Methods

A total of 30 NGage and 30 Dakota Baskets (11mm, 1.7F) were evaluated. Durability of each was evaluated by passing the basket through a simulated endoscopic 3.6F working channel and cycled repetitively in grasping and releasing an 8mm diameter synthetic stone model (0.6788g). The Dakota “Sure Release” feature was not implemented in the cycles. Each device was examined for damage and warping after each cycle, failure defined as the inability to grasp a 1mm synthetic stone model (0.3439g).

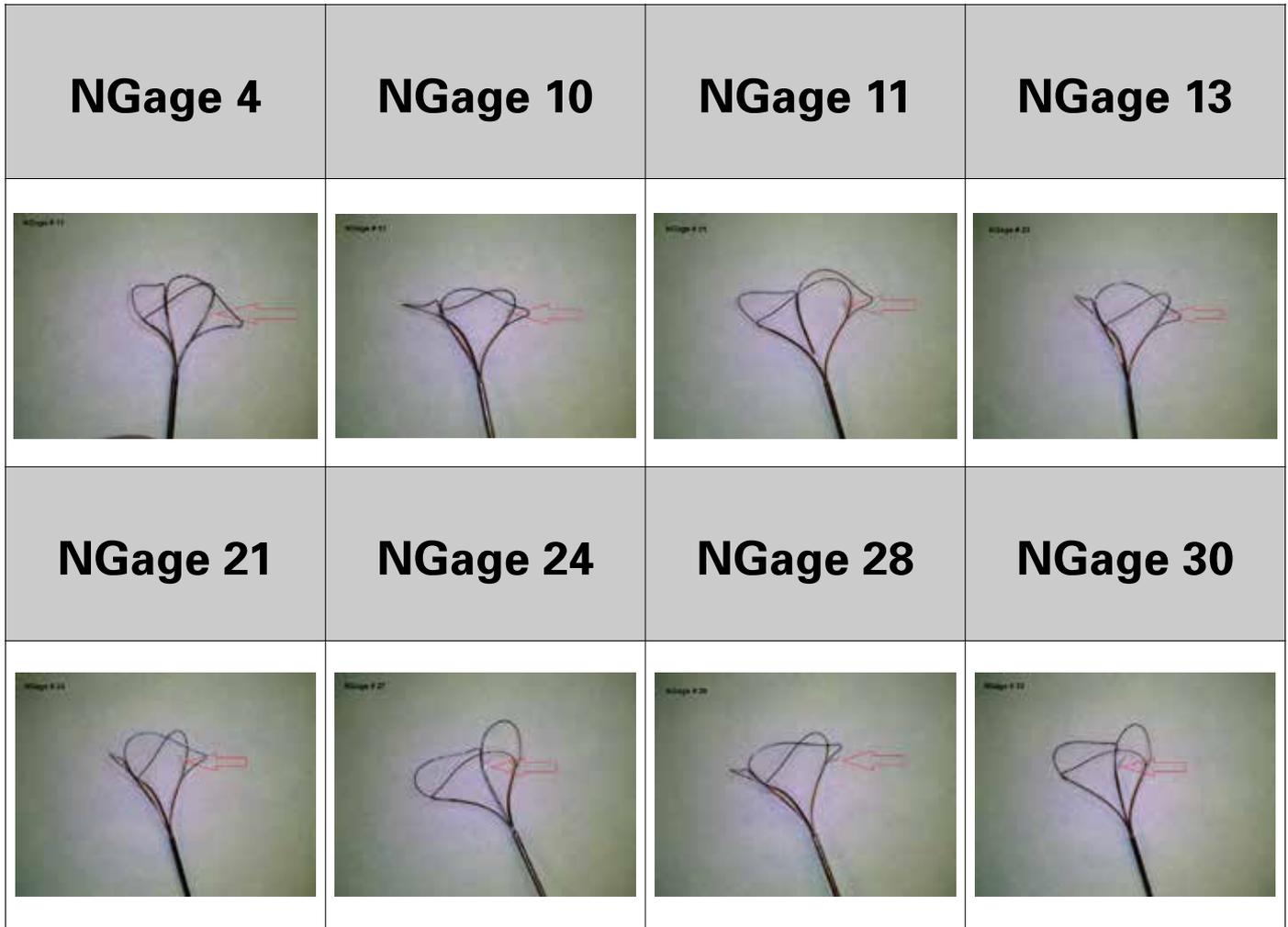
Results

No device failures were observed with the two basket types through 20 repetitive cycles. The Cook NGage did demonstrate a statistically significant increased rate of visible device breakdown ($p=0.0046$) (Figure 1); specifically, splitting of the end effector tube and kinking at the strain relief site. This visible breakdown was observed with 8 NGage devices compared to none with Dakota devices. Product breakdown was observed at a mean of 13.5 (range 7-18) cycles.

Conclusion

The 11mm Dakota™ Basket demonstrated greater durability of the working elements compared to the 11mm NGage™ Basket in this trial. The clinical relevance of the construct damage observed needs to be determined.

Figure 1. Physical damage observed during the cycling of the basket mechanism over an 8mm stone model.



Results from case studies are not predictive of results in other cases. Results in other cases may vary.

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Boston Scientific Corporation
300 Boston Scientific Way
Marlborough, MA 01752
www.bostonscientific.com/dakota

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URO-433516-AA OCT 2016