

# FELINE UROLOGICAL SYNDROME

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# Definition

- It is a combination of different affections of the urinary tract of cats. It usually occurs in male cats 1-5 years old (cystitis, urolithiasis, urethral obstruction and uremia)

# Causes of FUS

- **The castration will affect the testosterone secretion and consequently play an important role in the precipitation of crystals and formation of the calculi.**
- **Lack of fluids will lead to increase urine concentration and so calculi formation.**
- **Hereditary factors may predispose for this condition.**

# Pathogenesis:

- **Normally the struvite crystals are soluble in the acidic urine.**
- **Urine stagnation or retention will give chance for some micro-organisms to flourish and changing the pH to the alkaline side.**
- **Alkaline pH makes the struvite crystals insoluble which led struvite formation.**

# Clinical symptoms

- 1. The animal will show signs of pain which began mild then become severe. This painful condition was associated with anorexia.**
- 2. Anorexia due to constipation.**
- 3. After that the male cat may licking the penis.**
- 4. Bloody tinged urine either may occur on ground of house or noticed dripping from the penis indicating haematuria.**
- 5. Physical examination or palpation revealed painful distended urinary bladder.**
- 6. In the female cat the signs may be directed to cystitis form, with abnormal sites of urination, anorexia and severe weight loss.**

# Lab. Findings

- Urine, if excreted, may reveal blood, proteinuria: or crystals.
- Blood showed high urea and creatinine levels.
- Serum K, Cl,  $\text{HCO}_3$  were elevated.

# Treatment

- Relief pain and smooth muscle relaxant

## **1- Sedatives as:**

- R/ Pentobarbital sodium 22mg/kg body weight. IV slowly

## **2- Antispasmodic as:**

- R/ Atropine sulfate 1% by I/M or S/C
- R/ dipyrrone 50% by I/V, I/M; or S/C

## **3- analgesics and local anesthetics:**

- R/ meperidine HCl 3-5 mg/kg body weight
- By I/M or orally, repeated every 8-12 hr.

## **4- patent preparations:**

- Bascopan ampouls 2-5 ml by S/C, I/M or I/V.I
- Novalgen ampouls 2-5 ml by S/C, I/M or I/V

# Manual interference

## 1-In mild cases:

- Gentle compression of the bladder may push the stone outside.
- Milking of the penile urethra help to force the plug outside.

## 2-In firm cases:

- General anesthesia was indicated.
- Chlorpromazine 1-3 mg/kg body weight by I.MI
- Use small diameter catheter to dislodge the plug material to interior or exterior.

## 3-In difficult cases:

- Surgical interference:
- We should locate the site of the calculi either radiograph or ultrasonography.



# Approach to avoid recurrence

- **After relieving obstruction:**

**1-Fluid therapy** to combat dehydration and produce diuresis  
ringer's solution

- Lactate Ringer's solution 5-10% of the body weight by I/V or S/C.

## **2-Urine acidifiers**

- Diethylene dihydrochloride One tablet daily (90mg/tablets)

## **3-Antibiotics**

- Ampicillin Orally 30-60mg/kg body weight