### The 6<sup>th</sup> International Medical Congress for Students and Young Doctors

**Background**: Management of abdominal wall hernias in patients with liver cirrhosis with massive resistance ascites is still under debate. The objective of this study was to compare the outcome in our series of urgently versus scheduled operated treatment of these patients.

**Methods**. In the period between 2011 and 2015, 102 patients with an abdominal wall hernias combined with liver cirrhosis and ascites were identified from our hospital database.

I group: 48 cirrhotic patients operated on urgently, including 36 (75%) - with hernia sac erupts with ascites fluid overflow and 12 (25%) with strangulated hernias. 9 (18.8%) patients was performed endoscopic hemostasis simultaneously for variceal bleeding. In 85% cases ascites fluid was present bacterial microflora. In all cases was installed abdominal drainage, for drainage ascites and lavage abdominal cavity. Group II: 54 cirrhotic patients with massive ascites and spontaneous eruption risk of hernia, operated scheduled after a thorough preoperative preparation, laparoscopic drainage of abdominal ascites and abdominal cavity lavage with antibacterials. In 55% cases ascites fluid was present bacterial microflora.

Plasty method - "tension-free no mesh". Prophylactic endoscopic variceal sealing was performed in 29 (53.7%) patients.

**Results.** 7 patients from the first group died postoperatively with hepatic insufficiency (14.6%), including 4 with variceal bleeding and 3 ascites-peritonitis. In group II was 1 (1.9%) death - hepatorenal failure. Postoperative eventration 3-6 months: I group - 10 (20,8%); II group - 2 (3.7%). Suppuration of postoperative wound: I group - 8 (16.7%), II group without complications.

**Conclusions**. Abdominal wall hernias in cirrhotic patients with ascites preferable operated planned. Laparoscopic abdominal drainage and lavage with antibacterials reduces the risk of ascitesperitonitis, improves wound healing. The preferably solution is hernioplasty "tension-free no mesh".

Key Words. Hernia, ascites, hernioplasty

# 128. REMOVAL OF XENOANTIG ENIC GLYCOSYLATION PATTERNS FROM PORCINE PULMONARY HEART VALVE MATRICES IS DEPENDENT OF THE APPLIED DECELLULARIZATION METHOD

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**Introduction:** Matrix guided tissue regeneration (GTR) based on allogeneic decellularized matrices has been shown as an overall convincing method for heart valve replacement. Nevertheless, a substantial donor shortage prevents an unlimited clinical application of human GTR-valves. Utilization of porcine decellularized heart valve matrices could offer a possible solution for overcoming this considerable limitation. In the past, implantation of xenogeneic valve tissues considered to be acellular

into human recipients, however, mostly lead to severe immune responses usually ending up into graft rejection. This study addresses the question whether potential xenoantigenic glycosylation of extracellular matrix components, like the major xenoantigen  $\alpha$ -Gal, which served as model epitope for this study, can be removed by adjusted decellularization procedures.

Materials and methods: Fresh porcine pulmonary heart valve conduits were decellularized by application of different detergent- and enzyme-based decellularization protocols. Subsequent cleavage of remaining matrix-related  $\alpha$ -Gal epitopes was performed by enzymatic deglycosylation treatment on matrix samples of each decellularization group. Resulting tissues, mainly composed from insoluble extracellular matrix proteins, were afterwards divided into the relevant sections pulmonary artery wall specimens and pulmonary valve leaflets, frozen in liquid nitrogen, minced and finally solubilized by protease digestion. Evaluation of thus prepared solutions regarding to  $\alpha$ -Gal contents was finally performed using a novel designed lectin-based immunoblot technique.

**Discussion results**: Sole decellularization lead to significant removal of  $\alpha$ -Gal, substantial varying in strong dependency to applied protocols between 30 to 50% compared to  $\alpha$ -Gal contents of porcine native control tissues. An additional decrease of residual  $\alpha$ -Gal in a range of another 15 to 30% was achievable by additional  $\alpha$ -Galactosidase treatment. Combining decellularization and subsequent enzymatic digestion resulted in reductions of matrix related  $\alpha$ -Gal contents down to levels, which could be measured for respective pulmonary valve tissues of  $\alpha$ -Gal-KnockOut pigs.

**Conclusion:** Residual xenoantigenic carbohydrates are detectable on insoluble matrix components of porcine pulmonary heart valves, substantially varying dependent on applied decellularization protocols. Combined with glycolytic digestions, remaining glycosylation contents are reducible to background levels. Impacts of these novel insights have to be evaluated in further in vitro as well as in vivo studies.

**Key Words:** Xenotransplantation, Decellularization, Deglycosylation, Heart valves, Tissue Enigneering

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## 129. QUALITY OF LIFE INDICATORS ON A GROUP OF 20 BASICALLY "HEALTHY" SUBJECTS

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**Introduction:** The concerns for the concept and the research quality of life (QoL) in medicine have met a growth. Considering that a correct measuring of the QoL of the patients with chronic diseases must be comparative patient - healthy subject, it appears the necessity of clear view about the QoL of