

## CASE REPORTS

# ALTERNATIVE PROCEDURE FOR URINARY BLADDER CLOT EVACUATION - A CASE REPORT

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### Abstract:

*Along with different methods for the treatment option of urinary bladder clot removal, mechanical procedure for clot dissolution and removal also becoming popular. In this report we present a case of large organized post prostatectomy urinary bladder clot in a 90 years old patient by using simple operating room suction apparatus connecting with a Nelaton's catheter and its effectiveness.*

### Introduction:

Clot retention in urinary bladder is a common urological problem in day to day practice. There are several methods to manage this problem. From simple catheter irrigation to open cystostomy required to remove the large organized clot from bladder. Conventionally when there is any anticipation to form of bladder clot, simple tri-channel Foley's catheter irrigation is maintained to prevent the clot. But irrigation may become difficult because of the formation of dense blood clots. Tissue plasminogen activator (t-PA/Alteplase) may be a useful pharmacological agent to improve the efficacy of manual irrigation of large, dense clots. There is report of uses Alteplase (tissue plasminogen activator) for treatment of urinary clot retention in an in vitro model to compare efficacy with sterile water for clot irrigation<sup>1</sup>.

Some report shows physiologic thrombolysis is efficient, while pathologic aberrations in the fibrinolytic system may result in either thrombotic or hemorrhagic disease. This condition may cause post operative clot retention in patient with thrombotic or hemorrhagic disease. For the prevention of the post operative clot localized activation of fibrinolysis, discussed without systemic effects, and describes the molecular mechanism of plasminic degradation of fibrinogen and of cross-linked fibrin<sup>2</sup>.

In patient with severe persistent hemorrhage from urinary bladder after clot evacuation and fulguration continuous irrigation with 1% alum solution was found very effective with out any side effect and after treatment serum aluminum level was found normal in patients<sup>3</sup>.

Evacuation of clot from the bladder by irrigation can be difficult when significant clot burden or organized clot

exists. There are some technique for the evacuation of clot from the bladder using irrigation containing hydrogen peroxide that facilitated clot removal. It is also practiced by some author<sup>4</sup>.

A simple but effective technique for removing calcific and other debris following aortic and mitral valve replacement. This technique uses an Ellik evacuator, which is readily available in most operating rooms. This procedure also used for cystoscopic clot removal of urinary blood clot.<sup>5</sup>

Along with the usual systemic & local procedure to prevent and remove urinary bladder clot different kind of mechanical procedures like stronger suction pressure through the cystoscope sheath in patients who had failed clot evacuation using the traditional Ellik's evacuator<sup>6</sup>. Bladder evacuation device "Urovac" device proved to be better for evacuation of prostatic chips than both the Ellik's evacuation and Toomey syringe<sup>7</sup>.

Here we report a case of retained large urinary bladder organized clot in a post prostatectomy patient and removal of the clot with simple operating room suction apparatus easily and rapidly.

### Case report:

Eighty five years old male patient was underwent TURP due to hugely enlarged prostate and bladder was irrigated with normal saline and oral tranexamic acid was given 12 hourly for rapid homeostasis. On third postoperative day we noticed improper irrigation and distention of lower abdomen along with blackish red colour of irrigation fluid coming out of the bladder. After ultra-sonographic examination a large organized blood clot was detected in urinary bladder of the patient. Then after transfusion of two units of fresh blood, the patient was prepared for cystoscopic evaluation and removal of blood clot under spinal anesthesia. Per operatively we tried first with simple bladder wash with Ellik's evacuator through cystoscope but failed. Then we used resectoscopic breakdown of clot with TURP loop and wash with hydrogen peroxide mixed with normal saline solution with Ellik's evacuator. This procedure was also not that much satisfactory as because hydrogen peroxide was producing too much froth and dissolution of clot was very slow. Last of all we used 18fr Nelaton's catheter

through 24fr resectoscope and connecting the Nelaton's catheter with operating room suction machine using only 150-200 mm of Hg pressure along with continuous irrigation with normal saline. During the procedure the catheter was moved to and fro through the resectoscope by repeatedly stroking the clot in bladder. With repeated stroke and negative suction pressure the clot break down and rapidly coming through the suction tube.



**Fig:** *Clot evacuation in OT*

#### **Discussion:**

Retained urinary bladder clot removal is a common post operative procedure in urological procedure. The conventional catheter saline irrigation is an incomplete and slow method<sup>1, 2</sup>. There are also some systemic and local medication like Alteplase, Alum irrigation, hydrogen peroxide solution irrigation used for this purpose but all these procedure are slow and not that much satisfactory<sup>1, 3, 4</sup>. Mechanical suction evacuation with Ellick's evacuator, "Urovac" a patent device for suction also found effective<sup>5, 6, 7</sup>.

In this case we used simple wide bore Nelaton's catheter connecting with usual suction apparatus and handled carefully through the resectoscope to remove

large organized urinary bladder clot and found very rapid and effective. In this procedure there was no per or post operative complication was observed and the procedure is simple, cost effective and safe.

#### **References:**

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