

Dexsol™

for childhood vesicoureteral reflux

방광요관역류 VUR(Vesicoureteral Reflux) 치료제



First development
in Korea
Ingredients | Dextran

Edoscopic
Injection in
Pediatric VUR
Treatment

Insurance coverage has
significantly reduced the
burden on patients.

New pediatric vesicoureteral reflux treatment 'Dexol' We provide natural solutions for treating VUR & febrile UTIs.

About Dexsol

Dexol is a safe drug developed for pediatric patients with VUR symptoms. This is the latest treatment using highly proven dextran ingredients. It contains 100% dextran, a biocompatible ingredient, and is the latest treatment that significantly reduces repeat procedures by improving the volume effect and fixation power, which are shortcomings of existing dextran products. Dextran is a polymer of D-glucose and is a safe substance used as a plasma transfusion agent in emergency situations. It is a polysaccharide identical to Hyaluronic Acid and is biocompatible.

It is very high and biodegrades into H₂O and CO₂ in the body and disappears altogether. The decomposition period is about 1 to 2 years, and is replaced by collagen as it biodegrades. It has the characteristic of maintaining the initial volume. In addition, the endo-toxin content is so small that it cannot be measured, preventing toxicity. It is a safe substance with no reported side effects.

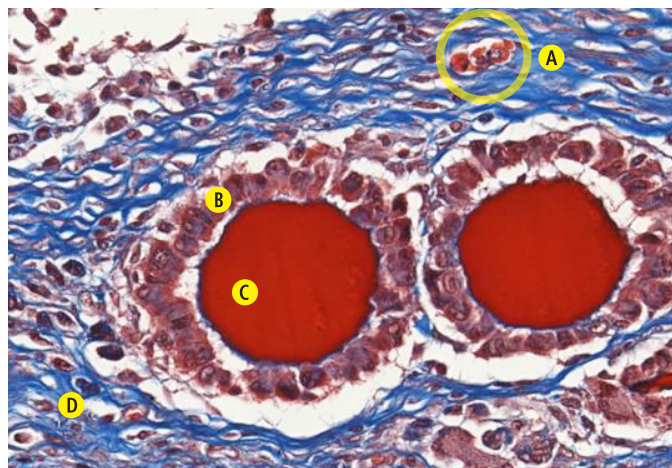
* Contains a trace amount of PMMA (polymathy methac-rylate) to promote self collagen production and increase volume.



History of Dextran



Mechanism



Dextran tissue reaction

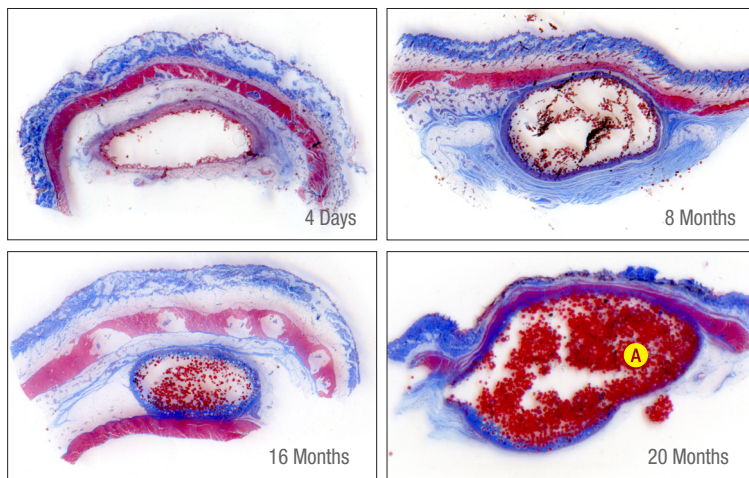
Dexol forms a large amount of collagen tissue around dextran particles. And, the raw material, dextran, biodegrades within 1 to 2 years. Prolonged fixation and volume effect by proliferated collagen tissue. It has the characteristic of being maintained for a long time.

- | | |
|---------------------|--|
| A New blood vessels | B Macrophase |
| C Dextran | D Newly generated collagen (TypeI & TypeIII) |

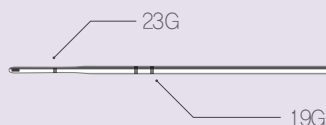
Collagen capsule formation tissue reaction

A collagen capsule is created around the injected dextran. In addition, the inside of the capsule is also filled with collagen tissue. It remains in the state of a collagen implant.

※ Dextran particles within the collagen capsule (A) without tissue reaction stays safe.



