



Advanced Biotech Products (P) Ltd.

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Surgicoll-Mesh®

White Paper for Trans-Obturator Tape (TOT) Sling Procedure

Description:

Surgicoll-Mesh® is an advanced implantable, bioresorbable, tissue regenerative sterile, Type-I collagen matrix. The collagen used in the Surgicoll-Mesh® product is based on a patented technology that ensures the high purity Type-I collagen. It is processed under GMP conditions with stringent USP quality tests as per WHO (World Health Organization) and other international standards.

List of all Surgicoll-Mesh® Indications:

- Intra Oral Surgical - Post-operative mucosal defect in oral cancer and pre-cancerous lesions, dental/OMF applications.
- Soft Tissue & Muscle Flap Reinforcement - As a patch used for suture line reinforcement, muscle supplement with sling, repair and anchorage of tendon damage, and Transverse Rectus Abdominis Muscle (TRAM) flap procedures.
- Pelvic floor reconstruction, sacro-colposuspension and urethral sling.
- Colo-rectal, urethral & vaginal prolapse.
- Hernia repair including abdominal, inguinal, femoral, diaphragmatic, scrotal, umbilical, and incisional hernias.
- Chronic ulcers and Diabetic ulcer treatment.
- Third-Degree Burn to accommodate the Skin Graft needs
- Orthopedic Surgery - Osteochondral resurfacing, synovial tissue implant, repair of rotator cuff, patellar, Achilles, biceps, quadriceps and other tendons.
- Cartilage Regeneration.
- Cardio-vascular - Atrial, ventricular and arterial patch repair, suture line buttress, intra-cardiac patch, thoracic wall etc.
- Neurosurgical - As a substitute for dura repair and nerve wrap.

Surgicoll-Mesh® for Pelvic Floor Reconstruction Surgeries:

Types of Pelvic Organ Prolapses (ref 1):

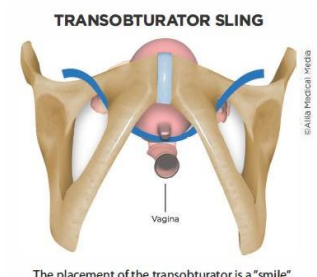
- ✓ **Vaginal prolapse:** This is a prolapse of the vagina.
- ✓ **Urethrocele:** This is a prolapse of the urethra (the tube that carries urine).
- ✓ **Cystocele:** This is a prolapse of the bladder into the vagina, the most common condition.
- ✓ **Uterine prolapse:** uterus descends toward or into the vagina
- ✓ **Enterocoele:** This is a small bowel prolapse.
- ✓ **Rectocele:** This is a rectum prolapse.

Urethrocele (Urethra Prolapse):

A urethrocele occurs when the tissues surrounding the urethra sag downward into the vagina (ref 2). **Surgicoll-Mesh®** urethral slings can be implanted through the vagina to support the bladder neck or the tube that carries urine from the body (urethra). This is known as a **midurethral sling or a mesh sling** procedure.

Trans-Obturator Tape (TOT) sling procedure:

In TOT surgery, the **Surgicoll-Mesh®** may be placed through small incisions in the groins and in the vagina under the urethra in the correct position (ref 3). Advanced Biotech provides an average size of 10 cm x 20 cm of **Surgicoll-Mesh®** for this purpose. This size can be adopted for different procedures and also the Physician can cut this into the size he/she wants. Further, the manufacturer can provide different sizes as needed. For more information, one of the synthetic mesh manufacturers has given detailed procedure to learn from (ref 4).





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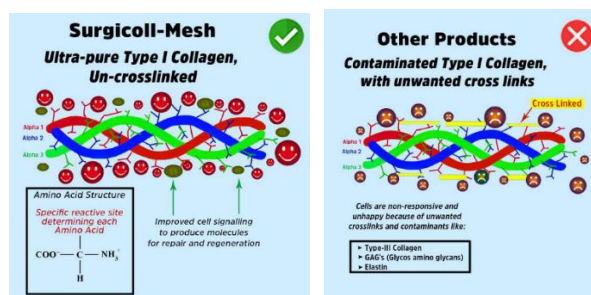
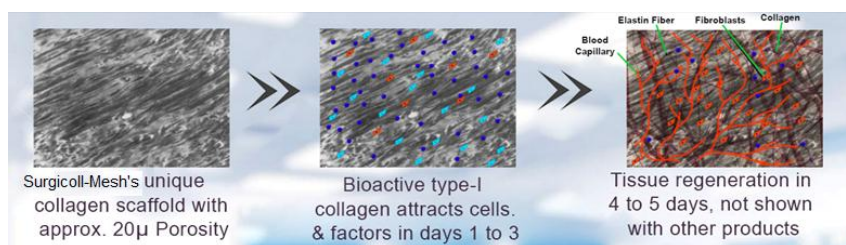
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Advantages of TOT:

- ✓ Can avoid passing needles blindly through the retropubic space, as in transvaginal tape (TVT).
- ✓ Needle passing area has been extensively studied and it is safe to work in.
- ✓ Shorter mean operative time and lower risk of bladder injury and of postoperative urinary retention (ref 5).
- ✓ It is a tension-free sling procedure.
- ✓ Resting urethral angle remains unchanged, nor is it necessary to correct urethral hypermobility (ref 6).

Why use Surgicoll-Mesh®?

Surgicoll-Mesh® consists of a highly pure patented Type-I collagen that is not cross-linked resulting in an ideal bioactivity. Surgicoll-Mesh® also has controlled phosphorylation, making the matrix extraordinarily regenerative. Surgicoll-Mesh® is a bio-compatible collagen mesh that is flexible, strong yet soft collagen membrane that is supple when hydrated and handles like natural tissue. It is resistant to infections and acts as a scaffold for fibrous tissue ingrowth. Surgicoll-Mesh® readily conforms to the surgical site upon application and is easily sutured. It is constituted by Type-I collagen membrane that is free of contaminants like lipids, elastin and other immunogenic proteins.



Moreover, it is available in different sizes to accommodate multiple types of wounds. It has the capacity to remain clinically usable for 3 years when stored in room temperature conditions.

Complications of other meshes (ref 7):

Local irritation at wound site	Migration of the device
Infection	Pain
Urinary tract obstruction and urine retention	Recurrence of incontinence
Vaginal extrusion	Nerve damage
Erosion through the urethra	Swelling and redness at the wound site
Scarring	Vaginal discharge
Scar contracture	Fatigue
Inflammation	Shortness of breath
Fistula formation	Bleeding

Surgicoll-Mesh® Available Sizes (in cms):

5x5	2x25	5x10	10x10	10x15	10x20	15x15
10x25	15x20	20x20	15x30	20x25	20x30	



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Conclusion:

Surgicoll-Mesh® is made of high purity, non-immunogenic and non-cross-linked, Type-I collagen for maximum biocompatibility. The exceptional bioactivity of Surgicoll-Mesh® is due to its phosphorylation that results in cell signal transduction. Surgicoll-Mesh® seems to be an advanced treatment option to successfully use in Trans-Obturator Tape (TOT) sling procedure.

References:

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Thank you.

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