

Introduction: Tricuspid valve replacement is the last treatment choice in tricuspid valve pathology. The choice to insert mechanical or bioprosthetic valve remains controversial. Both prostheses have some limitations such as infection, risk of thromboembolism, need for life-long anticoagulation or limited durability. The following study aimed to develop a novel tissue-engineered tricuspid valve based on decellularized pericardium allograft.

Materials and methods: Fresh ovine pericardium was harvested at the local slaughter house and decellularized using detergents. For disinfection all samples were treated for 24h with Phosphate Buffered Solution supplemented with 1% gentamicin and 1% streptomycin. The effectiveness of decellularization was evaluated by histological staining (hematoxylin-eosin, Movat's Pentachrom and Van Gieson), Isolectin B4 staining (a-gal xenoantigen) and by DNA-quantification. Two valvular leaflets were manufactured out of decellularized pericardium and sutured ex-vivo into the tricuspid annulus of an ovine heart and suspended on papillary muscles. Hydraulic test were performed to prove valve competency.

Discussion results: After detergent treatment pericardial tissue has been converted in a cell-free scaffold as proven by standard histological analysis. Immunofluorescent examinations revealed the absence of a-gal xenoantigens. DNA-quantification showed a substantial reduction in DNA content compared to the normal tissue. The alignment of collagenous fibers in decellularized scaffolds appeared well-preserved and was not affected by detergent decellularization procedure as proven by histological staining. Graft disinfection and storage in antibiotic solution after decellularization did not affect the texture of the scaffold. Furthermore, two leaflet structure created out of decellularized pericardium and surgically sutured in tricuspid position of ovine heart resulted in a competent valve prosthesis.

Conclusion: The present results have shown successful decellularization of the ovine pericardium using detergents. Decellularized pericardial allograft can be used in cardiac surgery as a scaffold for valvular tissue engineering or for in-vivo guided tissue regeneration in tricuspid valve replacement.

Key Words: Tissue Engineering, Cardiac Surgery, Tricuspid Valve, Pericardium.

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148. EVALUATION OF THE VA RICOSE VEINS AS A SURROGATE MARKER OF THE THROMBOPHILIC DISORDERS IN PREGNANCY

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Introduction: A successful pregnancy outcome requires an efficient utero-placental circulation. It may be compromised by hemostasis disorders Associated with a prothrombotic state, such as thrombophilia. Thrombophilia includes a large spectrum of disorders that have been assigned to

pregnancy complications as: preeclampsia, recurrent fetal loss and other. Also, recent studies showed higher incidence of thrombophilia in people with varicose veins, suggesting an association between these diseases. As the screening of thrombophilia is expensive and the diagnosis is frequently established late, we aimed to evaluate in this study the relevance of using the varicose veins as an indirect marker of thrombophilia that could lead to an earlier diagnosis, reducing costs and morbidity.

Materials and methods: The case control study was based on the data of 140 pregnant women admitted in the Department of Obstetrics of The Institute of Mother and Child, in the period of 2011-2014. They were evaluated from the perspective of their obstetrical complications suggestive for thrombophilia.

Discussion results: The study of the anamnesis of the previous pregnancies revealed a large number of obstetrical complications in the group of women with varicose veins. Statistically significant data were obtained from the incidence of stagnated pregnancy, found 7 times more often (10% of women from the main group vs. 1,4% women from the control group, $t=2,23$, $p<0.05$) and preeclampsia, found 5 times more often (15.7% vs 2.9%, $t=2.23$, $p<0.05$) in women with varicose veins. During the current pregnancy, these women developed 3 times more often a hypertensive pregnancy disorders (17,1% vs 5,7%, $t=2.88$, $p<0.01$) and 5 times more often – venous thrombosis (15.7% vs 2.9%, $t=2.23$, $p<0.05$) and intrauterine growth restriction (IUGR) (20.0% vs. 4.3%, $t=2.92$, $p<0.01$). There were no pulmonary thromboembolism and abruptio placentae in control group. Evaluating the risks of developing complications, we found out that in the main group the risk was 3.41 fold higher to develop a hypertensive pregnancy disorder (OR=3.41, CI 95.0%: 1.043-11.169, $p<0.01$, AR%=70,7), 6.34 fold higher for venous thrombosis (OR=6.34, CI 95.0%: 1.35-29.761, $p<0.01$; AR%=84.2), 5.58 fold higher for IUGR (OR=5.58, CI 95.0%: 1.527-20.415, $p<0.01$; AR%=82.1), 7.7 fold higher for stagnated pregnancy (OR=7.7, CI 95.0%: 1.118-24.061, $p<0.01$); AR%=87.0) and 6.34 fold higher for preeclampsia (OR=6.34, CI 95.0%: 1.35-29.761, $p<0.01$; RA%=84.2).

Conclusions: Women with varicose veins were more prone to develop thrombophilia Associated complications during pregnancy. This leads us to the idea of using the varicose veins as an early indicator /surrogate marker of a possible thrombophilic disorder, helping to establish the diagnosis and begin prophylaxis or an adequate treatment faster.

Keywords: thrombophilia, pregnancy complications, varicose veins.

149. DIAGNOSIS AND TREATMENT OF COLON POLYPS

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Introduction. Colon polyps are growths that develop in the colon or rectum. Most polyps are benign. A certain type of colorectal polyps (adenomatous) may be leading up to cancer. For this reason, regular screening is very important for people over age 50 or those at high risk of colorectal cancer.

Objectives: