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Title (type in CAPITAL LETTERS): **IMPROVED CONTRACTILITY OF OBSTRUCTED BLADDERS AFTER TADENAN TREATMENT IS ASSOCIATED WITH REVERSAL OF ALTERED MYOSIN ISOFORM EXPRESSION**

Aim of Study: Tadenan is a plant extract from *Pygeum africanum* used in the treatment of benign prostatic hyperplasia, protecting the bladder from contractile dysfunction induced by partial bladder outlet obstruction (BOO). The aim of the present study was to determine whether the Tadenan-induced return of detrusor contractility affects the expression of myosin isoforms, which differ at the C-terminus (SM1 and SM2) and the N-terminus (SMA and SMB).

Methods: Four groups of New Zealand White rabbits (3 to 5 kg., 4 to 6 rabbits per group) were either partially obstructed by ligation of the urethra (groups 1 and 2) or not obstructed (groups 3 and 4). After 2 weeks, rabbits from groups 2 and 4 received Tadenan in peanut oil (vehicle) orally at 100 mg/kg/day for 3 weeks and rabbits in groups 1 and 3 received vehicle only. Rabbits were sacrificed and bladders were removed and weighed. Contractility studies were performed on isolated strips of detrusor and the remaining muscular layer from the bladder body was used to study the expression of myosin isoforms at the protein and mRNA levels, respectively, by SDS-PAGE and RT-PCR analyses.

Results: Tadenan significantly reduced the effect of partial BOO on bladder mass. The significant reduction in contractile response to field stimulation and carbachol secondary to urethral obstruction was significantly reversed by Tadenan treatment. The altered relative ratios of myosin heavy chains SM2:SM1 and SMA:SMB associated with obstruction, as confirmed at the protein and mRNA levels, returned to nearly normal values after Tadenam treatment.

Conclusions: Improvement of obstruction-induced alterations in detrusor contractility following treatment with Tadenan is associated with reversal of the altered expression of myosin isoforms, suggesting the involvement of these isoforms in the mechanism by which Tadenan exerts its protective effects.