

# Center for Reconstructive Urethral Surgery



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# **Mukocell's tissue-engineered oral mucosa graft urethroplasty**

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**Dresda - Chemnitz - Germany**

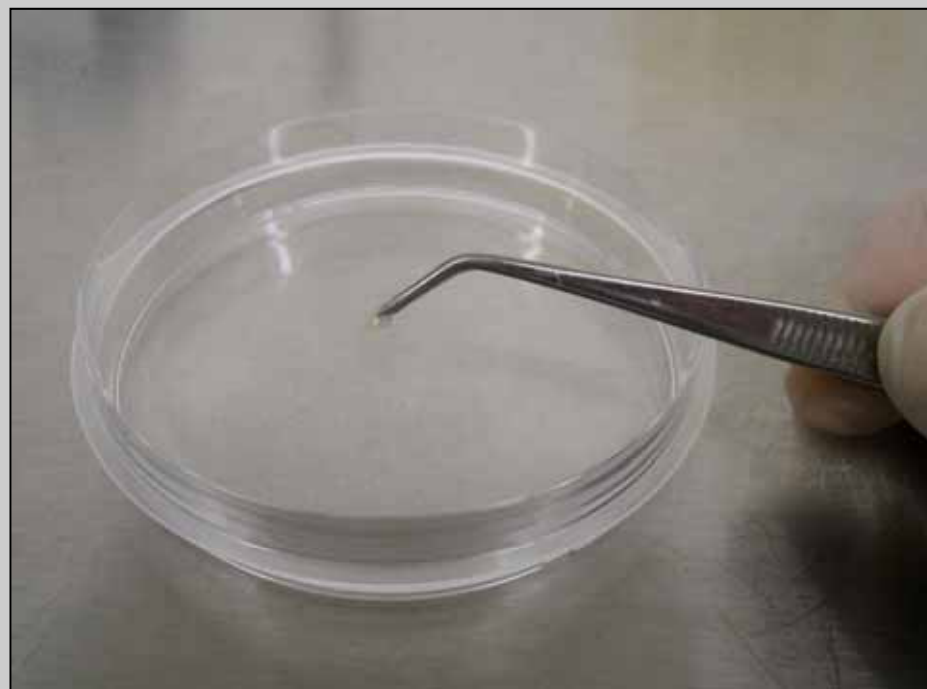
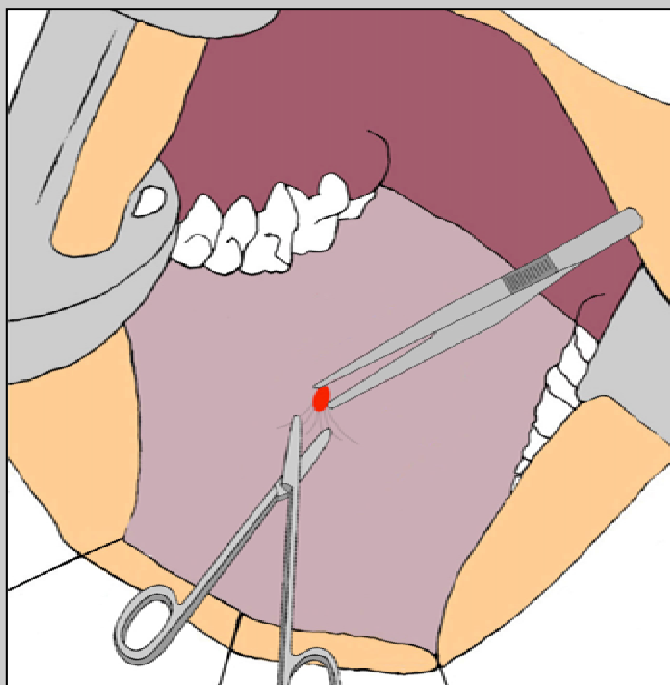
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**The Mukocell's tissue-engineered oral mucosa graft urethroplasty was performed ( in two patients) at the Department of Urology in Chemnitz (Germany), under the direction of Prof. Dirk Falhenkam**



**The Mukocell's tissue-engineered oral mucosa graft was arranged in the Uro-tech laboratory in Dresda (Germany), one of the most advanced pharmaceutical clean room facilities for manufacturing of cell-based medicinal products according to "Good Manufacturing Practice" (GMP)**

