

Flexor tendon sheaths – phlegmon of the thumb

Case report

A 40-year-old woman had a minor injury of the right thumb from a splinter of wood. She came to our department two days later because of considerable pain. On admission the right hand showed a very tender and greatly swollen reddened thumb. Movement was avoided because of the extreme pain.

In the subsequent emergency operation, copious amounts of pus were evacuated from both the thumb and the palm of the hand. The carpal tunnel had to be opened in the process (figure 1).

An elective second-look debridement with vacuum sealing was carried out later. Septic thrombosis of the blood vessels in the thumb led to necrosis of the skin and soft tissues over the flexor aspect (figure 2).

Once the infection had been controlled, a Foucher flap was constructed as a soft-tissue covering. The procedure included sheathing the flexor tendons of the thumb and wrist in GENTA-FOIL *resorb*® (2.5 x 2.5 cm or 2.5 x 5 cm) to prevent adhesion (figure 3).

On discharge (figures 7 and 8), movement of the fingers was still very limited. Ten weeks after discharge (figures 9 and 10) the patient had regained excellent function in her hand.

Dr Maria Babi

Department of Plastic, Hand and Reconstructive Surgery
PD Dr Spies, Senior consultant
Barmherzige Brüder Hospital,
Regensburg



figure 1



figure 3



figure 5



figure 7



figure 9



figure 2



figure 4



figure 6



figure 8



figure 10

REF	Size	Contents of Package
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GF 255	2.5 x 5 cm	1 film / package
GF 1010	10 x 10 cm	1 film / package

1 cm² of foil contains:
 5.6 mg collagen of equine origin
 4 mg gentamicin sulfate, equivalent
 to 2.20-2.86 mg gentamicin base

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Open PIP Dislocation following a Chainsaw Injury

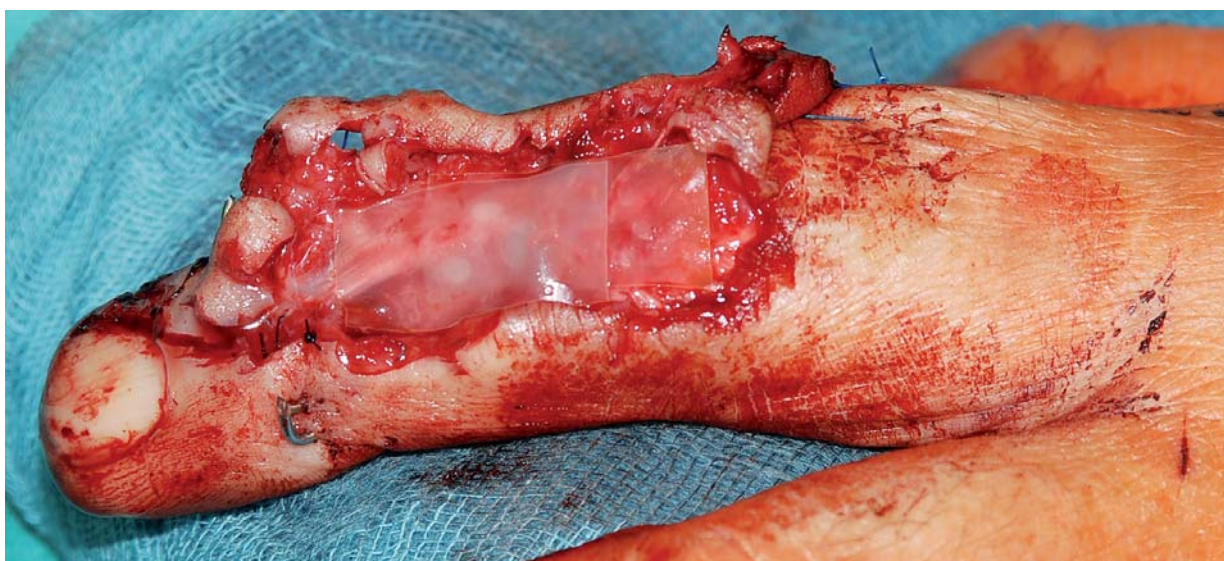
Example of Use

Male patient, age 62

Separation layer benefiting both joint restoration and infection prophylaxis following traumatic cartilage damage

