



## Anuria due to an Eyeless Urethral Catheter: A Case Report

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### Abstract

#### Background

Anuria is a dangerous omen in clinical practice and hardly caused by introduction of eyeless catheter except in this rare event which calls for clinical reportig ,

#### Case report:

This is a case report of an eyeless urethral catheter discovered during the pre-operative resuscitation of a 16-year-old male who had an acute

abdomen and was scheduled for emergency laparotomy because of suspected perforated acute appendicitis. The preoperative resuscitation included insertion of naso-gastric tube, 2 hours into the resuscitative phase was found to be anuric due to an eyeless Foley catheter. The defective catheter was replaced with a normal one and 600mls of urine was evacuated from the bladder. Laparotomy, appendicectomy and peritoneal toileting were carried out under general anesthesia with full recovery.

**Conclusion :** The close investigation of urethral catheter before use in clinical practice is Recommended.

**Keywords:** Anuria, Appendicitis, Eyeless Catheter, Resuscitation.

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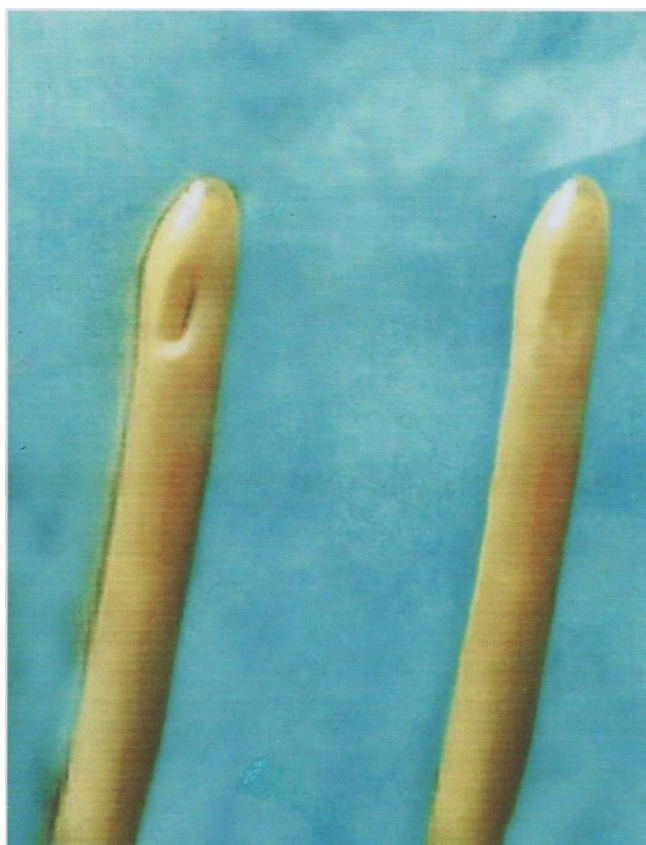
### I. Introduction

Anuria is the complete absence of urine production, as evidenced by the inability to void urine [1]. It may also be described as the inability to urinate due to either lack of urine production or having an obstruction along the urinary tract. There are several causes of anuria which can be classified into prerenal, renal, and post-renal causes. Prerenal causes of anuria include severe hypovolemia, sepsis, cardiogenic shock, and hypoxia. The renal causes are mainly due to damage or ischemia of the nephrons. Post-renal anuria is usually due to any cause of obstruction to the flow of urine through the lower urinary tract.

### **Case presentation**

Mr E. O, a 16-year-old male was admitted into the hospital following a history of sudden colicky abdominal pain of one-week duration. The pain was said to have started in the periumbilical region and had spread rapidly to the right iliac fossa. He had associated fever, and vomited once but had no urinary symptoms. He had indulged in self-medication at home until the pain became unbearable. Clinical findings revealed a young male who was not pale, anicteric. Refer to Figure 1

Figure 1.



A -Normal Foley's catheter. B-Eyeless Foley's cathete

but febrile (39°C), pulse rate 120 beats per minute, and blood pressure was 100/70mmHg. The respiratory rate was 28 cycles per minute. The abdomen was significantly distended and there was generalized guarding with rebound tenderness. The bowel sound was absent. The rectal examination was normal. Full blood counts and serum electrolytes and urea were normal. The serum creatinine was also normal. Preoperative resuscitation included insertion of a nasogastric tube, intravenous fluid administration using Ringer's lactate and normal saline, and urinary bladder catheterization with Foley's catheter. No urine was obtained on catheterization. The patient received 2 Liters of intravenous fluids in 2 hours but no urine was observed in the urine bag. The preoperative vital signs were within normal limits. The airway was assessed and graded to be Mallampati classification II. He was classified as American Society of Anesthesiologist physical status ASA II E, while in the anesthetic room the anuria was noted, though the patient had an urge to pass urine. The supra-pubic region was tender on further examination. It was decided to review the catheterization. The urethral catheter was removed and a new one was inserted. The new catheterization conducted 600mls of clear, amber-colored urine. The first catheter was inspected and found to be shorter than usual (26cms as opposed to 38cms) and eyeless (Fig.1). General anesthesia with the use of an endotracheal tube was administered to the patient.

Appendectomy and drainage of 500ml of pus from the peritoneal cavity were performed. The patient produced a total of 300mls of clear amber-colored urine during the 2-hour procedure. Full anesthetic recovery was recorded within 15 minutes of the termination of general anesthesia.

## **II. Discussion**

Abdominal emergencies are a frequent cause of death in sub-Saharan Africa. Patients usually present very late due to ignorance and poverty. It is not unusual for them to have severe dehydration, electrolyte imbalance, and septicemia. The main purpose of preoperative resuscitation is to optimize the patient's condition and maximize their chances of survival [2],[3]. Early, effective resuscitation improves oxygen delivery to the tissues and reduces mortality in this group of patients [4]. Anuria is defined as the complete absence of urine production. Acute Anuria which occurs rapidly is most likely due to obstruction or inadvertent ligation of both ureters as may occur following a vaginal hysterectomy or other pelvic surgeries. Acute Anuria noted during the preoperative period could be classified as post-renal obstruction of iatrogenic origin. It is imperative for doctors passing urethral catheters to inspect the catheter and make sure that the catheter is normal. The Foley catheter in question had been manufactured by a company from an emerging medical devices company in Asia. There must have been a failure of quality control at the company as the catheter in question was shorter than normal and eyeless. Doctors inserting urethral catheters must check that the catheter is normal in order to avoid its pitfall. A search of the medical literature did not reveal a previous report of an eyeless urethral catheter causing acute anuria.

## **III. Conclusion**

A urethral catheter is a medical device used for emptying the bladder for diagnostic or therapeutic reasons. Medical devices and implants are used to help or replace bodily functions. Although manufacturers subject these devices to rigorous quality control yet a few may be defective, it is mandatory for medical practitioners using medical devices and implants to check for functionality before usage.

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