Acute Inversion of Uterus- Do's & Dont's

The path for safe resolution

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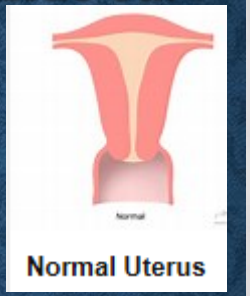
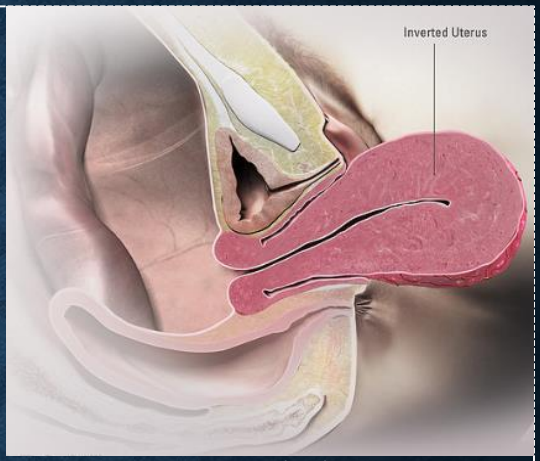
INTRODUCTION

Acute uterine inversion - infolding of uterus inside out

in varying degree, partially or completely

- relatively rare (incidence -1:20000)
- Serious, life threatening complication
- demands a prompt team management





Uterus turned inside out

Common presentation is shock, initially neurogenic then hypovoelemic due to post-partem haemorrhage.

Prompt diagnosis is important. Diagnosis is by:

presence of shock

haemorrhage

PPH due to invaginating uterus preventing ut. Cont. and stretching Em. leading to increased blood loss from mucosal surface of placental bed

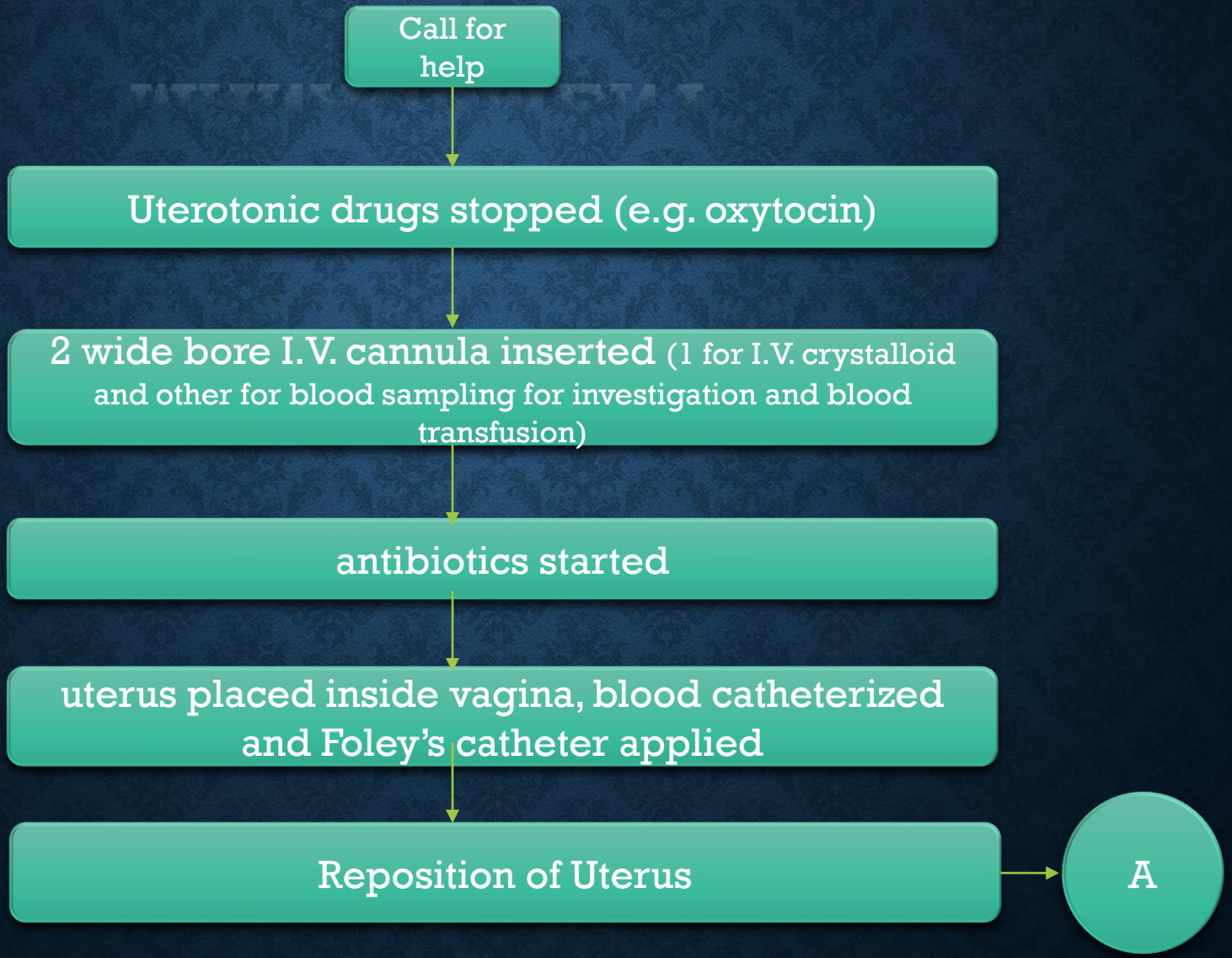
lower abdominal pain

cupping or dimpling of fundal surface

In complete variety, bimanual examination reveals a pear shaped mass outside the vulva with broad end pointing downwards, reddish purple in colour. 65% present with severe PPH. The **key to successful outcome** is teamwork.

