Intra-vesical Therapy (Bladder Instillation Therapy) for IC

The management of interstitial cystitis (IC) can be very challenging for both the patient and the Urologist. However, effective treatments for IC are available.

There are various modalities for treatment of IC, one of them is intra-vesical therapy (bladder instillation). Intra-vesical therapy (IVT) is becoming one of the most popular, and probably, the most effective treatment of IC in UK.

The symptoms of IC can be controlled with bladder installation therapy, when a combination of medication in a liquid solution is flushed into the bladder. The bladder is then filled with this liquid that is held for different periods of time before being emptied. The procedure is quick and needs to be repeated, initially on a weekly basis.

The usual regimen for instillation is weekly for 4-6 weeks, then two weekly for a period of time. Once symptoms under control, a maintenance regimen is tailored to the need of that specific patient
ranging from once every three weeks to once every two months. Not all patients need to go on a maintenance protocol and some IC patients can have a relatively prolonged remission with this therapy.

Various medications has been tried for bladder instillation like, **DMSO (dimethyl sulfoxide)**, **Heparin**, **Sodium Hyaluronate (Cystistat®)**, **Bacillus Calmette-Guérin (BCG)**, **L Arginine**, **Oxybutynin**, **Capsaicin** and **Resiniferatoxin** and more recently **Chondroitin sulphate (Uracyst®)**.

One of the most popular theories in the aetiology of IC is a defect or damage to the GAG layer (glycosaminoglycan), which is the protective layer of the inside of the bladder. Therefore, the aim of instillation therapy is to replace or replenish this GAG layer and reduce the permeability of the lining of the bladder to potassium ions, believed to cause the IC bladder pain.

The advantages of instillation therapy are the following:

- High concentration of drug at target location
- Fast symptoms relief
- High response rate
- Minimum side effects
- Out patient treatment
- Potential for self-instillation

Currently the most popular IVT is the Sterile Sodium Hyaluronic acid (Cystistat®). Dimethyl Sulfoxide (DMSO) is also widely used. Other GAG layers replenishing agent is Chondrotin sulfate which is available as
Uracyst®-S. Some centres use a combination of heparin, hydrocortisone, bicarbonate and local anaesthetic solution (Cocktail Therapy).

Although instillation therapy is generally considered to have minimal side effects, a certain degree of patient cooperation is required and hypersensitivity reactions are possible. Another disadvantage is the need for catheterisation for each session of treatment with risk of infection and bleeding.

Finally, instillation therapy is generally very well tolerated and the group of patients who respond appears to be very satisfied with its results.

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