

The implications of urinary tract reconstruction on pregnancy

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Introduction

Bladder augmentation and urinary diversion is commonly performed in neurological and other congenital anomalies of the lower urinary tract.

The outcome of pregnancy in women who have undergone urinary tract reconstruction remains unclear. This study aimed to evaluate the antenatal and intrapartum management, and outcomes of pregnancy following urinary tract reconstruction.

Methods

A retrospective review of prospectively collected data between 2010 and 2015 was performed.

We identified 34 pregnancies in 29 patients (median age 31.2 years, range 17–46).

All patients had undergone complex urological reconstruction for various indications.

Results

There were 35 (1 set of twins) live-births comprising 17 girls and 18 boys.

Mean gestation at delivery was 36 weeks (33 - 38) and mean birth weight was 2.78 kg (1.79 – 3.50). Five patients had a solitary kidney.

The majority were delivered by elective Caesarean section (LSCS) (94.1%, 32/34) performed jointly by a urologist and obstetrician.

Two women sustained bladder injury during surgery with no long-term complications (5.88%, 2/34). Another two women developed vesico-cutaneous fistulae which resolved spontaneously (5.88%, 2/34). One woman required emergency (37 week) LSCS for deterioration in renal function. (2.94%, 1/34).

Pregnancy-related urological complications included:

- UTI requiring hospital admission (11.8%, 4/34)

- upper tract obstruction requiring nephrostomy (20.6%, 7/34).

Three women reported difficulty with catheterisation via Mitrofanoff, requiring indwelling catheters (8.82%, 3/34).

Primary abnormality	Total number of patients
Exstrophy-epispadias	9/29
Spinal dysraphism	4/29
Sacral agenesis	2/29
Fowler's syndrome	1/29
Bladder cancer	1/29
Congenital incontinence/small bladder/short urethra	8/29
Neuroblastoma	2/29
Congenital VUR	1/29
Urogenital sinus	1/29

Type of reconstructive surgery	Total number of patients
Augmentation cystoplasty	15
Ileal conduit	1
Mitrofanoff channel	15
Ureteric re-implantation	4
Artificial urinary sphincter	2
Antegrade continence enema channel	1

Conclusion

Pregnancy can be safely managed with preservation of renal function in women with previous urinary tract reconstruction.

These women are prone to complications and require shared care, judicious monitoring and thorough counselling throughout pregnancy to diagnose and manage complications proactively.

These patients should be made aware of the impact of pregnancy and the high rate of pregnancy related complications.

Although some of these women could potentially achieve a vaginal birth, we favour planned Caesarean section, jointly performed by an obstetrician and urologist, in order to avoid the potential maternal and fetal risks of a complex emergency Caesarean section.