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Obstructive azoospermia typically with low vol, low pH, no fructose

Unilateral/Incomplete obstruction: variable (OAT) semen parameters

Management options
→ Sperm retrieval for ICSI
→ Reconstructive surgeries

With the increase availability of ICSI, less and less patients opt for TURED due to the higher risks of potentially serious complications
RECONSTRUCTIVE SURGERIES FOR EJACULATORY DUCTAL OBSTRUCTION

- TURED
- Incision or unroofing of the prostatic cyst
- Seminal vesiculocscopy ± stone extraction (with 7 Fr ureteroscopes)
- Seminal vesiculocscopy balloon dilatation
- Antegrade balloon dilatation

SURGICAL MANAGEMENT OF EJACULATORY DUCT OBSTRUCTION

- Allows natural conception
- Even if ART is needed, can have ejaculated sperm without surgical sperm retrieval
- Best performed when there is a prostatic cyst. Ejaculatory duct obstruction in the absence of a prostatic cyst on TRUS (e.g. due to stone, ductal stenosis or atresia) are more difficult to correct and may require seminal vesiculocscopy and ejaculatory duct balloon dilatation (which are also not easy to perform !)
**TURED - SETUP**

- 22 or 24 Fr resectoscope. Holmium laser would work too.
- Microsurgery setup (operating microscope, micro-instrument sutures, light microscope, setup for cryopreservation, microsutures for closure)
- Indigo carmine, 24G angiocatheter, 3Fr ureteral catheter for vasography

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**TURED**
OUTCOMES

- Significant post-TURED improvement in semen parameters in 50-70% of patients
- Natural pregnancy rate 20-40% up to 1 yr
- Important counseling points for couples choosing this invasive option

Paick et al., BJU Int 2000
Schroeder-Printzen et al., Hum Reprod 2000
Turek et al., J Urol 1996

OUTCOMES – Reasons for failure

- Remains low-vol azoospermic
  - Incomplete resection/unroofing or contracture of opening → may need redo
  - Ejaculatory ducts or SV’s not emptying into the unroofed cyst
  - Importance of using indigo-carmine vasogram during resection to confirm patency of ejaculatory ducts and their communication to the cyst

- Normal vol azoospermia
  - SV’s empty into the unroofed cysts but not the vasa ampullae
  - Or ejaculatory ducts obstruction proximal to the unroofed (para-midline) cyst
  - May need antegrade balloon dilatation or seminal vesicoscopy
  - Importance of using Indigo Carmine vasogram during resection to confirm patency of ejaculatory ducts and their communication to the cyst

- Concomitant bilateral obstruction of the epididymides
  - Importance of using vasogram prior to resection to confirm the presence of sperm in vasa fluid
COMPLICATIONS – (Up to 20%)

- Urine reflux to ejaculatory ducts
  - Can be documented with voiding urethrogram
  - Suboptimal improvement in semen parameters
  - Chemical/bacterial, acute/chronic/recurrent epididymitis or seminal vesiculitis

- Retrograde ejaculation (if bladder neck is resected or undermined)
  - For TURED, remember: “Less is more!”

- Ext/int sphincter injury.

- Rectal injury. Remember these are young patients with small prostate!
  - Use of O’Connor rectal drape

- Recurrent anejaculation from scarring

COMPLICATIONS – (Up to 20%)

- Ejaculation of urine at orgasm (“Climaturia”)
  - Big mess each time with sex! Dx confirmed by high Cr in ejaculate
  - Urine collection in cyst cavity (may need further unroofing) or reflux into ejaculatory ducts
  - Hyperactive trigone with weakened bladder neck (tend to be transient)
  - Trial of OAB meds, α-antagonists, pseudoephedrine
  - Void completely before sex
SUMMARY

- Ejaculatory duct obstruction remains a potentially correctable form of male infertility
- TURED in selected cases can have excellent results
- Proper pre-op counseling and proper surgical techniques are the key to successful outcomes with high degree of patient satisfaction

MANAGEMENT OF EJACULATORY DUCT OBSTRUCTION

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