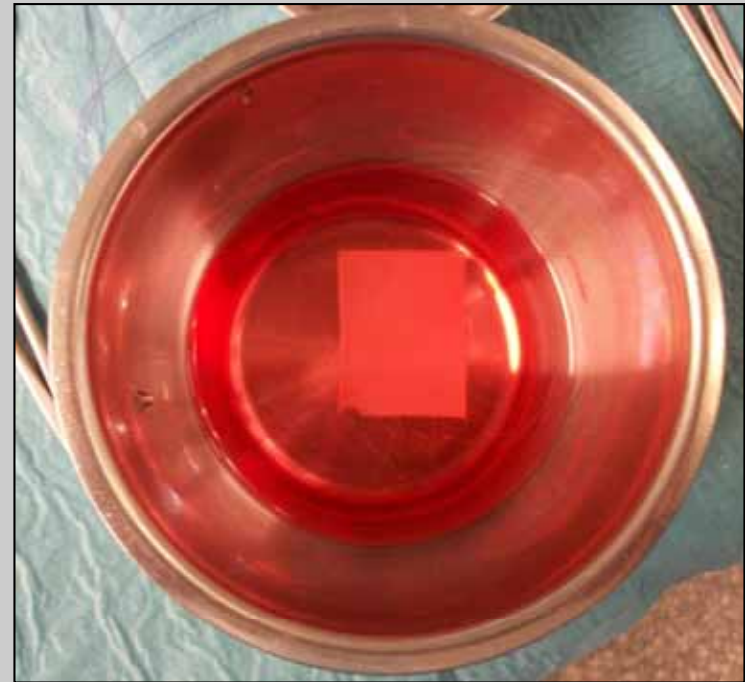


**For the production of MukoCell, a tiny oral mucosa biopsy is taken from the mouth of the patient and sent to the certified cell culture laboratory**





**MukoCell's production is a validated procedure and takes about 3 weeks. During this time, cells are isolated from the biopsy, expanded and cultured on the surface of a collagen scaffold**



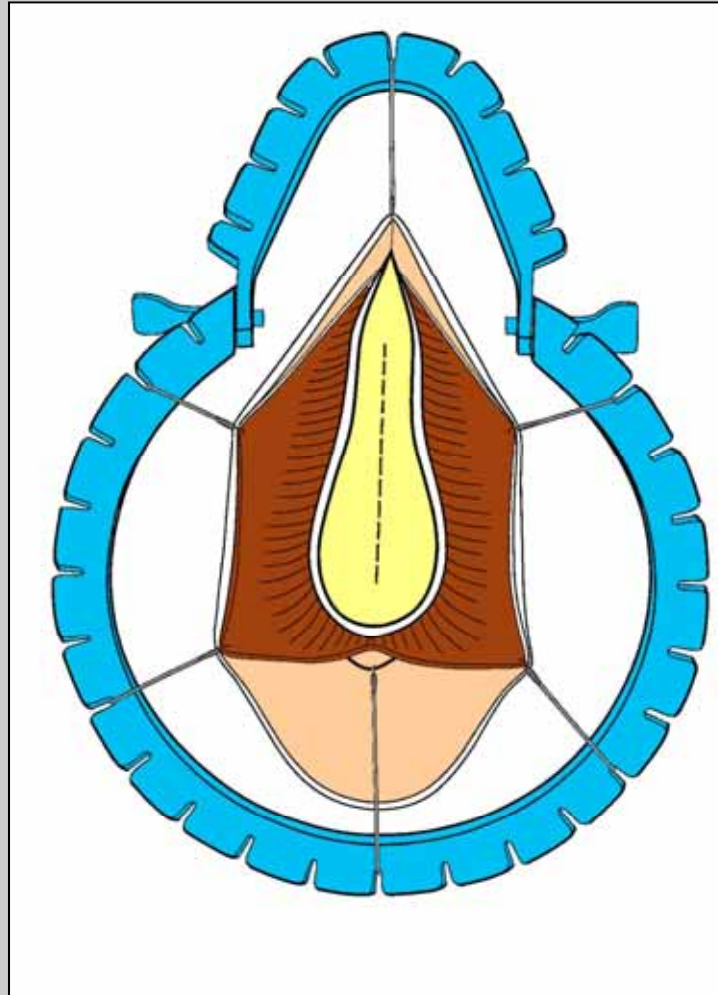
**Patients's own oral mucosal construct is then packed in a sterile container and sent to the hospital, where it can be implanted into patient, undergoing urethral reconstruction surgery**

