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Controversies in Urogynaecology – Multiple Choice Answers Vol. 54

1. a) T b) F c) T d) T e) F

VVF is a condition that is most prevalent in low resourced countries and it is estimated that approximately 3 million women have untreated urinary fistulae in the developing world. The majority of VVF in low resourced countries are obstetric related and results from prolonged, obstructed labour. In well-resourced countries, the commonest cause of VVF is surgically related and hysterectomy is the commonest surgical procedure causing fistula. VVF is ten times more common than ureteric injuries with gynaecological surgery. It is well known that the best opportunity for successful fistula closure is the first attempt, and with each successive attempt, failure rates increase.

2. a) T b) T c) F d) F e) T

It is well established that the first surgical intervention provides the best surgical result. It is also accepted that the transvaginal approach avoids the abdominal cavity, has a short operative time, is associated with little bleeding and patients have a short hospital stay. There is no evidence to substantiate that laparoscopy is the most superior approach for VVF repair as there are only few poor quality comparative studies. There is no head to head study comparing the transvaginal with the transabdominal route. In a systematic review article by Hilary et al., the success rates for transvaginal versus transabdominal repairs were 90.8% versus 83.9% respectively. The robotic approach is associated with good outcomes in both primary and recurrent fistula repairs.

3. a) F b) F c) F d) F e) T

To date, there are no data to confirm that any one intraperitoneal entry technique is superior to another. There is no RCT to show superiority of the *trans*-vesical approach. In the pooled data comparing the two approaches and reported by Miklos et al., the 2 techniques were comparable. Also from the pooled data there was no significant difference in cure rates when the bladder was closed in a single or double layer. Interpositional grafts have not shown superiority with regard to outcomes. In fact, there is no RCT addressing this issue and many reports have high success rates without grafts. In the study by Miklos, patients that had a bladder test after VVF repair had a 6% higher success rate compared to those who did not.

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4. a) F b) F c) F d) F e) F

There are no case series to date that addresses laparoscopic recurrent VVF repairs. There are no comparative trials comparing laparoscopy with the transabdominal route. From the available data, interpositional grafts have shown no superiority with regard to cure rates compared with no grafts. Robotic surgery is usually associated with a decreased learning curve when compared to laparoscopic surgery and at present, there is no data to confirm superiority of the extra-vesical approach to the *trans*-vesical technique.

5. a) F b) F c) T d) F e) F

The prevalence of urinary incontinence increases with age and is reported as 30–60%.

6. a) F b) F c) T d) F e) F

Approximately 20% of adult women will need incontinence and/or prolapse surgery in their lifetime.

7. a) F b) F c) F d) T e) F

Vaginal birth has repeatedly been shown to be the most important risk factor for future pelvic floor dysfunction.

8. a) F b) F c) F d) F e) T

The only factor not in the UR-CHOICE score is whether a woman has had a hysterectomy.

9. a) F b) T c) F d) F e) F

In a survey of 15 OECD counties in 2012, 82% of all SI operations were MUS. Other continence surgery includes fascial pubo-vaginal slings, the Stamey needle suspensions, Botox injections, sacral nerve stimulators, and reconstructive bladder interventions accounted for a median rate of 10.6% of continence interventions. There is considerable geographical variation in MUS usage with 90% of SI operations in Sweden and Canada and only 65% in France.

10. a) F b) T c) F d) F e) F

Numerous meta-analyses and case series have yielded a 2–3% risk of vaginal mesh exposure with mid-urethral sling.

11. a) F b) F c) T d) F e) F

There is considerable debate on this but consensus defines this urodynamically as having Valsalva leak point pressure (VLPP) of less than 60 cmH_2O and/or maximum urethral closure pressure (MUCP) of less than 20 cmH_2O. These patients have more severe incontinence and poorer surgical outcomes.