Dr. Claudia Schuster

Department of Trauma, Hand, and Restorative Surgery
Friedrich Schiller University
Hospital, Jena



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Adhesion and Infection Prophylaxis for Gunshot Wound

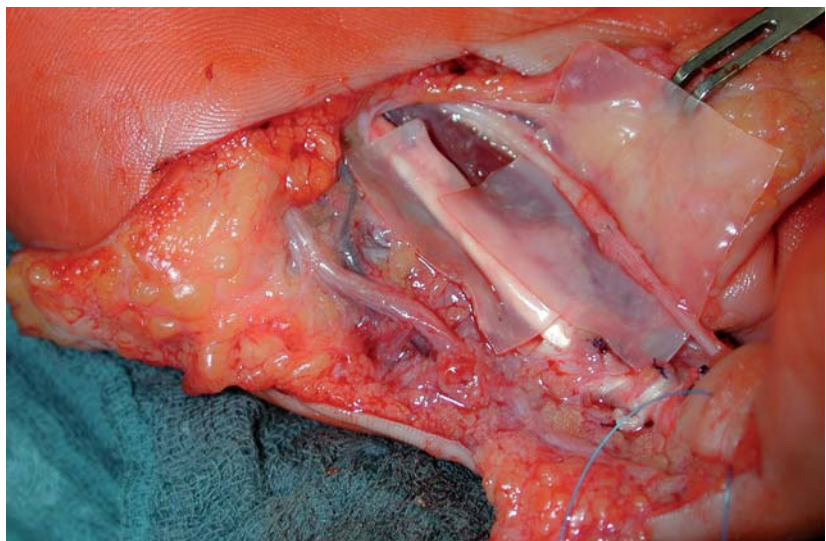
Example of Use

Male patient, age 36

Revision operations
Gunshot wound, 1st session
2-stage flexor tendon replacement
with silicone spacer after rerupture

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Adhesion Prophylaxis for Flexor Tendons Rupture

