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PERIURETHRAL INJECTION OF COAPTITE FOR FEMALE STRESS URINARY INCONTINENCE: TECHNICAL REFINEMENTS FOR A SUCCESSFUL OUTCOME

Synopsis of Video

This videotape shows the refinements of the technique of periurethral injection of Coaptite for the treatment of female stress urinary incontinence. Coaptite is a readily injectable soft tissue bulking agent formulated as a smooth, sterile, non-pyrogenic injectable mixture of spherical particles (75 to 125 μm) of calcium hydroxylapatite (CaHA) in an aqueous-based gel carrier of water, glycerin and sodium carboxymethylcellulose. The gel is dissipated *in vivo*, while the particulate remains to provide permanent bulking. Since the CaHA is a synthetic particle identical to the primary constituent of teeth and bones, it is very tissue friendly and biocompatible, forming a well-defined injection site. The CaHA particles allow for the cells from the injection site to grow directly on it's surface, without reaction or encapsulation process. Coaptite can be imaged utilizing standard radiological techniques, thus providing anatomical identity and location allowing for optimization of treatment and a full disclosure and accountability of the product.

The Coptite pack for incontinence is composed by 3 pre-filled 1ml seringes and a 7 Fr endoscopic catheter within a 10 mm 21 Gauge needle. It also includes a plastic holder to guarantie a close attachment of the Luer-lock cateter extremity to the seringe, in order to prevent any gel leakage. Before the begining of the surgery, a seringe is attached into the endoscopic needle, that is pre-filled within 0.5 ml of Coaptite. The procedure is performed with the patient in the lithotomy position, under spinal anesthesia in an outpatient basis. Using the 21 Fr cystoscope and 30 degree optical, the proper position for the injection is choosen, usually 10 mm from the bladder neck. The endoscopic needle is advanced though the cystoscope working channel and the puncture is made. After the insertion of at least 5 mm of the needle into the urethral submucosa, Coaptite is gentle injected under simultaneous endoscopic control of urethral coaptation. Usually three punctures are required, at 3, 9 and 6 o'clock positions. If the punctures can be well done, the urethral mucosa will seem a hypertrophic prostate at the end of the procedure. A 12 Fr Foley catheter is left in place overnight.

Since the needle puncture is so small, the loss of material resulting from augmentation pressure is minimal, providing greater long-term durability and reducing the amount of material required.

Periurethral injection of Coaptite adds the high biocompatibility, low biodegradation and potential for infection of CaHA with the advantages of a minimally invasive procedure. These features can enhance the long-term continence rate significantly over the other bulking agents current avaible.