12. a) F b) F c) F d) T e) F

The 2016 Ford et al. Cochrane review confirmed similar vaginal mesh exposure rate (2.1%–2.4%), de novo urgency rate (8.1%–8.3%) but the *trans*-obturator route has an excess of groin pain (20.8% vs 4.5%) compared with the retropubic route.

13. a) T b) T c) T d) T e) T

Small and early fistulas may heal if the leakage stops with a catheter. Fistulas due to surgery usually have less tissue damage and even though the number of reported cases is small, fibrin glue seems to increase the chance of healing.

14. a) F b) F c) F d) T e) F

Unless diagnosed within the first 2 days, repair of a VVF is best left until the tissues are not friable which is usually 10–12 weeks after the injury. A fascial sling may be placed in fistulas involving the urethra but only if no tension is applied. Most vault fistulas can be repaired vaginally. Single layer closure is the norm for most repairs although with smaller fistulas two layer closure is possible. There is no evidence that single layer closure is inferior to double layer. There is no strong evidence that any specific route of surgery has an advantage over any other.

15. a) F b) T c) T d) T e) F

The study that showed that seven days catheter drainage was not inferior to 14 days only applies to simple fistulas. Most fistulas would not be classified as simple. Even if the dye test is positive, if there is no leakage of urine with the catheter in, it is highly likely that the fistula will heal if given time to do so. It is estimated that about 10% of patients develop some degree of urinary retention after the catheter is removed. Therefore at least one measurement of residual urine volume should be performed at the end of the day that the catheter is removed and repeated the following day. In a large study of mortality after fistula repair, the cause of death in nearly half of the cases was various manifestations of sepsis. If the ureters are close to the repair site, ureteric catheters are inserted and left in for 7–14 days depending on how close they are to the suture line. If obstruction to the ureter occurs, a nephrostomy is a better option, as often the ureter will re-open with time so may avoid the need for surgery.

16. a) T b) T c) F d) T e) T

Spatulation is standard during re-anastomosis of ureteric injuries to reduce the risk of ureteric stricture. Anastomoses should be tension free to optimise vascularity, reduce strictures and prevent anastomotic breakdown and leak. Non-absorbable sutures should not be included into the urinary tract as foreign bodies within the urinary tract promote stone formation. Ureteric stents are used to optimise internal drainage of the ureter following uretero-ureterostomy and thereby reduce anastomotic leaks. External drains are useful to drain anastomotic leaks and thereby prevent urinomas which may become infected and complicate the post-operative course.

17. a) T b) T c) F d) T e) T

The ureter runs in proximity to the gonadal vessels over the psoas muscle before it enters the pelvis by crossing over the bifurcation of the iliac vessels. This crossing point is a relatively consistent position for the ureter and it can often be identified here during complicated cases when it may be challenging to find deeper in the pelvis. The ureter runs along the pelvic side wall once it enters the pelvis. It is vulnerable to injury as it lies in the base of the ovary along the pelvic sidewall. The ureter is crossed by the uterine artery as it branches off the internal iliac artery ("the water under the bridge"). The ureter runs along the pelvic sidewall until the level of the ischial spine. It traverses medially towards the bladder. Once the ureter traverses medially from the pelvic sidewall, it runs within the base of the broad ligament through the cardinal ligament to reach the bladder.

18. a) F b) T c) F d) F e) F

Stents may make it easier to identify the ureter and identify injuries but there is no proven benefit in terms of reduction of risk of injury. Stents make it easier to identify the ureter intra-operatively as they can be felt within the ureter. If a stented ureter is injured, the injury is easier to identify. Stents are not without complications and should therefore be reserved for high risk cases. Most stents should not be left in-situ longer than 6 months. Forgotten stents may cause stone formation, ureteric obstruction and destruction of the kidney. There is no evidence to support that ureteric stents prevent strictures. They do however reduce leaks.