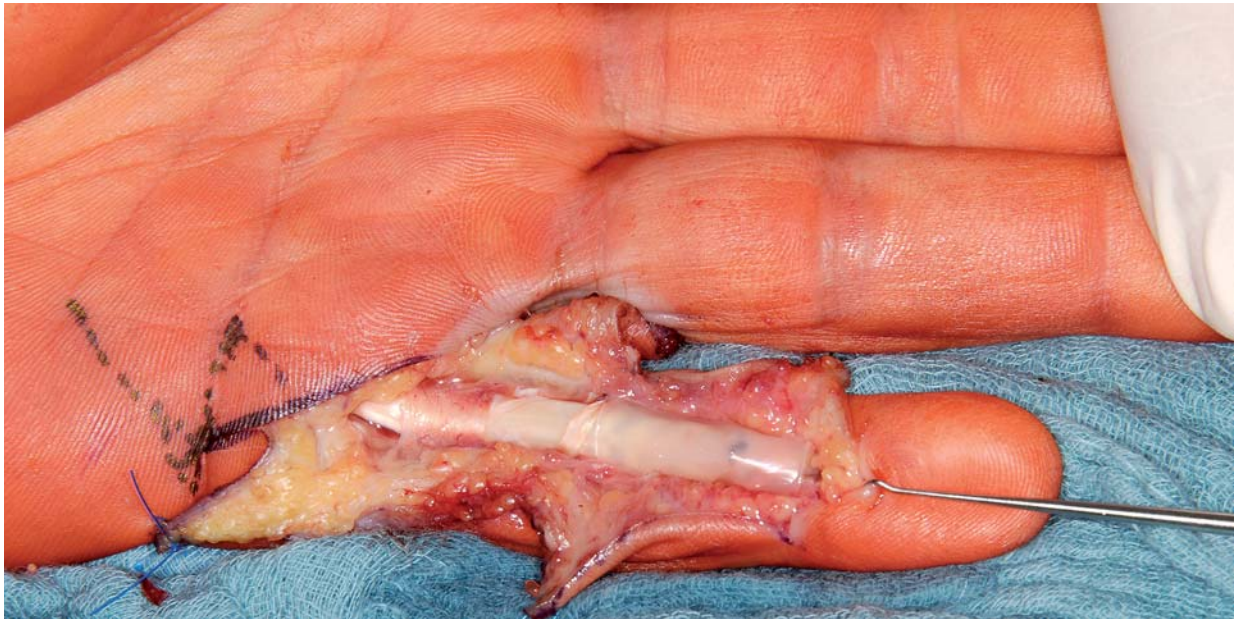
Example of Use

Male patient, age 42

Initial treatment of a 3-week-old
flexor tendon rupture

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Adhesion and Infection Prophylaxis for Prostheses

Example of Use

Female patient, age 68

SBI prosthesis for Heberden's nodes

Dr. Claudia Schuster

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Friedrich Schiller University
Hospital, Jena



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Infection Therapy and Prophylaxis for Synovitis

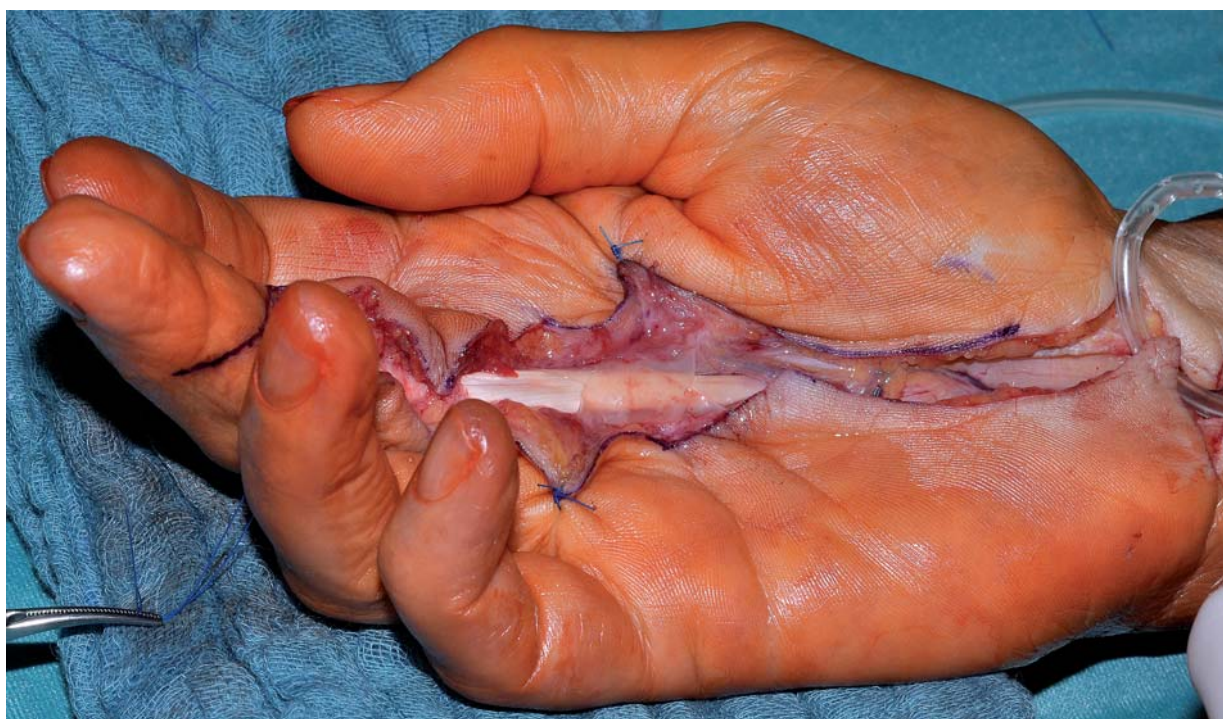
Example of Use

Female patient, age 64

Synovitis following annular ligament
desmotomy
Plus CTS

Dr. Claudia Schuster

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Infection Prophylaxis for Animal Bites

