MP39 20-604

FEASIBILITY STUDY OF INFLATING PENILE PROTHESES, URETHRAL CUFFS AND ANAL CUFFS WITH MRI-COMPATIBLE, TRANSDERMALLY POWERED PUMP IN RESERVOIR IMPLANTS

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Manually Operated Control Pumps

Limit Usefulness of Current Inflatable Implants

• **Gold Standard since ’70s**
  • Inflatable penile prosthesis for erectile disfunction
  • Artificial urinary sphincter for urinary incontinence

• **Limitations**
  • Manual dexterity needed
  • Anatomical sites for manual control pump placement

• **Next advance**
  • Externally controlled and powered electric pump implant for rapid fluid transfer
Externally Operated Electric Pumps

Addresses Untreatable Patients

- **Additional applications**
  - Female urinary incontinence
  - Rectal incontinence

- **Device features**
  - Electric pump contained in reservoir
  - Pushbutton operated external power source
  - Fluid transfer to penile prosthesis in less than 20 seconds
  - MRI conditional

- **Status**
  - Transdermal control, power and pumping demonstrated
  - Patent issued