**Bulbar urethroplasty with dorsal inlay  
Muko-cell's tissue engineered oral mucosa  
graft**

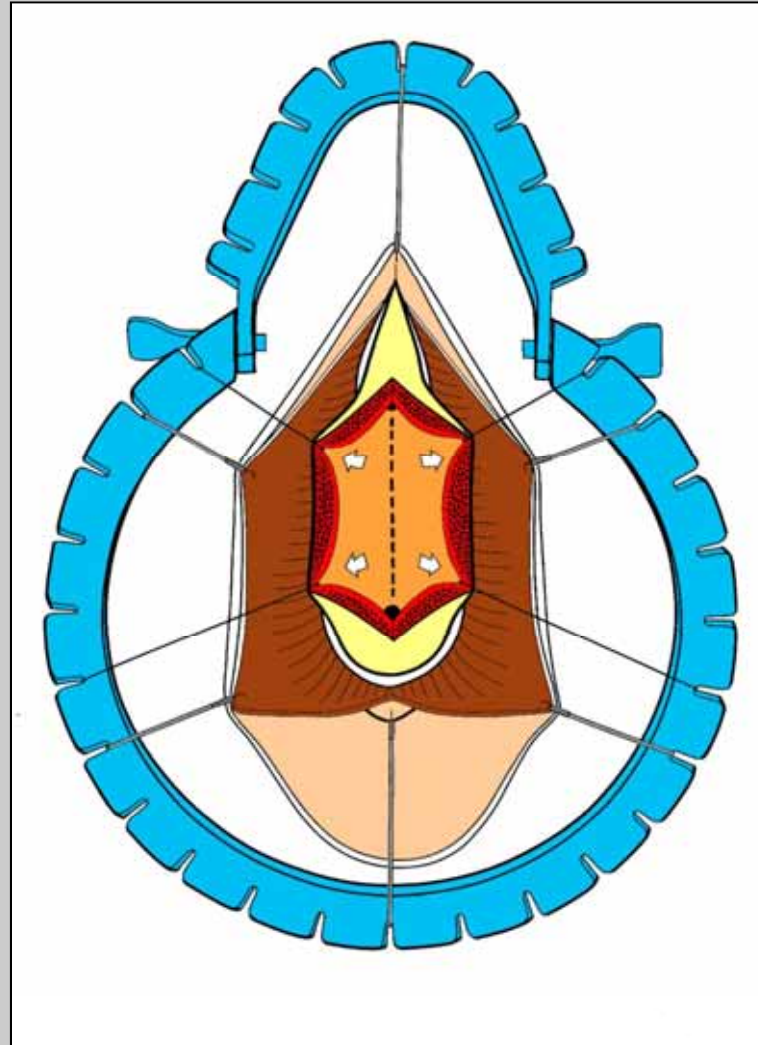




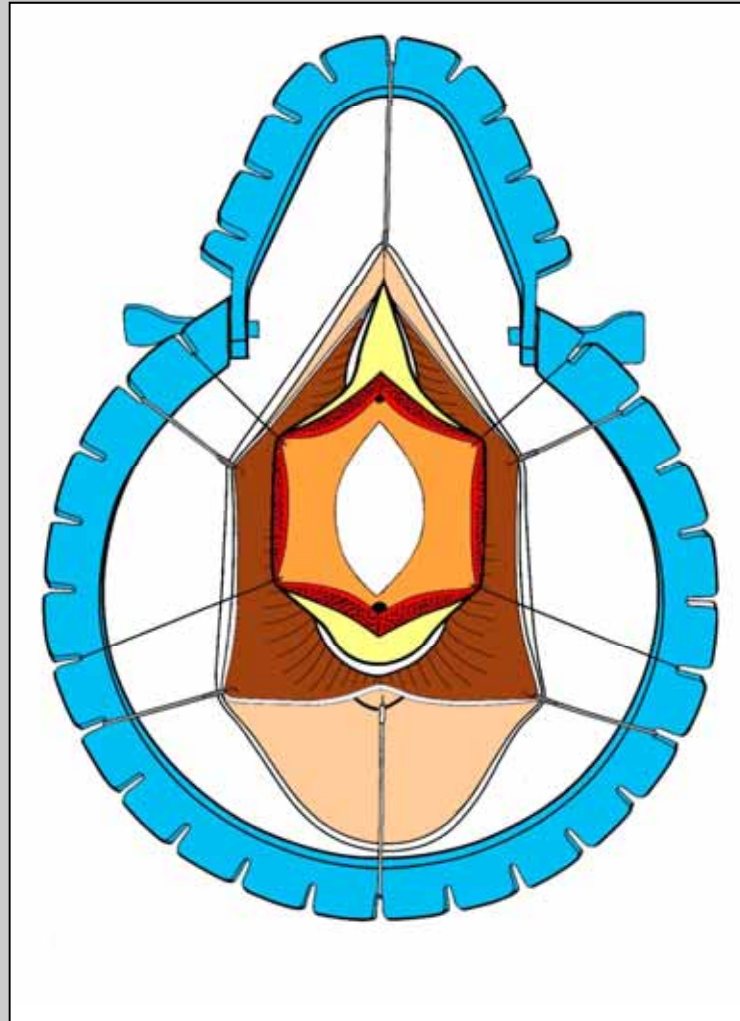
## **Pre-operative retrograde urethrography**



