

How Early Detection Error Can Lead to Severe Prognosis in Patient with Post-Partum Urinary Retention: A Case Report of Two Cases

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ABSTRACT

Postpartum urinary retention (PUR) is a condition with a post-void residual volume of more than 150 mL. The incidence of PUR is not clear because of an undiagnosed asymptomatic condition. According to from literature incidence of PUR is about 0.05%-37%. Neglected PUR may result in anuria, hydronephrosis, and also kidney failure caused by renal obstruction. We report two cases of patients with RUP with the main complaint of difficulty for urinating, the first case was a patient with fifteen days post vaginal birth and came to the hospital after two weeks of the complaint. The patient was catheterized with redness urine. Kidney function examination was performed urea 173 mg/dL and cr 8.4 mg/dL before catheterized and cr 1.9 mg/dL urea 46 after catheterized. The second case was a patient with one month after vaginal birth and came to the hospital after three days of the complaint. The patient was catheterized with cloudy urine with laboratory findings urea 35mg/dL and cr 0.8 mg/dL. PUR may result in Acute Kidney Injury (AKI) due to extrarenal obstruction. In the first case, the ability to urinate is impaired with the complaint difficulty of urinating spontaneously in two weeks, this condition may lead to AKI. Undiagnosed clinical symptoms and neglected PUR can lead to a severe prognosis.

Keywords: PUR, neglected, undiagnosed, AKI.

1. INTRODUCTION

Post-Partum Urinary Retention (PUR) is defined as the inability to empty the bladder or urinate normally in 6 hours after vaginal delivery with a residual volume of more than 150 mL [1]. PUR is categorized into two types: overt PUR which means clear and widely agreed upon. Condition of inability to urinate spontaneously in 6 hours after vaginal delivery or 6 hours after removing the catheter in the case of a cesarean section and covert PUR is defined as a post-void residual volume (PVRV) more than 150 mL after the first spontaneous urination, as measured by catheter. The mechanism of PUR is unclear. Multiple factors that related to the

physiological, neurological, and mechanical processes correlated during pregnancy and vaginal delivery [2].

The greater the residual volumes, the more persistent bladder dysfunction will occur and require longer periods of catheterization. Residual volumes 700-750ml or more, which is greater than normal bladder capacity, have resulted in poorer prognosis [1].

PUR may be a self-limiting Phenomenon. However, delays in diagnosing and managing PPUR promptly can result in ongoing bladder dysfunction requiring intermittent catheterization. In an observational study of 11.332 women after vaginal delivery, 6.45% of women with open PPUR resolved within 48 hours, 30% resolved with 72 hours, and 25% continued to

experience retention for >72 hours. Temporary one in five women needs intermittent catheterization to persistent PUR. Finally, there are resolution symptoms in all women [5].

Acute Kidney Injury (AKI) is characterized by an acute decrease in renal function, which encompasses structural damage and loss of kidney function. AKI was diagnosed based on the increase in serum creatinine more than or equal to 0.3 mg/dl and in percentage was increasing in serum creatinine more than or equal to 50% (1.5-fold from baseline), or a reduction in urine output (documented oliguria of less than 0.5 ml/kg per hour for more than six hours) [3]. Staging system of AKI is to classified prognosis and therapeutic interventions. AKI was classified into stage 1st which increase in serum creatinine of more than or equal to 0.3 mg/dl ($\geq 26.4 \mu\text{mol/l}$) or increase to more than or equal to 150% to 200% (1.5- to 2-fold) from baseline and urine output criteria less than 0.5 ml/kg per hour for more than 6 hours. AKI stage 2nd is the condition that increased serum creatinine to more than 200% to 300% (> 2- to 3-fold) from baseline and urine output evaluation was found to be less than 0.5 ml/kg per hour for more than 12 hours. For the 3rd stage was the condition that increase in serum creatinine to more than 300% (> 3-fold) from baseline (or serum creatinine of more than or equal to 4.0 mg/dl [$\geq 354 \mu\text{mol/l}$] with an acute increase of at least 0.5 mg/dl [$44 \mu\text{mol/l}$]) and urine output evaluation was less than 0.3 ml/kg per hour for 24 hours or anuria for 12 hours [4,6].

