Introduction

Benign prostatic hyperplasia (BPH) is the commonest benign neoplasm in men, up to a half of men in the six decade and 90% of men aged >80 years have histological evidence of the disease. There are many patients with severe LUTS or complications of BPH in whom medical therapy failed and for whom surgery is deemed a high risk e.g. *(ischemic heart disease, congestive heart failure, recent cerebrovascular stroke and chronic obstructive pulmonary disease),* therefore alternative procedures have been developed one of which is to use *prostatic stents* ***(James et al., 2006).***

The relief of prostatic obstruction using a metal stent was first described in 1980; the first generation stents were either *'epithelializing' or 'nonepithelializing'*. Epithelializing stents allow the urothelium to grow over it, which theoretically reduce the risk of infection and encrustation, the long term results of these stents were poor, encrustation and migration resulted in its removal under general anaesthesia. Non epithlializing stents are inert material and avoid epithelial reaction; again the long term results of these stents were discouraging with approximately 50% removal rate in the first year ***(Lee et al., 2005).***

The ideal prostatic stent should has particular qualities, it should be easy to insert under topical anesthesia, not extend into the bladder and not cause any local reaction or promote encrustation, also endoscopy through stent should be feasible and finally be easily removed, when needed ***(Neil et al., 2005).***

Urethral strictures are first described in ancient literature dating from the Greek and Egyptian period, currently it is relatively common, most strictures being acquired from infection and trauma e.g. *(blunt perineal trauma results in injury to the bulbar urethra and pelvic fractures result in distraction in the posterior urethra)* but iatrogenic causes e.g. *(urological instrumentation and indwelling urethral catheter)* which result in strictures any where in the urethra, are probably the most common causes ***(Andrew et al., 2004).***

The management of urethral strictures remains a challenge to all urologists. This is especially for those failing to respond to repeated dilatation or optical urethrotomy and for strictures recurring after urethroplasty ***(Devocht et al., 2003).***

In 1988, ***Milroy*** implanted the first stent in the urinary tract for the treatment of urethral stricture. Three types of metal stents have been used to treat recurrent urethral strictures: the self expanding mesh, the ASI titanium stent and the nitinol stent ***(Evangeles et al., 2006).***

Memokath was first introduced as the second generation stent for treatment of upper and lower urinary tract obstruction in 1993, it is used for treatment of benign and malignant ureteric strictures *(Memokath 051^{TM}),* bladder outlet obstruction due to BPH *(Memokath 028^{TM}),* and recurrent urethral stricture *(Memokath 044TW), (Memokath 045TW)*. It is thermo-expandable stent, made from a nickel and titanium alloy which has a 'shape memory' feature, it softens at <10°C and regains its original shape when heated to 50°C, the alloy exists in two distinct crystalline forms *'martensite and austenite'*. The former will after a *'plastic deformation'* return to its original shape when heated, within limits. This process occurs as a result of a specific type of phase-change known as *martensitic transformation.* This process is complex and the transition temperature depends on the alloy mix, deformation, type and direction of applied stresses ***(Perry et al., 2002).***