**The bulbar urethra is opened along its ventral surface**

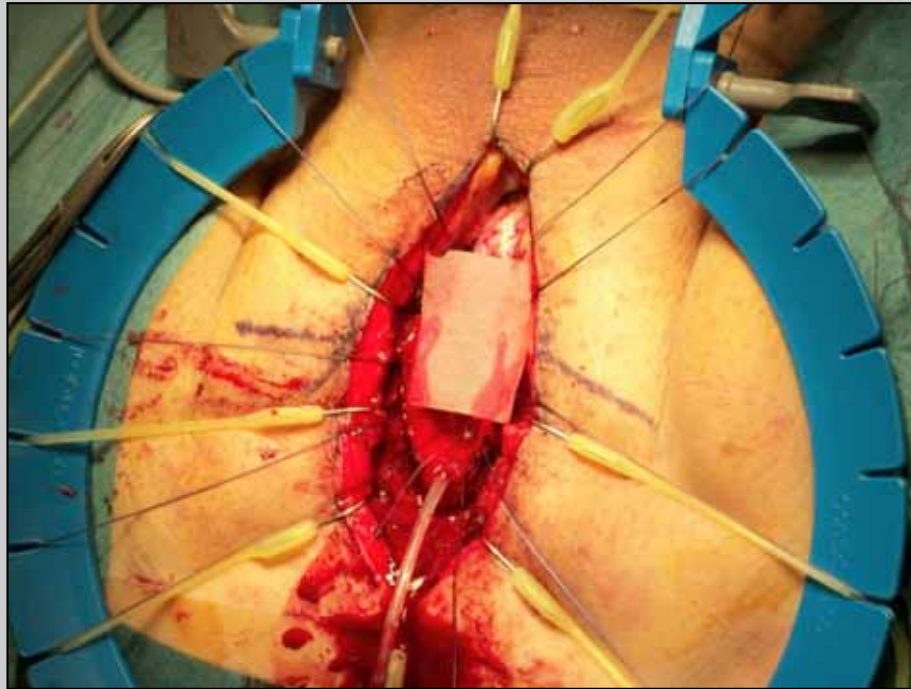


**The urethral plate is longitudinally incised**



**The urethral plate is longitudinally incised to obtain a wide window**





**The Mukocell's oral graft is