2. CASE REPORT

Two cases were reported of patients with RUP with the main complaint of difficulty for urinating. The first case was a patient fifteen days post vaginal birth and came to the hospital after two weeks of complaint. Patient can't urinate for 2 weeks after vaginal delivery at primary health care, she said that the past few days she couldn't control urination, so urine often came out unnoticed. Due to this condition patient came to Mataram University Hospital. Patient was catheterized with redness urine. Kidney function examination was performed urea 173 mg/dL and cr 8.4 mg/dL before catheterized and cr 1.9 mg/dL urea 46 after catheterized. This patient was diagnosed with Acute Kidney Injury et causa Post-Partum Urinary Retention.

Second case was patient with one month after vaginal birth and came to hospital after three days of complaint. Patient felt uncomplete urinate and often went back to toilet. Due to this condition patient came to

Mataram University Hospital. Patient was catheterized with cloudy urine with laboratory findings urea 35mg/dL and cr 0.8 mg/dL. Laboratories findings before catheterization was not evaluate

3. DISCUSSION

Postpartum Urinary Retention (PUR) is common in women after vaginal delivery. The obstruction caused by peri-urethral and vulvar edema after vaginal delivery can cause a physical obstruction which leading to obstruction of the bladder outlet. This condition can cause over-distention of the bladder and permanent damage to the detrusor. Therefore, the physiological adaptations after pregnancy and the trauma owing to vaginal delivery may lead to PUR. (2)

This case report was reported a patient after vaginal delivery and complaint with uncontrol urinate which came out unnoticed after 2 weeks of vaginal delivery. Patient previously came to primary health care and was catheterized and then asked to return home without more comprehensive evaluation. In this case there was negligence in the management, resulting in neglected patients that cause poor prognosis. When patient at Mataram Hospital University, we evaluate patient residual urine, at 22 May 2021 we found residual urine 500 cc due to this condition we maintained patient catheter for 24 hours and evaluate, we found residual urine at 23 May 2021 was 1200cc, based on guideline we should evaluate patient residual urine for 72 hours. At 26 May 2021 patient residual urin was 1200cc and at 29 May 2021 patient residual urine still 1200cc. Kidney function laboratory performed urea 173 mg/dl and cr 8.4 mg/dl before catheterization and cr 1.9mg/dl with urea 46mg/dl after catheterization. Based on this laboratory finding patient was diagnose with Acute Kidney Injury stage 1.

Mobilization and a trial without a catheter were also carried out every 6 hour and patient has not been able to void spontaneously. Pharmacological therapy that has been given is Ciprofloxacin 2x500 mg, Misoprostol 3x200 mg, Mefenamic acid 3x1, Neurobion inj 1 amp/ 24 hours, Metargin tab 3x1.

Second case, after 24 hours of hospitalization, patient's residual urine was evaluated and we found the volume is 500 cc and we maintained catheter for 24 hours. We evaluate residual urine was 800 cc. The patient was also taught to do bladder training and after 3 days of control, the urine residue was 200 cc so we removed patient's catheter. Laboratory findings urea 35mg/dL and cr 0.8 mg/dL. This patient was diagnosed

with Post-Partum Urinary Retention, without renal complication. This patient had a better prognosis than the first case due to the early treatment from primary health care.

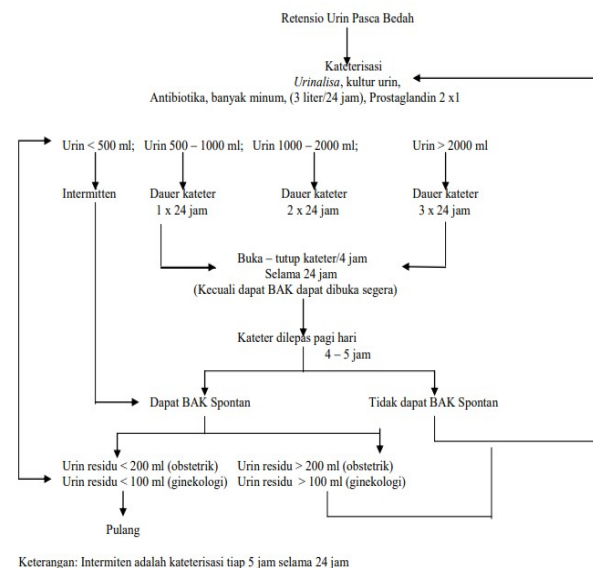


Figure 1. PUR Treatment (6)

4. CONCLUSION

The clinical diagnosis of RUP is not easy, especially in cases with asymptomatic symptom. Knowledge and understanding of health workers can affect the prognosis and final outcome of RUP. Awareness of risk factors may allow the obstetrician to prevent this complication

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