Original Article

Pregnancy related acute urinary retention

Kanta Ahuja, Akbar Ali, Ghulam Shabir, Nisar Ahmed

Department of Gynecology and Obstetrics, SMBBMU Larkana, Pakistan

Objective: To determine the etiology and management options of pregnancy related acute urinary retention.

Methodology: This retrospective study was carried out at Rimsha Medical Centre Dadu and Farooque Medical Centre Larkana, Pakistan from Jan 2006 to Dec 2011. During the study period, 15 cases of pregnancy presented with retention of urine. Ten patients presented in first trimester while 5 presented in second and third trimester. All were diagnosed on clinical presentation, ultrasound and routine investigation like Blood CP, Urine examination, serum creatinine and urine C/S.

Results: Mean age of patients was 30 years (range 25-40). In all patients urinary bladder was palpable. In 5 (33.3%) patients urine showed pus cells and two patients had positive urine C/S. Ultrasound of 5 (3.3%) patients showed pregnancy with retroverted uterus, 4 (26.7%) patients had lower genital infection, and in 6 (40%) patients there was no pathology detected except full bladder. Seven (46.6%) patients were treated conservatively, 2 (13.3%) were treated by placement of an indwelling catheter, 5 (33.4%) by clean intermittent catheterization and one (6.7%) by replacement of uterus in anterior position. All were relieved of retention after definitive procedures and no complication occurred except two developed UTI.

Conclusion: Acute urinary retention in pregnancy is an emergency, and rapid measures are essential to avoid irreversible uterine ischemia and spontaneous abortion. Simple measures may be sufficient like conservative treatment, placement of an indwelling catheter or by clean intermittent catheterization and replacement of uterus in anterior position. (Rawal Med J 2014;39: 42-44).

Keywords: Pregnancy, urinary retention, retroverted uterus.

INTRODUCTION

Acute urinary retention (AUR) during pregnancy is an emergency presenting with lower abdominal pain and retention of urine. Retroverted uterus, gravid uterus, uterine or vaginal leiomyomas, ovarian tumor, uterovaginal prolapse, ectopic pregnancy, cervical pregnancy, fibroid incarceration, lower genital infection and pelvic inflammatory disease (PID) are the commonest causes of acute retention of urine in pregnancy.[1-3] The enlarging gravid uterus and uterine pathologies may trap the uterus inside the pelvic ring, preventing it from ascending into the abdominal cavity. Furthermore, a history of inflammatory disease may trap the fundus of the uterus within scar tissue that also may prevent the enlarging, gravid uterus from ascending into the abdominal cavity.[2] Retroverted uterus is present in 15% of pregnancies during first trimester.

Retention of urine in pregnancy has been described in all trimesters but most commonly occurs between 10th and 16th week of gestation. Retroverted uterus is the commonest cause of urethral obstruction by extrinsic compression and has been postulated as the pathogenesis of urinary retention.[4,5] A knowledge of the causes of urinary retention during pregnancy can help prevent irreversible uterine ischemia and spontaneous abortion. Treatment options for AUR in pregnancy are conservative treatment, placement of an indwelling catheter or by clean intermittent catheterization and replacement of uterus in anterior position.[2,6] Aim of our study was to determine the etiology and management options of pregnancy related AUR.

METHODOLOGY

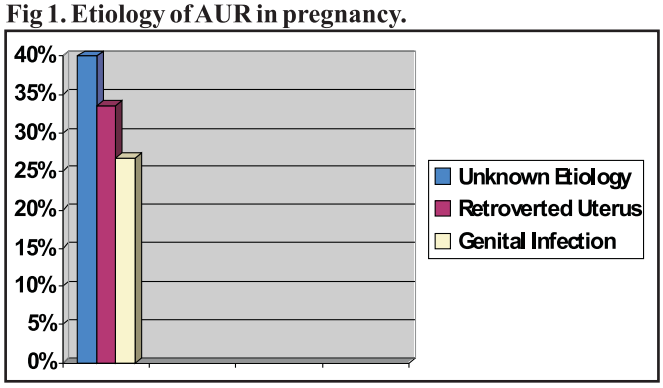
Fifteen female patients of urinary retention during pregnancy were seen between Jan 2006 to Dec 2011 in Rimsha Medical Center Dadu and Farooque Medical Center Larkana, Pakistan. All patients were diagnosed simply on presentation and ultrasound and by routine investigation like Blood CP, urine examination, serum creatinine and urine C/S. Ten (66.6%) patients presented in first trimester while 5 (33.3%) presented in second and third trimester. All

patients with retention of urine with pregnancy were included in this study while pregnant woman with chronic constipation and neuropathic patients were excluded from the study.