ready for the transplant into the urethra**

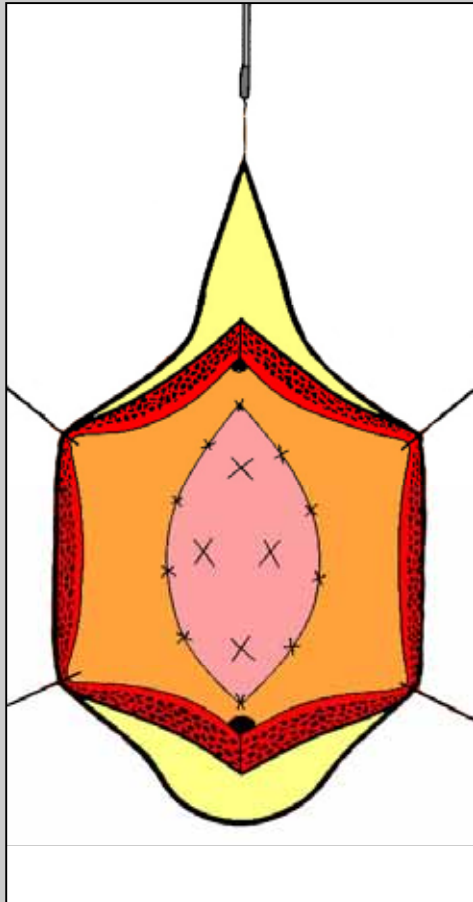


**The Mukocell's oral graft is layed carefully on the window created in the urethral plate**

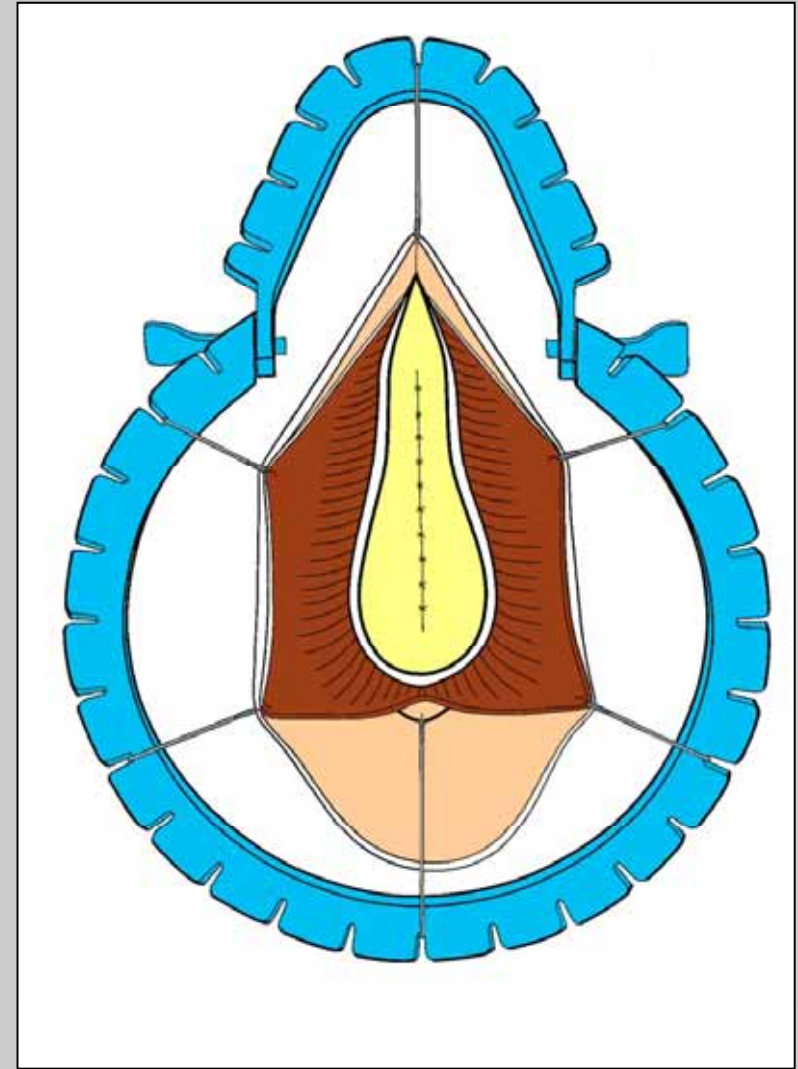
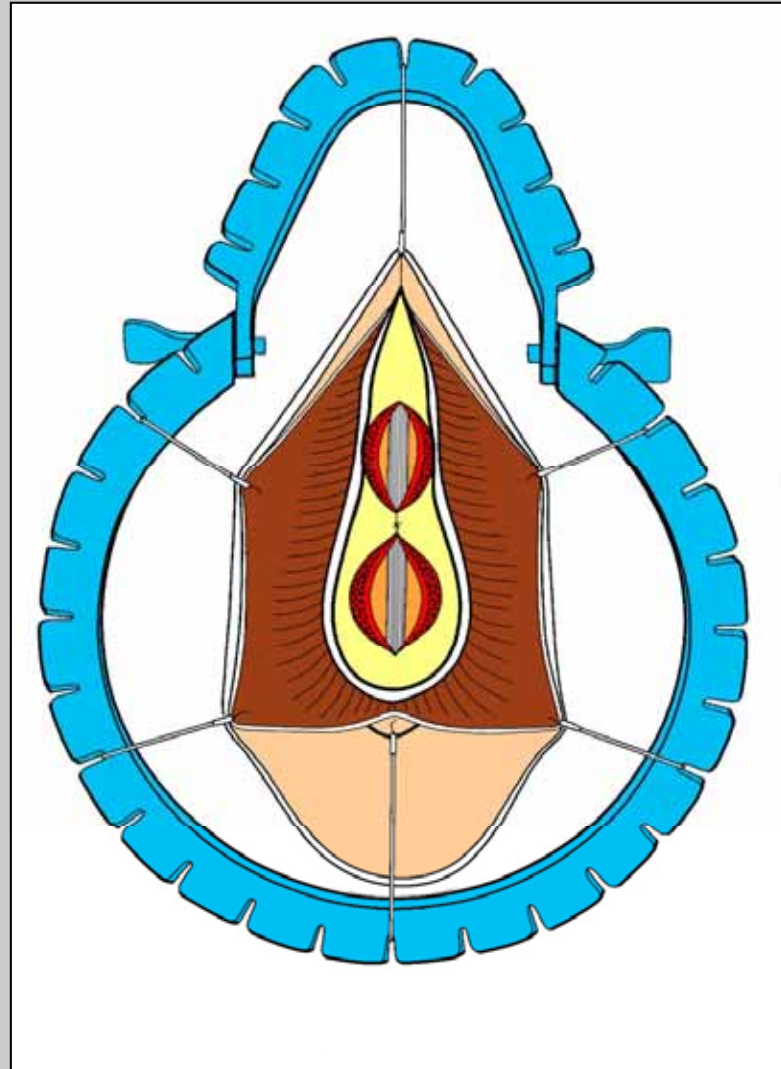