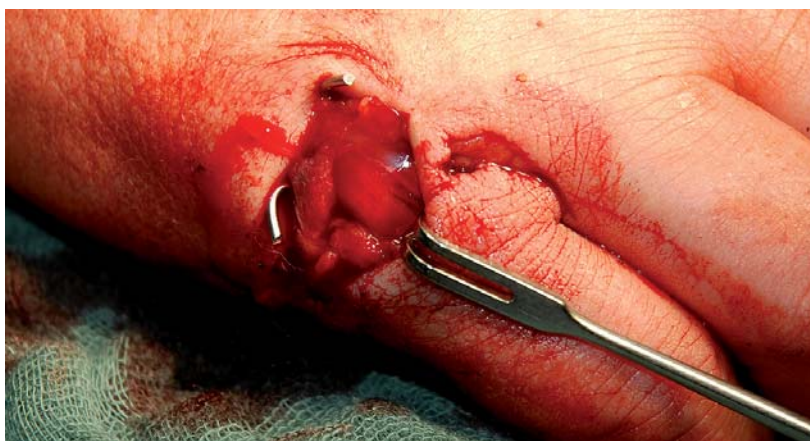
Example of Use

Female patient, age 54

Finger ischemia, fracture of the proximal phalanx and exposed tendons following a dog bite

Dr. Claudia Schuster

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Friedrich Schiller University Hospital, Jena



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Revision Operations

Example of Use

Female patient, age 76

Diagnosis:
Extensor tendon adhesions following
plate osteosynthesis

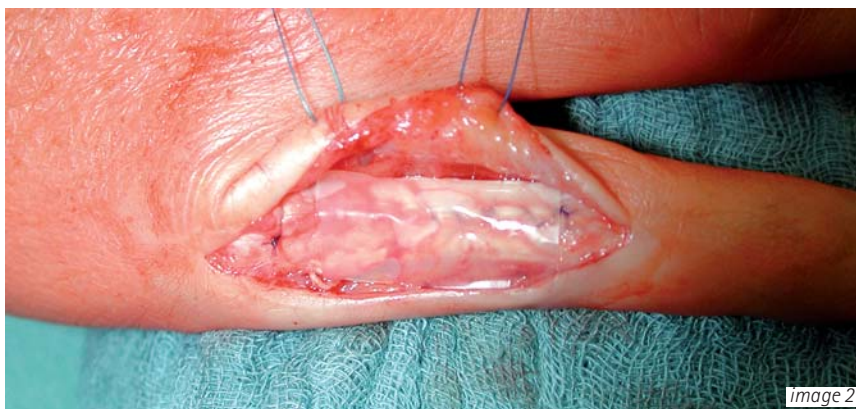
Removal of plate and tenolysis of the
extensor tendon (image 1)

Suture of the extensor tendon with
gliding layer absent (image 2)

Wound closure (image 3)

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Adhesion Prophylaxis for Neurolysis

