

# Erfolg beim



# DGGG-Kongress 2024



**Fünf prämierte Vorträge – unser Team zeigt, was es kann!**

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Die Fisteln sind ein seltenes, potenziell letales  
 das meist sekundär auf Basis einer  
 (80%), einer Tumorerkrankung des kleinen  
 (69%) oder nach  
 (53%) und klinisch mit einer Makrohämaturie  
 Retentionsparametern einhergeht. Die  
 Stellung ist oft schwierig. Die Fisteln können im Rahmen  
 gynäkologischer Grunderkrankungen auftreten,  
 die frühzeitige Diagnostik sowie Therapieeinleitung in  
 Klinikalltag von Bedeutung sind. Innerhalb des letzten  
 stellten sich drei betroffene Patientinnen vor, von denen hier  
 beispielhaft beschrieben wird.

**Anamnese und klinischer Befund**

69-jährige Patientin Vaginalkarzinom pT2b, pN1, pM1 (paraaortale LK), G3 ED 11/21

- 01/2022 präoperative Einlage von Ureterschienen, Lymphknotenstaging
- ab 02/2022 primäre Radiochemotherapie
- 02/2023 ED vaginales Rezidiv

Notfallmäßige Vorstellung in 02/2023 mit beginnendem hämorrhagischen Schock bei

- Unterbauchschmerzen
- Makrohämaturie
- Anämie (Hämoglobin 6,8 g/dl)
- Akutem Nierenversagen

**Diagnose und Therapie**

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Abb.1: Harnblasentamponade



Abb.2: Lagebeziehung A. iliaca und Ureter

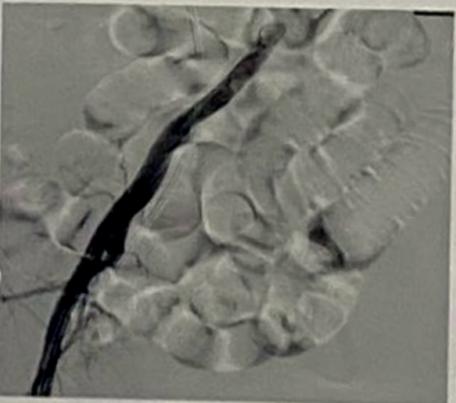


Abb.3: DSA der A. iliaca communis rechts

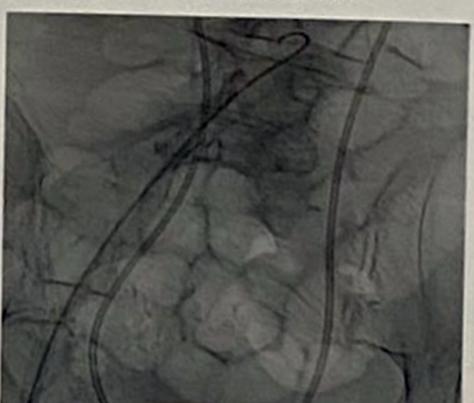


Abb.4: Kalkulierte Stentgraft-Implantation

es stationären Aufenthaltes ein Rezidiv des vorbekannten  
 matische Radiotherapie initiiert. Nach Einlage des  
 n Beschwerden, im Sinne einer erneuten Fistelung.

Systematic Review of 445 Patients. The Journal of urology, 207(1), 35-43.

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**22 Posterpräsentationen – wissenschaftliche Einblicke hautnah!**



## Effect of relaxin on human endometrial stromal cell characteristics

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### Introduction

Patients undergoing frozen embryo transfer in an artificial cycle (AC-FET) are at a twofold increased risk for preeclampsia compared to embryo transfer in a natural cycle<sup>1</sup>. This may be related to the absence of the *corpus luteum* in an artificial FET cycle, which produces important hormones such as estrogen and progesterone in early pregnancy. These hormones are supplemented during AC-FET, whereas other products of the *corpus luteum*, such as relaxin (RLX), are not. Low maternal RLX levels were found in women who developed preeclampsia, but the direct relationship between RLX and the occurrence of preeclampsia remains to be elucidated<sup>2</sup>.

### Methods

Primary human endometrial stromal cells (hESC) isolated from biopsies of women without endometrial pathology, primary decidual cells (pD) isolated from biopsies of the basal plate of the placenta of uncomplicated pregnancies and immortalized human endometrial stromal cells (T hESC) purchased from American Type Culture Collection were used. Cells were decidualized with either 0.5 mM cyclic dibutyryl adenosine monophosphate (db-cAMP) or a cocktail of 10 nM estradiol, 1 μM progesterone and 0.5 mM cAMP (EPC) and additionally treated with 0, 0.3 or 1 ng/ml RLX for twelve days. RNA was isolated on day zero and day twelve from all three cell types. mRNA expression level of decidualization markers (prolactin (PRL); insulin-like growth factor-binding protein 1 (IGFBP1)) as well as pro- and angiogenic factors (vascular endothelial growth factor (VEGF); placenta like growth factor (PlGF); soluble Fms-like tyrosine kinase-1 (sFlt-1); and endoglin (ENG)) were analyzed by quantitative real time polymerase chain reaction (qRT-PCR).