Specification



< Product configuration >

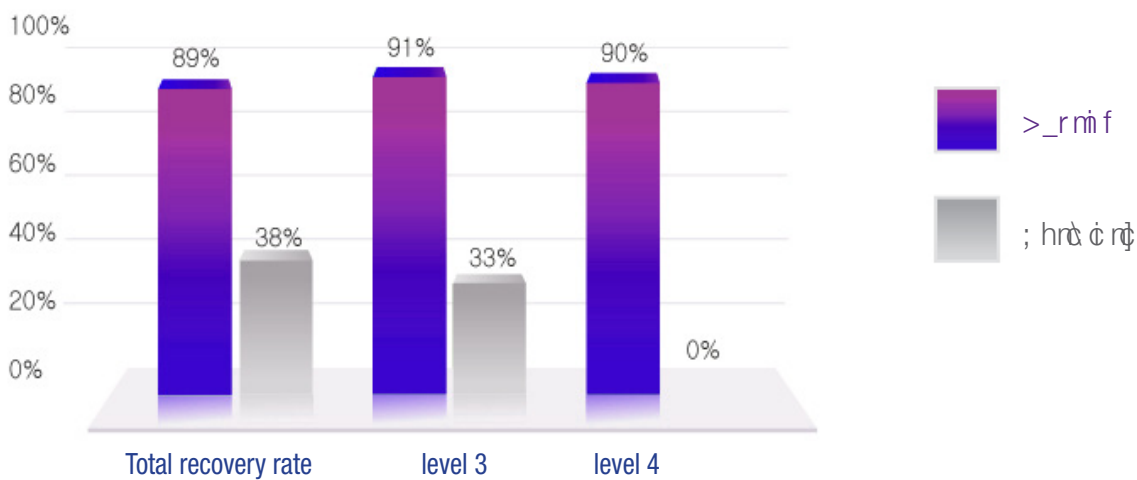
- Syringe capacity 1cc/Syringe
- Dextran content 30mg
- Needle spec 3.7 FR x 23G(tip) x 350mm
- Co



Efficacy and Safety

“The effectiveness and safety of the dextran ingredient have been verified through clinical trials.”

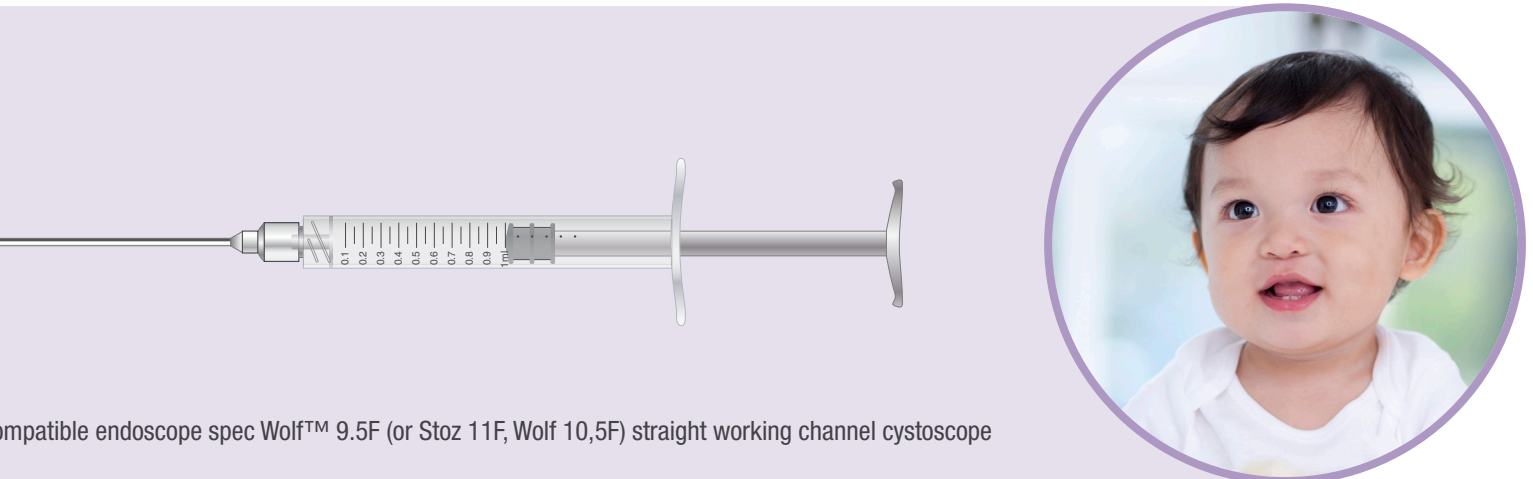
< Comparison of cure rates between dextran injection and antibiotics >



Numerous research results have been published certifying the long-term safety of VUR treatment using dextran for more than 20 years, and More than 200,000 children have undergone the procedure and have been cured, with no reports of lasting side effects. Currently using dextran VUR treatment is a treatment option for children suffering from recurrent urinary tract infections, as prompt diagnosis and treatment can prevent long-term kidney damage. This is an appropriate response.

