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Abstract

Prostatic urethral lift: A historic shift towards minimally invasive urology

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Abstract:

Introduction: Maximilian Stern introduced the first resectoscope and performed the first transurethral resection of the prostate (TURP) in 1926.1 The design was advanced in 1931 by Joseph McCarthy with the addition of an effective panendoscope. The Stern-McCarthy resectoscope and the TURP procedure was initially advocated in the UK by urologists such as Canny Ryall and Terrence Millin; and soon became the global gold-standard treatment for symptomatic prostate enlargement.2 In the subsequent decades, concerns were raised regarding the procedure's need for general anaesthesia, risk of retrograde ejaculation, and invasive method.3 In 1993, Thomas Stamey, a noted urologist, stated that TURP was 'now a therapy of history'.4 In the last two decades, a novel minimally invasive non-ablative surgical technique to treat symptomatic benign prostatic hypertension (BPH) has been developed. The procedure is called prostatic urethral lift (PUL), trademark: 'UroLift',5 and this paper aims to highlight its modern progression.

Methods: A systematic review of the literature was conducted via searching online databases such as the Cochrane Library and Pubmed. Relevant articles which included the keywords: 'TURP', 'prostatic urethral lift' and 'UroLift', were collated.

Results: PUL was designed by Theodore Lamson and a team of engineers at the American-based start-up Neotract Inc. The procedure and delivery device were formally presented in 2004, after extensive animal testing and research and development costs of approximately 30 million dollars. Initial pilot studies in 2011 showed promise,5 and a randomized multicentre sham comparison trial in 2013 demonstrated the IPSS, QoL score, Qmax, and another validated questionnaire known as the BPHII score were all improved with PUL.6 Furthermore, the 2015 BPH-6 study which was a randomized European multicentre trial showed that PUL yielded viable improvements in operative results while sustaining a robust safety profile and causing a negligible effect to sexual functioning when compared to TURP.7 This build-up of positive evidence led to regulatory approval by the USA Food and Drug Administration in 2013, and the UK National Institute of Clinical Excellence in 2014. In October 2018, the UK Government acknowledged the PUL as one of only seven Accelerated Access Collaborative 'Rapid Uptake Products', leading to rapid uptake in the NHS. In December 2018, the MedLift 12-months study was published and showed that even prostates with middle lobe obstruction can be treated with the PUL procedure safely and effectively.

Biography:

Dr. Chaitya Desai has completed his MBChB at the University of Liverpool. He intercalated in a master's in medical law and ethics, graduating with a distinction from the University of Liverpool. He is currently a foundation year trainee at City Hospital in Birmingham, UK.

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