### Results



Figure 1: Representative images from morphological changes in hESC after twelve day with decidualization treatment (EPC or cAMP) in comparison to day zero untreated (UNT) and twelve day treatment with vehicle control (DBM). Scale bar = 200 μm. Only day zero untreated (UNT) and twelve day treatment with vehicle control (DBM) treatment have an elongated phenotype which changes to a polygonal or rounded shape during decidualization by EPC or cAMP treatment.

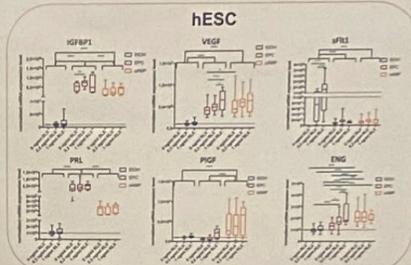


Figure 2: qRT-PCR analysis of decidualization markers and pro- and angiogenic markers in primary hESC. Decidualization with EPC or cAMP and treated with 0, 0.3 or 1 ng/ml RLX. IGFBP1 and PRL expressions were significantly increased by decidualization, EPC caused a more severe increase of both markers than cAMP. Decidualization caused a significant decrease in sFlt-1. VEGF and ENG were significantly increased by RLX treatment in the EPC treatment group, while PlGF expression didn't change after RLX treatment. n=4, \*

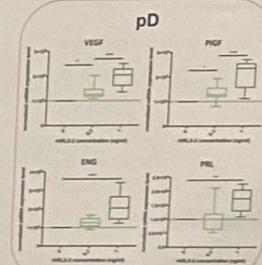


Figure 4: qRT-PCR analysis of VEGF, PlGF, ENG and PRL in undecidualized pD treated with 0, 0.3 or 1 ng/ml RLX. RLX treatment caused an increase in VEGF, PlGF and ENG similar to primary hESC. n=4, \*

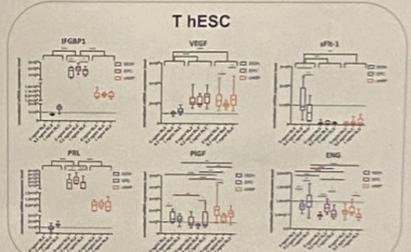


Figure 3: qRT-PCR analysis of decidualization markers and pro- and angiogenic markers in T hESC. Decidualization with EPC or cAMP and treated with 0, 0.3 or 1 ng/ml RLX. IGFBP1 and PRL expressions were significantly increased by decidualization with EPC being more effective, comparable to hESC. Similar to hESC decidualization caused a decrease after treatment with 1 ng/ml RLX. In PlGF mRNA expression level we measured an increase with 0.3 ng/ml RLX compared to no RLX in the control group and with 1 ng/ml RLX compared to 0.3 ng/ml RLX in the EPC treatment group. In the cAMP group a decrease was detected with 0.3 ng/ml RLX compared to no RLX. ENG expression level decreased with 0.3 ng/ml compared to 0 and 1 ng/ml RLX in the control group and increased with 0.3 ng/ml RLX in the EPC treatment group. In the cAMP group a decrease from 0.3 ng/ml to 1 ng/ml occurred. n=4

### Conclusion:

Our results show that hESC and T hESC can be decidualized by EPC and cAMP treatment, however we observed a more effective decidualization of both cell types with the EPC treatment. In primary hESC – which are closer to the *in vivo* setting than T hESC – our results show a proangiogenic effect of RLX which was not detected in T hESC. A proangiogenic effect could also be observed in non-decidualized pD. ENG was increased by RLX in all three cell types. According to these results supplementation of RLX, e.g. in women with low levels or a lack of a *corpus luteum*, could potentially be beneficial to reduce the risk of preeclampsia. However, further studies are needed to confirm these effects and to study the safety of RLX at conception and in early pregnancy.

The authors have no conflicts of interest to declare.

P 165

• Expression molekularbiologischer Untersuchungen bei chronischer Endometriose. Neue Ansätze für die Antikörpertherapie

P 175

• Effekt von Relaxin auf die Eigenschaften humaner endometrialer Stromazellen

**Danke an unser engagiertes Team – gemeinsam für Forschung und Patientinnen und Patienten!**



**Wir freuen uns auf den Austausch und neue Projekte mit euch!**

## **Der DGGG-Kongress 2024 – Wir sind stolz!**

**Der Kongress der Deutschen Gesellschaft für Gynäkologie und Geburtshilfe ist vorbei, und wir blicken auf einige Highlights zurück! Die MHH Frauenklinik konnte mit 5 prämierten Vorträgen, 22 Posterpräsentationen und zahlreichen eingeladenen Vorträgen sowie Sessionleitungen beeindruckende wissenschaftliche Erkenntnisse teilen.**

**In diesem Sinne: Herzlichen Glückwunsch an Dr. Lars Brodowski, Prof. Dr. Matthias Jentschke, Dr. Agnieszka Dencke, Dr. Julia Günther, Anna Biermann und Jasmin Neuhold.**

**Ein riesiges Dankeschön an unser Team für dieses Engagement – und an alle, die währenddessen die Versorgung unserer Patientinnen und Patienten aufrechterhalten haben.**

**Zusammen gestalten wir die Zukunft der Gynäkologie und Geburtshilfe. Wir freuen uns auf die weitere Zusammenarbeit und den Austausch in der Gynäkologie und Geburtshilfe.**

**#dggg #frauenklinik #mhh #frauenklinikhannover #allesuntereinemdach**