Publications on Tutoplast® human Pericardium
(as of January 2007)

Neurosurgery

HP-N1 Caroli E et al.
Duraplasty: Our current experience.
Surg Neurol, 61, 2004
Report on 250 patients treated with Tutoplast Dura (101) and Tutoplast pericardium (149). Follow-up was 5.4 years on average. Only 4 complications occurred but could not clearly be attributed to the grafts. The authors conclude that Tutoplast is safe and effective.

Ophthalmology

HP-O1 Alvarenga LS et al.
Efficacy and safety of recurrent pterygium surgery using human processed pericardium
Cornea, 21(6), 2002
Results of 25 patients are presented. The area of the resected recurrent pterygium was covered with Tutoplast pericardium. Recurrence rate was 48%. The authors state that the use of Tutoplast is safe but should be considered only when conjunctival autografting is not available.

HP-O2 Bhatia LS et al.
New Ahmed Valve designs
Int Ophthalmol Clin, 44(1), 2004
Overview. For coverage of the valve tube Tutoplast pericardium is recommended.

HP-O3 Falck FY
Ectropion repair technique uses processed donor pericardium
Ocular Surgery News, Nov. 15, 1996
Case report. A lower eye lid was successfully fixed with a 4x5mm Tutoplast pericardium to the periosseum. The author has also used it during seton surgery and for repair of wound dehiscence. He concludes that Tutoplast pericardium is a valuable adjunct for ophthalmic surgeons and less costly than eye bank sclera.

HP-O4 Foster JA et al.
Processed human pericardium barrier for gold weight implantation.
Ophthal Plast Reconstr Surg, 20(2), 2004
In 23 patients a gold weight implant was covered with Tutoplast pericardium. Mean follow-up was 11 month (range 3-36).acceptable tissue coverage was found in all patients. One edema and erythema resolved spontaneously after 3 month.

HP-O5 Fechter HP et al.
Preventing and treating complications of Baerveldt glaucoma drainage device surgery.
Int Ophthalmol Clin., 44(2), 2004
Review. The authors recommend coverage of tubes in all cases and recommend Tutoplast pericardium besides glycerol preserved cornea and sclera.

HP-O6 Fine et al.
Management and prevention of thin, cystic blebs.
Int Ophthalmol Clin. 44(1), 2004
Review. Prior to covering the old scleral flap site with conjunctiva. Tutoplast may be used to cover the old scleral flap site.
HP-O7 Gayton JL
Managing overfiltration during glaucoma surgery
Ocular Surgery News
Tutoplast pericardium was successfully used in 17 patients. The author states that every ophthalmologist would benefit from having this material available.

HP-O8 Greenfield DS et al.
Aqueous misdirection after glaucoma drainage device implantation.
Ophthalmology, 106, 1999
Report on 10 patients. All received a patch graft of either sclera or Tutoplast pericardium.

HP-O9 Ho-Shing D
Treating glaucoma with drainage devices and pericardial grafts.
AORN Journal, June 2000
Detailed description of the surgical procedure. For tube coverage Tutoplast pericardium is mentioned.

HP-O10 Kafkala C et al.
Ahmed valve implantation for uncontrolled pediatric uveitic glaucoma
Journal of AAPOS, 9(4), 2005
Retrospective study on 6 patients. Tubes were covered with Tutoplast pericardium. Treatment was successful in all patients.

HP-O11 Kwon YH et al.
Long-term results of eyes with penetrating keratoplasty and glaucoma drainage tube implant
Retrospective study. Tubes were covered with either sclera or Tutoplast pericardium. No complications related to the patches were found.

HP-O12 Law SK et al.
Comparison of safety and efficacy between silicone and polypropylene Ahmed glaucoma valves in refractory glaucoma.
Ophthalmology, 112, 2005
Comparative study of two valve types in a total of 99 patients. The scleral entry site and the anterior 8mm of the tubes were covered with Tutoplast pericardium. No patch related complications are reported.