RESULTS.

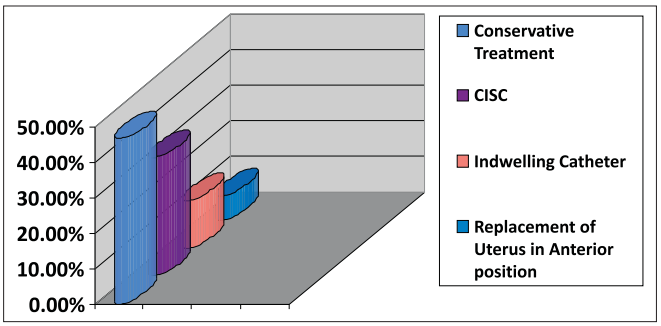
Mean age of patients was 30 years (range 25-40). Urine showed pus cells in 5 (33.3%) patients and two had positive urine C/S. Ultrasound of 5 (33.3%) patients showed pregnancy with retroverted uterus (Fig 1).

Fig 1. Etiology of AUR in pregnancy.



All patients treated by procedure like conservative treatment, placement of an indwelling catheter, clean intermittent catheterization and by replacement of uterus in anterior position. 7 (46.6%) patients were treated conservatively, 2 (13.3%) were treated by placement of an indwelling catheter, 5(33.3%) by clean intermittent catheterization and 1 (6.7%) patient by replacement of uterus in anterior position (Fig. 2).

Fig 2. Treatment options used.



All patients relieved retention of urine after definitive procedure and no complication occurs during any procedure except two patients developed UTI, which was treated by antibiotic according to urine culture and sensitivity.

DISCUSSION

Burdon and co-workers noted this disturbance of pregnancy in 1877. During gestation, the capacity of the bladder increases and tonicity also decreases. Various etiology cause mechanical pressure on the urethra and bladder neck leading to acute retention.[5,7] Retroverted uterus is present in 15% of pregnancies during first trimester and the incidence of urinary retention due to a retroverted has been observed to be 1.4%. In our study, retroverted uterus was seen in 5 (33.3%) cases, lower genital tract infection in 4 (26.7%) cases. In 6 (40%) cases cause was not detected it may be there is role of PID, which can trap the fundus of the uterus within scar tissue and may prevent the enlarging, gravid uterus, from ascending into the abdominal cavity.[3,6]

Pregnancy related AUR has been described in all trimesters but most commonly occurs between 10th and 16th week. In our study, 10 (66.6%) patients presented in first trimester while 5(33.3%) patients presented in second and third semester. This is comparable to previous studies.[8,9] Seven (46.6%) patients were treated by conservative treatment, two patients by replacement of indwelling catheter while 5(33.3%) patients treated by clean intermittent catheterization due to refusal for catheterization. In conservative treatment, counseling and reassurance were given to patients that there is no serious pathology in investigation and advised to void in toilet in such a manner that you should pour some water in external genitalia and open the water tap drop by drop, which is comparable to other studies.[2,10]

In one patient, replacement of uterus in anterior position was done, which is comparable to other studies.[11,12] Retroverted gravid uterus causes mechanical compression on the lower bladder by the anteriorly and superiorly displaced uterine cervix. Replacement of uterus in anterior position done by simple technique, in which bladder is decompressed, the patient is placed in the dorsal lithotomy or knee chest prone position. Manual reduction of the uterus is undertaken by inserting two fingers into the vagina along the posterior wall,

while simultaneously pushing on the lower abdominal wall. In most cases, one is able to feel a sudden loss of resistance as the uterus is repositioned into its anterior location. It is important to apply gentle and slow pressure to prevent separation of the placenta or rupture of the membrane or uterus.[13]

CONCLUSION

Acute urinary retention during pregnancy is rare, and rapid measures are essential to avoid devastating consequences. Simple measures may be sufficient, like placement of an indwelling catheter or by clean intermittent catheterization and replacement of uterus in anterior position.

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Conception and design: Kanta
Collection and assembly of data: Nisar, Kanta
Analysis and interpretation of the data: All
Drafting of the article: Nisar
Critical revision of the article for important intellectual content: ALL
Statistical expertise: Saeed
Final approval and guarantor of the article: Kanta, Nisar
Corresponding author email: drnisarshaikh@yahoo.com
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