19. a) T b) F c) T d) T e) F

a, c and d are all anatomical abnormalities of the ano-rectum that usually present as posterior compartment descent, although an isolated enterocele may also be evident as an isolated vault eversion after hysterectomy. Anal incontinence is a functional disorder that may or may not be associated with prolapse of the posterior compartment, but the latter is not directly causative of anal incontinence. Isolated utero-vaginal prolapse is a mid-compartment problem.

20. a) T b) T c) T d) F e) T

A radiological or sonographic rectocele is a diverticulum or sacculation of the rectal ampulla which is due to a defect in Denonvillier's fascia or the rectovaginal septum, and usually filled with hyperechogenic stool and bowel gas. Getting the patient to bear down makes any pelvic floor defect more obvious.

21. a) F b) T c) T d) T e) T

Avulsion, i.e., the traumatic disconnection of the m. puborectalis from the inferior ramus of the os pubis, requires passage of the baby's head, or at the very least a failed Forceps delivery. Forceps is the primary obstetric risk factor, and the likelihood of avulsion increases with maternal age at first birth, in an almost linear fashion. It is strongly associated with anterior and central compartment prolapse while the link with posterior compartment descent is much weaker.

22. a) T b) F c) T d) T e) T

Ballooning, i.e., a highly distensible levator hiatus of $\geq$25 cm^2 on maximal Valsalva, is associated with prolapse and prolapse recurrence and can be determined clinically by measuring the distance between urethra and anus on Valsalva (GH + Pb). There is no link with urinary incontinence.

23. a) T b) F c) F d) F e) F

Vaginal delivery is the single most important risk factor for pelvic organ prolapse.

24. a) T b) F c) T d) T e) T

Only age is not associated with unsuccessful pessary fitting.

25. a) T b) T c) T d) T e) T

In Sweden the annual cost of urinary incontinence alone has been reported to account for approximately 2% of the total healthcare budget. The highest life time risk for POP surgery, 19%, has been reported from Western Australia. Route of delivery and family history of each pelvic floor disorder

were strong predictors in most models. Urinary incontinence before and during the index pregnancy was a strong predictor for developing all pelvic floor disorders in most models 12 years after delivery.

26. a) T b) T c) F d) T e) T

Only Caucasian race is not associated with mesh exposure.

27. a) T b) F c) F d) F e) F

There is no difference in the rates of dyspareunia, cost effectiveness or QoL in mesh or native tissue repairs. Correction of mesh erosion is very difficult.

28. a) F b) F c) T d) F e) F

The structure indicated by the arrows in images A and B is a mesh repair.

29. a) T b) F c) T d) F e) F

Vaginal laser treatments are being introduced and used worldwide to treat urogenital symptoms including USI. The studies performed to date are using CO_2 or erbium YAG lasers in single centres, small numbers and short-term follow-up with comparative control group. Improvement rates of 62–78% have been reported with minor side effects including vaginal warming, increased vaginal discharge and transient urge incontinence. However recently a case report of a vesico-vaginal fistula following laser treatment for USI was reported. Prospective comparative studies are planned so it is important that the widespread commercial introduction of vaginal laser therapy should not occur until safety and effectiveness is confirmed.

30. a) T b) T c) F d) F e) T

The bulking agents to date have had a reasonable short-term effectiveness but repeated reinjections have been necessary to maintain continence. In a RCT of women with SUI and ISD comparing the pubovaginal sling and transurethral Macroplastique, the symptomatic and patient satisfaction success rates were similar following the sling and Macroplastique with the objective success rate being significantly greater ($P < 0.001$) following the sling (81% vs 9%). Macroplastique had significantly lower morbidity but was more expensive than the sling ($P < 0.001$). Response rate at 62 months follow up was 60% in both groups with the sling group reporting better continence success (69% vs 21%) and satisfaction rates (69% vs 29%, P greater 0.05). Whether the newer bulking agents are more effective remains to be seen. A RCT comparing Bulkamid to TVT sling is presently being conducted which should provide answers.