HP-O13 Moster MR
5 tips for success with Tutoplast pericardium. A glaucoma surgeon shares pearls and pitfalls from her experience.
Review of Ophthalmology, June 2000

HP-O14 Nouri-Mahdavi K et al.
Evaluation of the hypertensive phase after insertion of the Ahmed glaucoma valve.
Am J Ophthalmol, 136(6), 2003
Retrospective study on 156 eyes after median 12 months (range 3-53 months). All tubes were covered with Tutoplast pericardium. Tube exposure occurred in 4(2.6%)

HP-O15 Raviv T et al.
Pericardial patch grafts in glaucoma implant surgery
J Glaucoma, 7, 1998
Retrospective study on 44 eyes with follow-up of 2.3 to 18.6 months. No infection, tube erosion, graft rejection, and graft-related inflammation occurred. In five eyes there was asymptomatic graft thinning.
Aqueous shunt implantation: Pearls and pitfalls.
Techniques in Ophthalmology, 1(3), 2003
Review. The authors recommend to cover the scleral fistula and the external portion of the tube with a patch graft. Among others they mention Tutoplast pericardium.

A comparison of glaucoma drainage implant tube coverage
Journal of Glaucoma, 11, 2002
Retrospective study on 64 eyes with at least 2 years follow-up. 23 had Eio treated donor sclera, 18 Tutoplast dura and 23 Tutoplast pericardium. No material was more prone to melting than another. The authors conclude that Tube erosion is uncommon with sclera, pericardium and dura patches.

The use of processed pericardial tissue in anterior ocular segment reconstruction.
Three case reports. Tutoplast pericardium was found to be a helpful adjunct in providing tectonic support and promoting epithelialisation in the cases described. Pericardium has potential application to a variety of anterior ocular segment conditions.

Outcomes of bleb excision and conjunctival advancement for leaking or hypotonous eyes after glaucoma filtering surgery.
Retrospective study on 49 eyes with more than 6 months follow-up. In the subset of patients who underwent resutting of sclera and/or placement of a pericardial/Tutoplast graft in addition to bleb excision and conjunctival advancement, 16 of the 19 obtained at least qualified success and eight of 19 obtained complete success.

Cataract surgical problem
Consultation. "I have observed that by using a large piece of Tutoplast and covering the plate of the seton with conjunctiva, epithelialisation of the Tutoplast occurs down to the limbus in most cases, even if one could accomplish conjunctival closure to the limbus.

Rescue of exposed scleral buckles with cadaveric pericardial patch grafts.
4 case reports. In 3 cases the exposed buckle was successfully covered with Tutoplast pericardium. Epithelialization of the pericardium took 3-5 weeks.
Comment in Ophthalmology 109(8), 2002 Uzcategui N and S Dresner. They prefer autologous temporalis fascia.

Double-layer pericardium sandwich technique of Ahmed glaucoma valve implantation in patient with anterior necrotizing sleritis
Techniques in Ophthalmology, 3(2), 2005
Case report. In a 23-years old patient with a 3-year history of bilateral anterior necrotizing sleritis and glaucoma a shunt was implanted and successfully covered with a double layer of Tutoplast pericardium.

Avoiding and managing complications of glaucoma drainage implants
Curr Opin Ophthalmol, 15; 2004
Overview. Tutoplast pericardium is recommended for tube coverage.
Fibrin glue-assisted glaucoma drainage device surgery
Br J Ophthalmol, 90(12); 2006
In 14 patients Tutoplast Pericardium for glaucoma shunt coverage was fixed with fibrin glue and the results were compared with those of 28 patients in whom fixation was done with traditional suturing. No dislocations or exposures occurred, post op. inflammation was less pronounced and OR time was significantly reduced.

Maxillofacial

HP-M1 Paolantonio M
Combined periodontal regenerative technique in human intrabony defects by collagen membranes and anorganic bovine bone. A controlled clinical study.
J Periodontol, 73(2), 2002
17 patients each were randomly assigned to receive either Tutoplast pericardium alone or bone grafting with pericardium for the treatment of periodontal intrabony defects ≥4mm, with a 1-wall component of at least 50% of the defect, involving 2 tooth surfaces or more with a probing depth ≥6mm. Vertical bone gain after 1 year was significantly greater in the group with bone and membrane.

