Table 4. Female-to-male: Operations and techniques available, and the benefits and risks

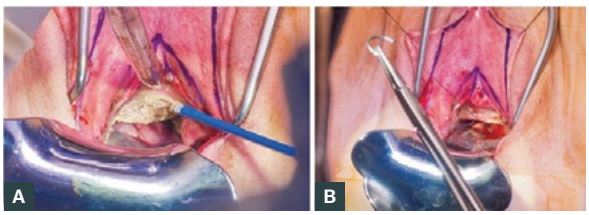
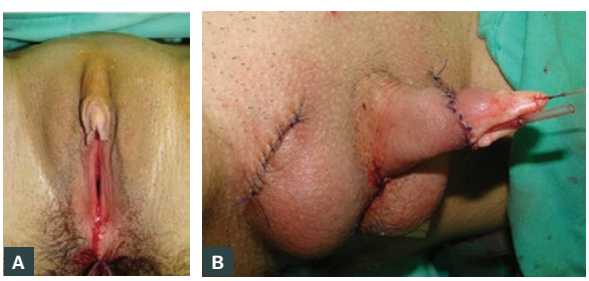
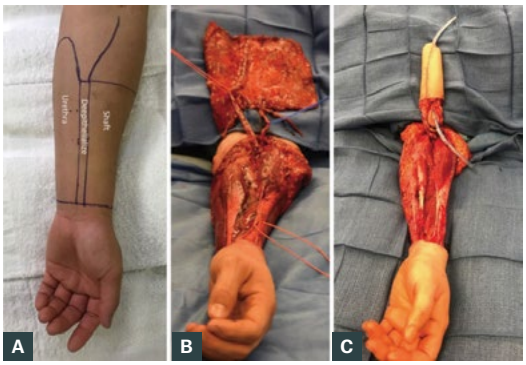
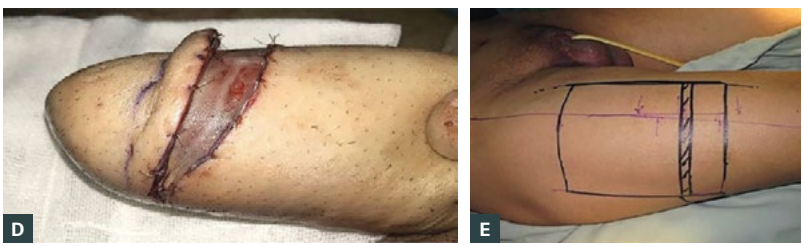
Operation	Surgical technique	Benefits	Risks
Hysterectomy +/– salpingo-oophorectomy	Hysterectomy +/– salpingo-oophorectomy involves the removal of the uterus +/– fallopian tubes and ovaries. It can be performed trans-vaginally, trans-abdominally, laparoscopically, and robotically	• Gender affirmation/ reduction of dysphoria • Lowered uterine and cervical cancer risk If oophorectomy: • Cessation of menstruation • Decreased need for hormones • Lowered ovarian cancer risk	• Surgical complications (infection, bleeding, vault dehiscence, adhesions) • Urinary and bowel issues • Infertility regret If oophorectomy: • Hormonal changes (early menopause) • Osteoporosis or osteopaenia • Cardiovascular risks
Vaginectomy	This procedure involves the surgical removal or closure of the vaginal canal. Vaginectomy is often performed in conjunction with other gender affirmation procedures, such as phalloplasty or metoidioplasty, depending on the patient's surgical plan  (**A**) After distal sharp mucosal excision, the remainder of the vaginal mucosa is fulgurated; (**B**) Colpocleisis is carried out with a thick polydioxanone suture[A]  Vascular de-epithelialised flaps from the labia minora tissue not used for urethroplasty are preserved for coverage of the pars fixa urethral suture line[A]	• Gender affirmation/ reduction of dysphoria	• Surgical complications (infection, bleeding, sinus formation, rectal injury, bladder injury, small bowel injury)
Metoidioplasty[16]	 (**A**) Preoperative appearance with a hormonally enlarged clitoris[B] (**B**) Appearance after metoidioplasty. Two testicle implants are inserted into the scrotum created from the joined labia majora[B]	• Gender affirmation / reduction of dysphoria • Reduced scarring compared to phalloplasty • Preservation of clitoral sensation • Personalised approach to gender affirmation	• Relatively smaller neophallus size compared to phalloplasty • Infection • Nerve damage • Inability to perform penetrative intercourse

Table continued on the next page

Table 4. Female-to-male: Operations and techniques available, and the benefits and risks (cont'd)

Operation	Surgical technique	Benefits	Risks
Phalloplasty	**Abdominal flap phalloplasty**[17] In this approach, tissue from the lower abdomen, often including the musculocutaneous rectus abdominis flap, is used to build the neophallus **Radial forearm**[17] In this technique, a segment of the patient's forearm, including the radial artery and the skin from the underside (**A**), is used to create the neophallus. The radial forearm flap provides excellent vascularisation, allowing for good blood supply (**B**). Nerves and blood vessels are microsurgically connected to maintain sensation and vascularisation  Example of a tube within a tube flap design in the radial free flap with (**A**) arm markings; (**B**) dissected flap; and (**C**) a tube within a tube around the catheter[C]  (**D**) Postoperative result after second stage – 'glans sculpting'[D] **Anterolateral thigh**[17] This method uses tissue from the thigh, particularly the anterolateral thigh, to construct the neophallus (**E**) Leg markings for the anterolateral thigh flap without urethra creation[E]	• Gender affirmation with improved mental health, enhanced body confidence • Aesthetic outcome • Functional benefits • Increased freedom of gender presentation through clothing choices • Improved confidence in intimate relationships • Ability to engage in penetrative intercourse	**Infection:** surgical site infections can occur, necessitating proper wound care, antibiotics and monitoring **Urethral complications:** issues with urethral fistulas or strictures might arise, requiring surgical correction **Vascular complications:** blood flow problems can lead to partial or total flap failure, emphasising the importance of maintaining optimal circulation **Sensation issues:** changes in sensation, particularly around the neophallus, are possible due to nerve manipulation **Penile prosthesis complications:** higher incidence of implant infections or erosion compared to cis-population; higher incidence of 'visible' changes in the phallus related to cylinder position **Scrotal and perineal issues:** skin loss, scarring with reduced size and capacity for implant.

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[B]Reproduced from Djordjevic ML, Stojanovic B, Bizic M. Metoidioplasty: Techniques and outcomes. Transl Androl Urol 2019;8(3), with permission from AME Publishing Company.

[C]Reproduced from Heston AL, Esmonde NO, Dugi DD 3rd, Berli JU. Phalloplasty: Techniques and outcomes. Transl Androl Urol 2019;8(3), with permission from AME Publishing Company.

[D]Reproduced from Akhoondinasab MR, Saboury M, Shafaeei Y, Forghani S, Fatemi MJ. The comparison of a new durable coronaplasty technique with Norfolk method for glans reconstruction after phalloplasty. World J Plast Surg 2020;9(1), with permission from the Iran Society of Plastic, Reconstructive and Aesthetic Surgeons.

[E]Reproduced from Rashid M, Tamimy MS. Phalloplasty: The dream and the reality. Indian J Plast Surg 2013;46(2), with permission from Medknow Publications.