Following the institution of AMTSL, the incidence has fallen.

MANAGEMENT


Call for help
Uterotonic drugs stopped (e.g. oxytocin)
2 wide bore I.V. cannula inserted (1 for I.V. crystalloid and other for blood sampling for investigation and blood transfusion)
antibiotics started
uterus placed inside vagina, blood catheterized and Foley's catheter applied
Reposition of Uterus
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MANAGEMENT

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1

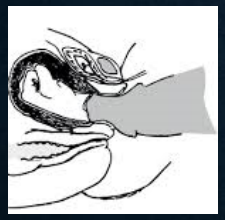
Manual Reduction (Johnson maneuver)

Fundus pushed through cervical ring towards umbilicus

bimanual compression and massage done till uterus is well contracted and bleeding stops

Uterus held in place

Uterotonic (oxytocin/methergin) given after placental removal.



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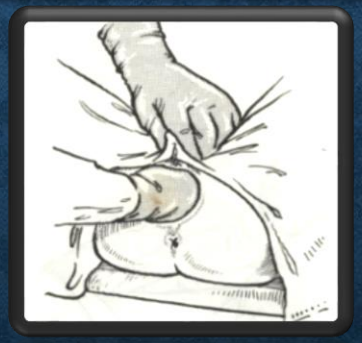
Hydrostatic reposition as recommended by WHO (O'Sullivan)

instilling warm saline or isotonic sodium chloride solution in vagina.



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Surgical reduction (Haultains)

Operation done under laparotomy or via laparoscopic guidance

- If 1 fails, then 2 is action on
- If both fail, the 3 is recommended
- If none of the above applies, then Hysterectomy is the way forward

The part of the uterus come down last should go back first.
After reposition, hand withdrawn slowly when it is felt contracted

MANAGEMENT – HYDROSTATIC REPOSITION

Hydrostatic reposition as recommended by WHO (O'Sullivan)

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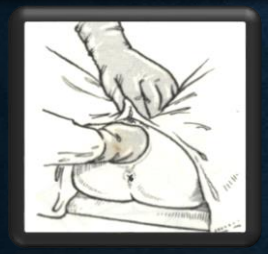
instilling warm saline or isotonic sodium chloride solution in vagina.



- O'Sullivan's Hydrostatic method
  - I.V set or rubber tube passed through post. Fx , bag of fluid elevated 100-150 cm above the level of vagina
  - vulva closed around operator's wrist by assistant

  (making a water seal with operator's hand and vulva)
  - warm water or saline is run until pressure gradually restores uterus in position(5L).
- SOS Bakri tamponade, Silastic ventouse cap are also useful.
- Use of Intrauterine Rusch balloon catheter (modified hydrostatic method)also reported.

MANAGEMENT – SURGICAL METHODS

Surgical methods

Haultains	**Operation done under laparotomy or via laparoscopic guidance** (Laparotomy done; constriction ring of cervix revealed by post longitudinal incision, replacement of uterus done by traction on round ligaments
Spinellis	Vaginally; ant. Colpotomy, incision on cervix ring and uterine reposition
Kustners	Post Colpotomy incision on cervix ring and uterine reposition

Post-operative monitoring: vital signs, position of uterus, vaginal bleeding, continuous I.V. uterotonic, antibiotic

Tocolytics may be used to facilitate reduction-

- Nitroglycerine 0.25 to.. 5 mg I.V over 2min, or MgSo4 4-6 gm I.V over 20 min
- Epidural or Spinal anesthesia are in use in Acute inversion, G/A in Sub-acute & Chronic
- Tocolytics may cause Hypotension, appropriate care should be taken.

Trenexamic acid ,the antifibriolytic, 1gm bolus followed by 1gm infusion over 8 hours minimize bleeding.

DO'S AND DON'T'S

- Call for extra help
- Rapid I.V. crystalloid infusion
- Blood transfusion
- Immediate manual reduction of Uterus
- Stop Uterotonics

- No premature cord traction
- No fundal pressure
- When you face inversion, do not hesitate for extra help
- Do not remove the placenta before correction of inversion

Conclusion

Path for safe resolution:

- AMTSL should be followed strictly
  - Cord clamping and cutting
  - CCT
  - Uterine massage
- Response team should be at bedside and prompt in action
- Acute inversion typically presents with shock, PPH , p/a non palpable uterus/ dimpling of fundus/ or mass outside vagina

Goals: Shock and haemorrhage are of main concern.

Prompt actions: Resuscitation, hemodynamic stability, reposition. Removal of placenta after reposition, uterotonics (Oxytocin orPGF2alpha) after successful reduction

Monitor: Position of uterus, Vital signs, Vaginal bleeding
Future pregnancy – Chance of recurrence so detailed discussion with patient and family is a must.

Conclusion

Prognosis: Good, if managed correctly

Acute uterine inversion is potentially **life threatening** complication of third stage of labour, morbidity and mortality reduced by prompt diagnosis, quick team management.

AMTSL should be followed strictly (this has reduced the incidence).

Education of signs of placental separation, training regarding placental delivery, diagnosis and management of uterine inversion should be given to juniors, post-graduate students, mid-wives and birth attendants. The management of acute uterine inversion should be incorporated into skills and drills training.

Mis-management of third stage of labour such as premature traction on umbilical cord, fundal pressure before separation of placenta – the commonest causes needs to be prohibited.

Acknowledgement – my sincere thanks to Adity Bhushan ,my daughter .

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