HP-M2 Shin H et al.
Implant Dentistry, 14(4), 2005
Case report. A large perforation of the Schneiderian Membrane was successfully covered with Tutoplast pericardium that was stabilized with fibrin glue.

HP-M3 Ekin Y, GH Alpaslan
Comparative evaluation of contraction and sulcus depth achieved by Clark’s Technique vestibuloplasty operations using full-thickness skin grafts and solvent dehydrated human pericardium
Abstract. Time and location not known.
20 patients were randomly divided into two groups. One received full-thickness skin grafts and the other Tutoplast pericardium for vestibuloplasty. Patients were followed for 9 months. Both groups showed acceptable results.

General Surgery

HP-G1 Aleshchenko IE et al.
Use of Tutoplast processed bioimplants in repair of complicate defects of abdominal wall in newborn infants.
Abstract: 11th International Conference on Tissue Banking and EATB Annual Meeting, Bratislava, Slovak Republic, 2002
In 9 babies Tutoplast pericardium 6x8cm, 6x10cm and 6x12cm was successfully used to close abdominal wall defects. The authors state that Tutoplast was the best material of all they had used.

Urology

HP-U1 Chun JL et al.
A comparison of dermal and cadaveric pericardial grafts in the modified Horton-Devine procedure for Peyronie’s disease.
J Urol, 166, 2001
Results in 18 patients with autologous dermal graft and 9 with Tutoplast pericardium were compared. No difference was found. Average operative time was shorter with pericardium (154 vs 174 minutes). The authors state that the minimal preoperative preparation, the decreased patient morbidity and the pliability make the pericardium an attractive suitable graft.

HP-U2 Gholami S
Not-so-rare penile aneurysm repaired without resection
Medical Post, 38(27), 2002
In two patients with large traumatic defects and thinning of the tunica it was reinforced with Tutoplast pericardium.

HP-U3 Hellstrom W et al.
Application of pericardial graft in the surgical management of Peyronie’s disease.
J Urol, 163, 2000
In 11 patients the plaque resection defect was covered with Tutoplast pericardium. No complications occurred during the mean follow-up of 14 months (9-19). The authors conclude: Overall patient satisfaction, absence of a second surgical incision, relative low risk and ease of surgical placement make this material ideal for the surgical treatment of this disease process.

HP-U4 Hellstrom W
New concepts in the management of Peyronie’s disease.
Asian J Androl, 4(2 Suppl 1), 2002
Review: “We studied commercially available processed pericardial tissue Tutoplast. After a long-term evaluation, this technique continues to be successful.”

HP-U4 Leungwattanakij S et al.
Long-term follow-up on use of pericardial graft in the surgical management of Peyronie’s disease.
Continuation of HP-U3 now with a mean follow-up of 30 months (range 25-35), the authors conclude, that for those patients who do not undergo placement of a prosthesis, a better long-term outcome is observed when the plaque is small to medium in size (<2x5cm) and dorsally located.

HP-U5 Levine LA et al.
Human cadaveric pericardial graft for the surgical correction of Peyronie’s disease.
J Urol, 170(12), 2003
40 Patients with Tutoplast pericardium grafting, mean size 4.9x4.8cm, were followed at mean 22 months (range 2-40 months). The authors conclude: “human cadaveric pericardium is a safe, readily available and pliable tissue for tunica albuginea grafting.”

HP-U6 Levine LA
Update on surgical treatment of Peyronie’s disease.
Urology Times, Jun 1, 2004 www.urologytimes.com
Detailed description of the surgical procedure. The author states: “the “off-the-shelf” grafts appear to gaining popularity, as they are readily available, do not require another incision to harvest, and shorten operating room time-all of which reduce the cost of surgery. My preferred graft is the Tutoplast processed pericardium.”

