

## Treatment of Balanitis Xerotica Obliterans with Topical Floucinolone Acetonide Cream

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### Abstract

This is a case control study which included (40) patients with Balanitis Xerotica Obliterans (B.X.O.), from the 3rd of Feb. 2009 to the 3rd of Sept. 2011, (25) patients (Group A) were treated with topical Floucinolone Acetonide (0.025%) cream, the other (15) patients (Group B) did not receive any treatment.

All patients were followed up for (30) days, in (Group A) 18(72%) patients showed an improvement in their symptoms and 20(80%) patients had a higher urine flow rates than before treatment, but those patients in (Group B) showed no improvement or became worse.

**Key words:** Balanitis Xerotica Obliterans (B.X.O.), Corticosteroids, Floucinolone Acetonide.

### Introduction

Balanitis Xerotica Obliterans (B.X.O.) first described in 1928 by Stühmer(1), it is now considered to be the male genital variant of lichen sclerosus et atrophicus (LSA). This common penile disease can involve the prepuce, the glans or the urethra, either individually or in any combination (2). Most of the cases of BXO are seen in the third to fifth decades of life, even though they may occur at the extremes of age. Biopsy of the lesions is not essential in all cases and is indicated to differentiate from penile cancer and in atypical cases (3).

BXO is a rare disease, occurring in men between (20-45) years of age. It affects the glans penis, external meatus, sulcus, and occasionally the penile shaft. Diagnostic difficulty arises when the eruption is of restricted distribution. There is a mottled or parchment-like appearance with white or ivory areas scattered throughout apparently

normal tissue. There may be a stricture of the external meatus (4).

BXO has been managed both medically and surgically. Currently available medical treatment can provide useful palliation but is generally regarded to be of limited benefit. Topically applied and intralesionally injected steroids have been shown to arrest the progression of the disease and in some cases cause regression or resolution(5).

Carbon dioxide (CO<sub>2</sub>) laser surgery has been used with good results(6).

Fluocinolone acetonide is a corticosteroid primarily used in dermatology to reduce skin inflammation and relieve itching. It is a synthetic hydrocortisone derivative. The fluorine substitution at position 9 in the steroid nucleus greatly enhances its activity. A typical dosage strength used in dermatology is 0.01–0.025% (7).

## Patients and Methods

This is a case control study included (40) patients attended urology clinic at Azadi Teaching Hospital in Kirkuk Governorate from the 3rd of Feb. 2009 to the 3rd of Sept. 2011. Patients ages ranged from (37-51) years mean (43) years. They were complaining from recurrent cystitis, difficulty of micturation, nocturia, itching at tip of penis and some with difficult painful ejaculation. On physical examination they were all circumcised and found to have a hardened tissue with a whitish color at the tip of the external meatus, urinalyses showed pyurea in (35) patients, renal function test and blood sugar were normal, abdominal ultrasonography showed thick bladder wall in (28) patients, a residual urine post voiding of less than (150 ml) in (12) patients, a urine flow rate test performed and showed a maximum flow rate of less than (15ml) per second in all patients. Floucinolone Acetonide cream (0.025%) was prescribed for (25) patients (Group A), they were instructed to lubricate their external meatus and the fossa naviculares (3) times daily using ear cotton sticks for (30) days, the other (15) patients (Group B) were given information about their disease and the treatment options and informed not to take any medication and to visit the urology clinic after (30) days for rechecking and considered to be as a control group. A chi-square test was used for statical analyses.

## Results

In (Group A), (18) patients (72%) showed an improvement in their symptoms, the other (7) patients (28%) claim no segnificant improvement, on examination complete disappearance of the lesion noted, urine flow rate increased to (20ml) per second in 20 patients (80%), the other (5) patients (20%) there was no change in their urine flow rate. Regarding (Group B), 12 patients (80%) were having the same

symptoms, in the remaining (3) patients (20%) symptoms worsened, clinical examination was the same as before, urine flow rate showed no change in (12) patients (80%), and decreased to (13ml) per second in the remaining (3) patients (20%) (Table 1 and 2).

## Discussion

Treatment of BXO depends on the anatomic location of the lesions their extent and severity, together with the rapidity of progression of the disease process, it may vary from topical corticosteroids, laser vaporization in early cases to meatoplasty and urethroplasty in extensive cases. Topical pharmacotherapy is useful in the early stages to reduce the initial symptoms and slow down the progression (3).

Kiss A *et al* had improvement of symptoms of B.X.O. in (7) patients out of (17) using topical application of 0.05% mometasone (10). Michelle Valerie Vincent *et al* showed a success rate of only (30.4%) after a (14) months of using topical steroid based creams (11).

Tadeusz A. H. Pasieczny used testosterone propionate ointment (2%) in 4 patients with good results (12). Ebert AK *et al* used tacrolimus ointment in 13 patients and observed a decrease in relapse of the B.X.O. (13).

Hrebinko RL reported good results using laser vaporization in (4) patients (8). Walter B. Shelley *et al* used systemic antibiotics (oral and intramuscular penicillin) for balanitis xerotica obliterans (9).

In our study those patients receiving topical Floucinolone Acetonide cream, (Group A), (72%) of the patients had a relief of their symptoms (Table 1), And the flow rate improved in (80%) of the patients (Table 2), whereas those patients in (Group B), they either had no change or became

worse in both their symptoms and urine flow rates (Table 1 and 2).

## **Conclusions:**

Topical use of floucinolone acetonide cream in early cases of Balanitis Xerotica Obliterans is safe, cheap, easily performed and prevents further progression of the disease and its miserable complications.

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**Table (1)** Symptoms status in both groups

Groups	Improvement	No change	Worse
A(25)patients	18(72%) patients	7(28%) patients	None
B(15)patients	None	12(80%) patients	3(20%) patients

P value  $\leq 0.005$

**Table (2)** Urine flow rate status in both groups

Groups	Improvement	No change	Worse
A(25) patients	20(80%) patients	5(20%) patients	None
B(15) patients	None	12(80%) patients	3(20%) patients