

## 5-2.

**Noninvasive rapid urinary trypsinogen-2 dipstick test for early exclusion of post-ERCP pancreatitis within hours after ERCP : Clinical diagnosis and considerations**

(社会人大学院博士課程 3 年消化器内科学)

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【Objective】 Few reports have explored the application of urinary trypsinogen-2 measurement in the early diagnosis of post-ERCP pancreatitis, and none have demonstrated the benefits of noninvasive testing. This study aimed to evaluate the clinical application of the rapid urinary trypsinogen-2 dipstick test (Nipro, Japan) compared with serum amylase and lipase levels for the early diagnosis of post-ERCP pancreatitis (PEP).

【Methods】 A total of 100 consecutive patients (54 men and 46 women) who were admitted and underwent ERCP at Tokyo Medical University Hospital from August 2021 to December 2021 were recruited. All patients underwent rapid urinary trypsinogen-2 measurement using the dipstick test before and after ERCP. Measurements were taken 24 h before ERCP for pre-ERCP and 1-4 h after ERCP for post-ERCP. Additionally, serum amylase and lipase levels were measured at 8 : 00 AM of the day after ERCP (at least 8 h after ERCP), and their diagnostic abilities for PEP were compared and evaluated.

【Results】 PEP occurred in 5/100 patients (5%). The sensitivity, specificity, positive predictive value, and negative predictive value of the dipstick test for diagnosing PEP were 100%, 83.2%, 23.8%, and 100%, respectively. These results were comparable to the diagnostic performance of serum amylase and lipase levels at 8 : 00 AM on the day after ERCP (at least 8 h after ERCP). However, false positives must be considered.

【Conclusion】 The dipstick test may be useful in clinical practice as a noninvasive screening test for the early prediction of PEP.

## 5-3.

**Rebleeding risk of acute hemorrhagic rectal ulcer : a multicenter retrospective study**

(社会人大学院博士課程 4 年消化器内科学)

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【Objective】 Acute hemorrhagic rectal ulcer (AHRU) is a disease characterized by sudden, painless, and massive bleeding from rectal ulcers. Few studies to date have analyzed risk factors of the rebleeding of AHRU. In this study, we hence aimed to clarify the risk factors of rebleeding after initial hemostasis of AHRU, by a multicenter study.

【Methods】 A total of 149 patients who were diagnosed as having AHRU between January 2015 and May 2020 in 3 medical centers were enrolled. The following factors were retrospectively investigated : age, sex, body mass index (BMI), performance status (PS), Charlson comorbidity index (CCI), comorbidities, medications, laboratory examinations, endoscopic findings, view of the whole rectum on endoscopy, hemostasis method, blood transfusion history, shock, instructions of posture change after initial hemostasis, and clinical course.

【Results】 Rebleeding was observed in 35 (23%) of the 149 patients. Multivariate analysis showed that significant factors for rebleeding were PS4 ( $p = 0.001$  ; odds ratio (OR) : 5.23 ; 95% confidence interval (CI) 1.97-13.9), blood transfusion history ( $p = 0.008$  ; odds ratio : 3.66 ; 95% CI : 1.41-9.51), estimated glomerular filtration rate (eGFR) ( $p = 0.001$  ; odds ratio : 0.98 ; 95% CI : 0.97-0.99), view of the whole rec-

tum on endoscopy ( $p = 0.030$ ; odds ratio: 0.33; 95% CI: 0.12-0.90), and use of monopolar hemostatic forceps ( $p = 0.014$ ; odds ratio: 4.89; 95% CI: 1.37-17.4)

**【Conclusion】** Factors associated with the rebleeding of AHRU were poor PS (PS4), blood transfusion, low eGFR, poor view of the whole rectum on endoscopy, and the use of monopolar hemostatic forceps.

#### 5-4.

#### **Ubiquitin carboxyl-terminal hydrolase L1 (UCHL1) is crucial for the development of uterine leiomyoma**

(社会人大学院博士課程 4 年産科婦人科学分野)

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**【Objective】** The hallmark of uterine leiomyoma is the excessive deposition of extracellular matrix (ECM) and key ECM components including collagens, fibronectin, laminins and proteoglycans have been reported to be elevated in leiomyoma compared to myometrium. There are currently few non-invasive treatments for leiomyoma, and there are no practical early intervention or preventive methods. Therefore, we focused on the regulatory mechanism of the ubiquitin-proteasome system and planned this study to develop a new treatment for leiomyoma that does not require pseudo-perimenopausal therapy.

**【Methods】** In this study, human uterine leiomyoma and myometrial tissues were used to detect the protein and messenger RNA (mRNA) expression levels of ubiquitin carboxyl-terminal hydrolase L1 (UCHL1). To explore the effects of UCHL1 in leiomyoma and myometrial tissue, we determined the expression level of type I and III collagen. Wound healing and collagen gel contraction assays were performed on leiomyoma and myometrial cells.

**【Results】** We found that UCHL1 expression was sig-

nificantly higher in uterine leiomyomas than in the myometrium. COL1A1 and COL3A1 expression levels were downregulated after inhibition of UCHL1 in human leiomyoma cells. Furthermore, the migration and contractility of leiomyoma cells were markedly reduced by the inhibition of UCHL1.

**【Conclusion】** In conclusion, these results indicate that UCHL1 is involved in the growth of leiomyoma in humans. For the treatment of uterine leiomyoma, targeting UCHL1 activity may be a unique possible therapeutic strategy.

#### 5-5.

#### **stageIV 大腸癌患者の血漿メタボローム解析の研究**

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**【はじめに】** stage I-III 大腸癌の 5 年生存率は 80% 以上で比較的良好であるが、遠隔転移を伴う stage-IV は 33% であり予後改善が急務である。メタボローム解析は代謝物を網羅的に測定する分析技術で個々の代謝状態に合わせたバイオマーカーを同定し個別化医療に貢献できる可能性がある。今回 stage IV 大腸癌の予後予測の指標探索を目的として血漿でのメタボローム解析を行った。

**【対象と方法】** 当院で大腸癌術前に血液採取した血漿の検体を使用しキャピラリー電気泳動・質量分析装置 (CE-MS) を用いて stage I-III vs IV で比較解析したメタボロームの中で有意に検出される代謝物を網羅的に探索した。大腸癌の臨床病理分類は TNM を用いて評価した。

**【結果】** 患者数は stage I-III/stage IV=189 例/16 例、男性/女性は stage I-III=103/86、stage IV=8/8、年齢中央値は stage I-III/stage IV=70 歳 (27-97)/69 歳 (53-84) だった。メタボローム解析では stageI-III と比較して stageIV において Pelargonate ( $p = 0.0047$ , AUC = 0.814) と N1,N12-Diacetylspermine ( $p = 0.0091$ , AUC= 0.814) の 2 つの代謝物で有意差を認めた。