INTERVENTIONAL ENDOSCOPIC ULTRASONOGRAPHY TRAINING

Creation of a minimally invasive porcine model of biliary obstruction.

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Interventional Endoscopic Ultrasonography (EUS)

EUS guided minimally invasive therapeutic biliary interventions are increasing.

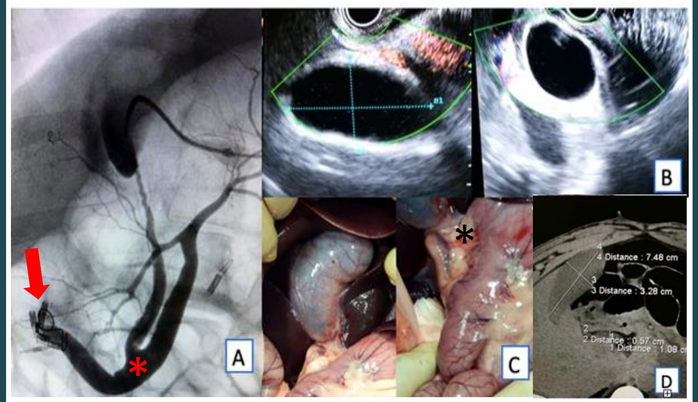
Hands-on training using relevant models is needed to improve the ability of endoscopists.

The goal of the study is to develop a high fidelity in-vivo animal model with **intra and extrahepatic** bile duct dilation to be used during EUS hands-on training curriculums.

Methodology

Developing a bile duct dilation model

36 porcine models were involved, procedures were performed in an experimental hybrid operating room, under general anesthesia, animals underwent an endoscopic duodenal papilla clipping with several hemostatic metallic clips (*arrow*) , after a survival period of 24 hr. models with an effective **intrahepatic and extrahepatic** bile duct dilatation (*asterisk*) were included in a EUS hands-on training course.



Results

Extrahepatic bile ducts and gallbladder dilation was achieved in 36 of the models, in 11 of the 36 models a treatable intrahepatic dilatation was assessed. The overall evaluation from experts and trainees was: **71% excellent.**

Discussion:

Efforts to improve the intrahepatic biliary system dilation are planned, we found that the pig weight and the period between clipping and the use, are key factors. All animals even the ones who did not develop intrahepatic dilation were used adequately during the training session.

Conclusion:

We present a reliable and time-cost-effective model of extrahepatic dilation suitable for interventions . If intrahepatic biliary procedures are the goal; a longer period between clipping and use may be needed.