**The Mukocell's oral graft is tailored according to the size of window created into the original urethral mucosal plate**

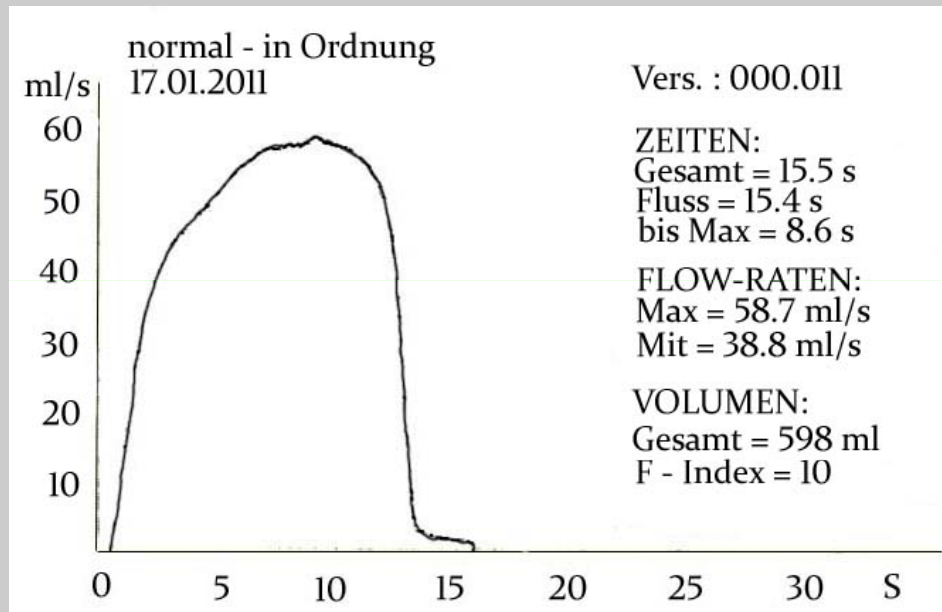


**The Mukocell's oral graft is sutured and quilted deeply into the urethral plate window**



**The bulbar urethra is closed over 16 Ch Foley silicone catheter**





**Four weeks after urethroplasty uroflowmetry and urethrography is made**

**This Mukocell's tissue-engineered oral mucosa graft  
urethroplasty will be soon ready at our Center,  
the first Center selected for using this product in Italy**