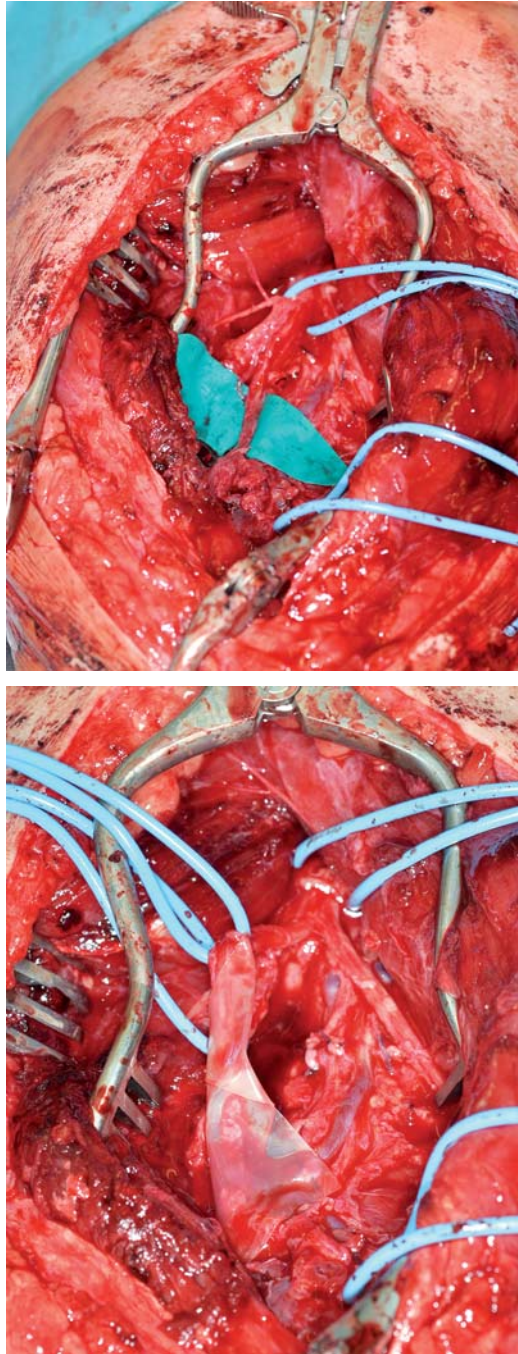
Example of Use

Male patient, age 49

Neurolysis of the radial nerve
following humeral shaft fracture

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Adhesion Prophylaxis for Plate Osteosynthesis

Example of Use

Male patient, age 78

Adhesion and infection prophylaxis
for insufficient soft tissue coverage
of the plate

Dr. Claudia Schuster

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Recurrence of Ulnar Nerve Entrapment with Claw Hand

Case Study

Patient: 20-year-old woman

Claw hand deformity IV/V on the right hand since Dec. 2009

1st operation on 12 Feb. 2010:

Roof of the ulnar tunnel is split, neurolysis of the ulnar nerve and fat flap graft.

Improvement of the claw hand deformity.

Treatment concluded on 8 Nov. 2010

Since Dec. 2010, reappearance of symptoms following localized contusion.

13 June 2011: recurrence

(images 1-3)

2nd operation on 14 June 2011:

Roof of the ulnar tunnel is split, neurolysis of the ulnar nerve, nerve is embedded in GENTA FOIL and an extension graft of the

roof of the ulnar tunnel made

(images 4-6)

15 Feb. 2012: Improvement, treatment

concluded

(Images 7-8)

Ev.-luth. Diakonissenanstalt

Marienstift

Helmstedter Str. 35

38102 Braunschweig

Dr. Silke Juras

Senior physician

Department of Hand Surgery and

Congenital Hand Deformities

Director: Dr. N. Benatar



image 1



image 2



image 3

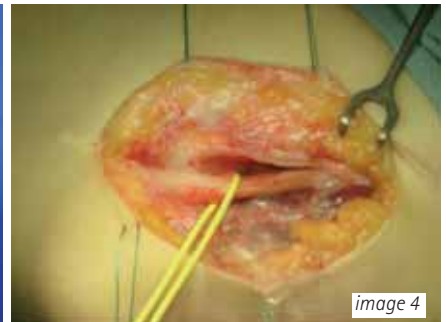


image 4



image 5



image 6



image 7



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Recurrence of Ulnar Nerve Entrapment