HP-U7 Moncada et al.
Peyronie’s disease: a review
GIMSeR, 12, 2005
Review. In the chapter “Tunica lengthening” various grafting materials are discussed. The authors state: “Although the best grafting material has yet to be determined, the authors use pericardium.”
HP-U8 Muneer et al.
The Lue procedure as a salvage following a Nesbit procedure.
In 15 patients autologous saphenous vein or Tutoplast pericardium was successfully used.

HP-U9 Palese MA and AL Burnett
Corporoplasty using pericardium allograft (Tutoplast) with complex penile prosthesis surgery.
Urology, 58, 2001
In 4 patients an eroded penile prosthesis was covered with Tutoplast pericardium. The authors conclude: "Our early results with Tutoplast processed pericardium for windsock reconstruction of the corpora cavernosum and placement of a penile prosthesis are encouraging."

HP-U10 Thiel DD et al.
Inclusion cyst and graft contraction in Tutoplast human cadaveric pericardium following Peyronie’s grafting: a previously unreported complication.
Int J Impot Res, 17, 2005
Case report. 3 months after Tutoplast pericardium grafting a patient developed a around 2 cm painless cyst that did not resolve over a 6 month period. The cyst was resected and successful grafting with autologous temporalis fascia was done.

HP-U11 Usta MF et al.
Patient and partner satisfaction and long-term results after surgical treatment for Peyronie’s disease
Urology, 62, 2003
61 patients were followed for a mean period of 22 months (range 12-48 months) and divided in 3 groups. Group 1(n=19) had excision and grafting with Tutoplast pericardium, group 2(n=31) had prosthesis and penile modelling and group 3(n=11) had prosthesis and Tutoplast grafting. No penile shortening occurred in groups 1 and 3. Patient and partner satisfaction was highest in group 2 and lowest in group 1.

HP-U12 Kendirci M, WJG Hellstrom
Critical analysis of surgery for Peyronie’s disease
Current Opinion in Urology, 14; 2004
Literature review. Tutoplast pericardium is very positively discussed.

Animal Studies

HP-A1 Klapper SR et al.
Hydroxyapatite implant wrapping materials: Analysis of fibrovascular ingrowth in an animal model.
Ophthal Plast Reconstr Surg, 16(4), 2000
Various wrapping materials, among them Tutoplast pericardium, were tested in 3 rabbits each and fibrovascular ingrowth was analyzed after 4, 8 and 12 weeks. All materials propped suitable. The authors prefer Vicryl mesh for cost reasons and because of their good clinical experience with it.

HP-A2 Leungwattanakij S et al.
Evaluation of cadaveric pericardium in the rat for the surgical treatment of Peyronie’s disease.
Urology, 56, 2000
In 20 rats a 2x4mm section of the tunica albuginea was resected in the midshaft of the penis. In 10 rats the defect was covered with Tutoplast pericardium. After 4 month the intracavernosal pressure was measured and a histology was done. The authors conclude that Tutoplast pericardium is a suitable tunica substitute exhibiting enough strength to withstand normal intracorporeal pressure.
HP-A3 Leungwattanakij S et al.
Comparison of cadaveric pericardial, dermal, vein, and synthetic grafts for tunica albuginea substitution using a rat model.
BJU International, 92, 2003
Various materials were compared among them Tutoplast pericardium. The authors conclude: “The pericardial graft is a satisfactory grafting material when used for tunica albuginea substitution, including the surgical management of Peyronie's disease.”

HP-A4 Leungwattanakij S et al.
Evaluation of corporal fibrosis in cadaveric pericardium and vein grafts for tunica albuginea substitution in rats.
Tutoplast pericardium and autologous vein were compared. The authors state: “We demonstrated that vein graft was an advisable substance to be used as a tunica albuginea substitute in the surgical treatment of Peyronie's disease, because of the minimal fibrosis around the graft. However the disadvantages of vein graft and other autologous grafts include the necessity for a second incision for pre-grafting preparation, contracture and scarring and the meticulous preparation necessary to remove fat and other connective tissues.”