Comparative Study of Urethral Catheterisation and Suprapubic Drainage Following Vesicolithotomy in Children

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Summary

Suprapubic drainage and urethral catheterisation was studied following vesico-lithotmy in fifty (50) male children and the results were compared. It was revealed that suprapublic drainage is far better and free from complications of the latter procedure.

Introduction

Suprapubic approach is universally accepted in nearly all those cases where the bladder requires to be opened. This may be for drainage purposes or for the treatment of intravesical conditions like stones, growths, diverticulae or a method of access to prostate. Vesico-lithotomy is a simple procedure and a catheter is left in situ for a minimum of 5-6 days depending upon the conditions of the wound. After this time, the wound is usually healed, the catheter is removed and the patient voids by himself. Usually there is no bleeding or very little bleeding, and continuous irrigation is not needed. In case there is some bleeding or blockage of the catheter, biadder wash can be performed by a syringe and 0.9% saline. In children as a matter of fact there is some difference following surgery. Uretheral catheters (Foley's) have a small bore compared to other tubes of the same size due to two or three channels; feeding tubes of the same size are difficult to be retained in children. Small sized Foley's catheters (e,.g. 8 ch and 10 ch) have more tendency towards blockage post-operatively. The most important cause of catheter blockage is obstruction by clot in the post-operative period. Another factor which is important in these circumstances is infection. Pus flakes block the pores of the catheter and leads to suprapubic leak.To avoid these complications, this study was performed to see the results of suprapubic drainage of urine and urethral catheterisation.

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[redacted]laterial and Methods

Vesico-lithotomy was performed in 50 male children between the ages of 2-6 years. Cases were divided into two groups. Group-A consisted of 25 cases while the remaining 25 cases wer kept in Group-B which was further subdivided in B1 and B2. In all cases of Group-A, ordinary polythene tubing (infusion set) was used for vesical drainage after vesico-lithotomy. No urethral catheterisation was done in these cases. In Group-B suprapubic drainage was avoided and bladder was drained through urethral route. In B1, urethral catheterisation was done with Foley's catheters of corresponding sizes (8ch and 10 ch). In B2, instead of catheters feeding tubes were used for this purpose. In all cases of Gourp-A suprapubic tubes were clamped on the 5th post-operative day and it was observed that patients could pass urine freely and hence the suprapublic tubes were removed the next morning.

Results

In 23 cases of Group-A, no complication was observed: the intravesical tubes worked properly. Only two case had wound infections but not accompanied by any urinary problem, like tube obstruction and S. P. leak. On the contrary all cases of Group B had complication. In B1, all cases had catheter blockage and needed intermittent wash or change of catheter. 10 cases also had suprapubic leak following catheter blockage but the leak stopped spontaneously after changing the catheters. In B2, the same problem was observed and feeding tubes had to be washed and changed repeatedly. 7 of these cases also had suprapubic leakage in addition to the blockage of the feeding tubes. Each feeding tube was tied to penis by the help of gauze and sticking and it proved very uncomfortable to the child.

Discussion

Bladder drainage is an important step following surgery on the urinary bladder[2]. In prostatectomy, uretheral catheters and intravesical suprapubic tubes both are retained to give the patient free drainage and to avoid clot obstruction. In vesico-lithotomy the chances of bleeding are less and hence the use of two tubes is not in practice. Blockage of narrow tubes lead to complications following open cystostomy[1] Our study is restricted to male children (2-6 years). In children vesical drainage is always done by small tubes. Our results have shown that catheterisation in children following vesico-lithotomy is not free of complications. Usually it is the suprapubic leak following catheter blockage. Blood clot is the most important cause of catheter blockage. Wound infection and pyuria is very frequently seen follow-

ing surgery on the bladder. Whatever the cause may be, catheter blockage and S.P. leak needs frequent washes and sometimes the catheters have to be changed as revealed in our results too. Feeding tubes used as catheter substitutes cannot be retained and very frequently pass out spontaneously especially in children as they are never cooperative. On the contrary suprapubic drainage via a simple tubing is far better. It is easily available and one has not to bring it from outside. Moreover it is better tolerated by the child. It is very wide and has no danger of blockage. Wide bore tubes should always be used in preference to catheters which may become blocked by blood[2].

Suprapubic drainage is now an accepted method of short term management following surgery[3]. We recommend suprapubic drainage via an infusion set following vesico-lithotomy in children. It is easily tolerated by children and is free from the complications of uretheral catheterisation.

Conclusion

Suprapubic drainage via a wide bore tube like infusion set is better than urethral catheterisation. It is free from complications following vesico-lithotomy in children and more acceptable to the child.

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