Case Study

Patient: 68-year-old woman

1st recurrence of ulnar nerve entrapment,
left hand

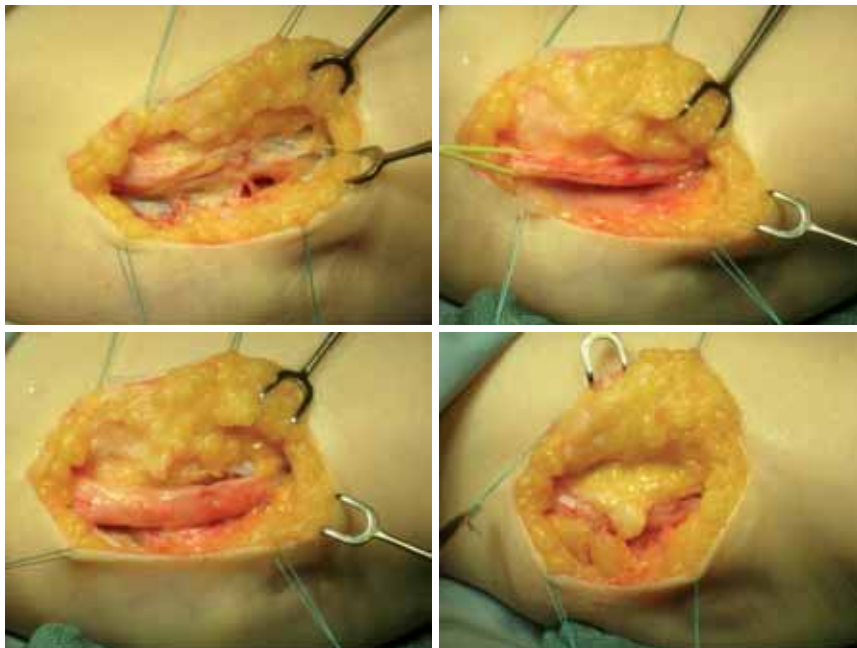
Operation on 14 June 2011: neurolysis,
ulnar nerve is embedded in a film of
GENTA FOIL

5 Oct. 2011: improvement, conclusion of
treatment

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Marienstift
Helmstedter Str. 35
38102 Braunschweig

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Articular Infection following an incision with a utility knife

Example of Use

Four days prior to presenting at the hospital, Mr F. had cut himself with a utility knife upon the middle joint of his right index finger (extensor). The wound was initially repaired using cutaneous sutures; following this the case was referred to our healthcare facility.

The patient began to experience increased swelling and tenderness upon palpation of the joint. Tests showed that the white blood cells and CRP levels were within the normal range. The potential of an infection within the joint was determined to be high, with the need for further surgical revision to be undertaken.

Surgery revealed that the original incision had severed the central slip of the extensor tendon and had opened the articular capsule. A cloudy coloured liquid was draining from the location of the joint. A swab was taken and the area thoroughly rinsed. The cartilage of the adjacent articular surfaces was found to be intact, allowing for a preservative course of action to be taken. A GENTA-FOIL *resorb*® dressing was cropped to meet the required size and shape and was then inserted into the joint with forceps.

A joint-spanning external fixator was placed along the extended finger in order to temporarily immobilise the joint.

Following the surgery, IV antibiotic (Cefuroxime 1.5g) was applied three times daily. The swab collected during surgery produced a positive culture of *Staphylococcus aureus* and *Staphylococcus* sp. (coag neg), Cefuroxime sensitive. The fixator was used to immobilise the joint for four weeks, after which it was removed and then physiotherapy provided. There was no need to remove the GENTA-FOIL *resorb*®.

Outcome: Thanks to a proactive approach and the use of the external fixator to keep the joint immobilised, the implementation of GENTA-FOIL *resorb*® was a success with the joint being subsequently preserved.

Dr. med Vanessa Haug, Dr. med Thomas Pillukat
Clinic for Hand Surgery, Salzburger Leite 1
97616 Bad Neustadt an der Saale
E-mail: Thomas.Pillukat@handchirurgie.de



Preoperative presentation following the application of cutaneous sutures.



*Insertion of the GENTA-FOIL *resorb*®.*



*GENTA-FOIL *resorb*® in place within the middle joint of the index finger.*



Joint-spanning external fixator along the middle joint of the index finger, conventional X-ray.



Joint-spanning fixator along the middle joint of the index finger.

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