References:

1. Capozza N, Caione P. Dextranomer/hyaluronic acid copolymer implantation for vesico-ureteral reflux: a randomized comparison with antibiotic prophylaxis. J Pediatr 2002; 140: 230-4.
2. Sjostrom S, Sillen U, Bachelard M, et al. Spontaneous resolution of high grade infantile vesicoureteral reflux. J Urol 2004; 172: 694-8.



Benefit

Endoscopic injection

Recently, minimally invasive treatment using fillers has become the gold standard. Short procedure time, same-day discharge for patient and guardian. There is no disruption to your daily life. The success rate of endoscopic injection for children with moderate to severe reflux varies slightly depending on the surgical technique, but shows a high cure rate of approximately 93%.



Neo collagenesis

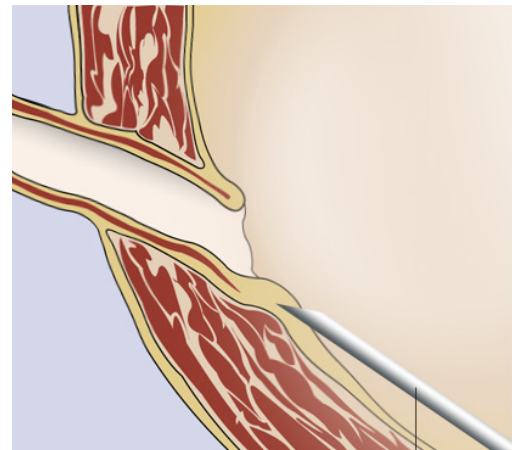
Macrophages surround the surface of the positively charged dextran particles, and the macrophages secrete TGF-beta and Interlukins and stimulate fibroblasts to create new collagen and blood vessels. As the newly created collagen combines with surrounding tissues, its fixation power increases. This has become excellent and the probability of moving to an unnecessary area has been dramatically reduced.

Easy to handle

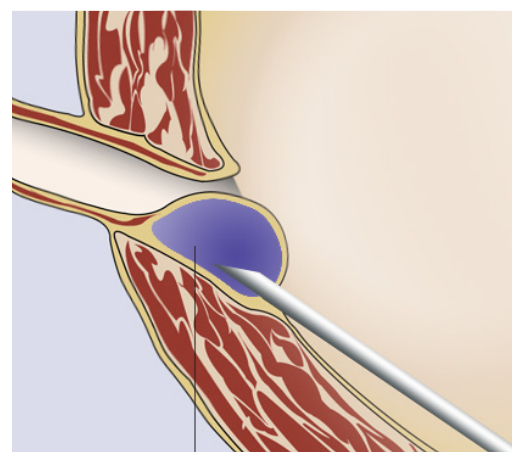
Dexsol contains 100% dextran, so the initial volume loss is small and large. Induces collagen production and has the characteristics of less migration and long term effect.

Less migration

The shooting feeling is smooth when injecting, and the thin needle ensures excellent visibility during the procedure. During the procedure, general anesthesia is administered to the patient, and Dexsol is injected by inserting a needle through a cystoscope. The injection site is the entrance to the ureteral opening leading to the kidney, as shown in Figure 1 on the right. An artificial 'volume' is created so as not to impede the flow of urine from the kidney to the bladder. While doing so, it acts as a valve to suppress backflow.



Needle



DX

High VUR recovery rate

In Korea, over 4,000 cases of VUR treatment using Dexsol over 9 years since 2015 have been proven to be safe and effective through clinical trials

References:

1. Lackgren G, Lottman H, Hensle T, Stenberg A. Endoscopic treatment of vesicoureteral reflux and urinary incontinence in children. AUA Update Series. 2003;22:294-299.
2. Lottmann HB, Margaryan M, Bernuy M, et al. The effect of endoscopic injections of dextranomer based on continence and bladder capacity: a prospective study of 31 patients. J Urol. 2002; 168:1863-1867.
3. Capozza N, Lais A, Matarazzo E, Nappo S, Patricolo M, Caione P. Treatment of vesico-ureteric reflux: a new algorithm based on parental preference. BJU International. 2003;92:285-288.
4. Capozza N, Caione P. Dextranomer/hyaluronic acid copolymer implantation for vesico-ureteral reflux: a randomized comparison with antibiotic prophylaxis. J Pediatr 2002; 140: 230-4.
5. Andrew J. Kirsch, Hal C. Scherz, et al. Hydro-distention implantation technique (HIT)-a novel endoscopic treatment for VUR in children and adults Contemporary Urology, April 2005.

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