

誘発、3) OVA 感作・誘発 + デキサメサゾン (Dex、1 mg/kg、14 日間) 群、4) OVA + Rof (5 mg/kg、14 日間)、5) OVA + 喫煙 (CS)、6) OVA + CS + Dex、7) OVA + CS + Rof に分け、気道病理所見を評価した。OVA 群と OVA + CS 群では気道壁厚、コラーゲン沈着量、杯細胞数、線維芽細胞数、TGFβ 発現量が増加したが、平滑筋厚は増加しなかった。Dex は OVA 群と OVA + CS 群においてこれらの気道リモデリングの指標を減少させた。一方、Rof は両群のいずれにおいてもこれらの指標を改善しなかった。すなわち喫煙喘息マウスの気道リモデリング予防には Dex が有効であったが、Rof の有効性は認められなかった。

7-7.

一酸化炭素の応用による血小板への効果

(大学：人体構造学分野)

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【背景】 必要ときに必要な量の血小板を高い品質を担保したまま供給することは、世界中から切望されている課題である。近年、一酸化炭素 (CO) や一酸化窒素 (NO) などの内因性生理活性ガスの臨床応用が期待されているが、国内外において、血小板保存へと応用した報告はない。そこで、ヒトの血小板を用いて血小板の機能制御や凝集抑制などの活性化防止に効果のある CO を含有した血小板保存液を応用することで、血小板の活性化防止を行えないかと考えた。本研究は、lipopolysaccharide (LPS) で血小板を刺激して活性化の状態を再現し、さらに CO を含有した血小板保存液にて血小板への効果を検討した。

【方法】 血小板保存液 (PAS 液) は「ACD-A 液 : Bicarbonate 液 = 1 : 20」を用いて調整し、PAS (CO-Dissolve) 液は「ACD-A 液 : Bicarbonate 液 = 1 : 20」と CO を 1 : 1 の比率で 1 時間以上浸透し作成した。10 単位の研究用血小板製剤 (採血後 1~2 日経過) を分注し、遠心 (900 g/5 分) 後、全容量の 65% 分の血漿を除去し、同量の PAS 液・PAS (CO-Dissolve) 液を添加した。さらに 24°C で 30 分間浸透し、血小板を評価した。評価の指標として、透過型電子顕

微鏡 (JEM-1400 PLUS)・走査型電子顕微鏡・フローサイトメーター (BD FACS Lyric™) を用いた。

【結果】 血小板は活性化する時、α 顆粒膜 GPIIb/IIIa が放出反応に伴って表面膜へ移動することが知られている。今回、CO を溶存した群において、α 顆粒膜 GPIIb/IIIa の表面膜への移動が抑制されることが認められた。

【結論】 血小板保存液に CO を溶存させることで、血小板の活性化を防止し、新たに有効な保存法になり得る可能性がある。(COI: なし)

8-1.

The sex-specific association of physical activity with vision among community-dwelling older adults stratified by age group

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【Background】 The association between vision and physical activity (PA) among older adults remains to be clarified. As remarkable differences in activities of daily living and activity levels were reported by age groups, we investigate the sex-specific association of vision with PA among community-dwelling older Japanese adults stratified by age group.

【Methods】 This cross-sectional study used data from The Neuron to Environmental Impact across Generations study analyzing older adults (527 participants, 65-84 years) living in Tokamachi city, Niigata prefecture,

Japan. A questionnaire was used to assess subjective vision. Intensity-specific PA (light-intensity PA and moderate-to-vigorous PA [MVPA]), and bout-specific sedentary behavior (SB) were evaluated objectively using an accelerometer. The sex-specific associations of vision with PA, stratified by age group (65-74 years, and 75-84 years), were analyzed by general regression analyses, adjusting for covariates.

【Results】 Data of 512 participants (men: 46.9%; with poor subjective vision: 22.9%; those aged 65-74 years: 58.0%) were analyzed. Among young-older adults, poor subjective vision was associated with log

MVPA ($B = -0.298, P = .032$) and prolonged SB ($B = 59.168, P = .015$) among women, but not among men. Among old-older adults, poor subjective vision was significantly associated with prolonged SB among men ($B = 69.505, P = .039$), but not among women.

【Conclusion】 Poor subjective vision was associated with less PA among men aged 75 years and older and women younger than 75 years. Our results suggest that poor subjective vision may affect PA from late elderly stage in men and from early elderly stage in women. Since this is a cross-sectional study, longitudinal studies are needed.

国際交流報告：9-1～9-10

9-1.

ペーチ大学（ハンガリー）留学報告

2023年3月27日～2023年4月21日

(医学部医学科6年)

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One of us completed a one-month clerkship in the surgery department and participated as a second assistant in open and laparoscopic surgeries every day. Another visited different departments every week in the order Pediatrics, Cardiology, Gastroenterology, Vascular Surgery. During the surgeries, the enthusiastic teachers explained the procedures in fluent English. Additionally, we joined extracurricular activities organized by students interested in surgery, such as observing surgeries, competitions, and training sessions. Also, we joined in morning rounds and conferences, sometimes observe outpatient care, examination and treatment for inpatients. This experience highlighted the importance of taking proactive actions to achieve future goals.

Medical students in Pécs take on the part of duties of Japanese residents, such as visiting patients in their charge, doing physical examination, creating charts, and giving a presentation of their findings or opinions to a professor. Pécs University is different in that students

are able to decide the clinical departments that they are interested in and the period they want to practice in each department, so they are able to have a high degree of freedom in their training. Then, I considered the weaknesses and strengths of medical education in two countries.

This overseas practice provided me with a good opportunity to reassess my approach to learning and training. Medical students in Pécs are required to have specialized knowledge in line with clinical practice. I was surprised a disparity in medical education between the two countries while I noticed goodnesses of Japanese medical practice. I got overwhelmed Hungarian students' rapid acquisition of advanced expertise, high level of medical knowledge and practical ability, and high motivation for learning. We are falling behind in medical knowledge, language ability, outgoing power. By experiencing clinical practice according to educational system is different from the usual in Japan, I was able to receive positive stimuli from those around me, and realize what I lack and should improve to become a good doctor with enthusiasm and positivity comparable to those of overseas.