

(between Proximal AP axis and D2), and $\angle D3$ (between Proximal AP axis and D3). All measurement was done as external rotation direction was +. We measured Kellgren-Lawrence classification and femorotibial angle (FTA), using full-length X-ray photograph of the lower limbs, to assess the stage of OA and coronal alignment of knees.

【Results】 $\angle D1$ was $-0.8 \pm 10.6^\circ$, $\angle D2$ was $-3.3 \pm 19.1^\circ$, and $\angle D3$ was $-0.6 \pm 11.4^\circ$. There were no significant correlation between angles and the severity of OA (grade1 were 3, grade2 were 19, grade3 were 83 and grade4 were 196 knees) or the changes of coronal alignment (average of FTA was 182.0 ± 5.1) caused by OA.

【Discussion and Conclusion】 The second metatarsal axis was considered to be highly reliable as the distal AP axis, but there was variation of accuracy among cases. We could not find out the correlation between the variation of the distal AP axis and the stage of OA or the changes of coronal alignment of the lower limbs. Therefore, we considered that the variation of distal tibial rotation references may depend on individual differences in the torsion of the lower leg. When we use the distal AP axis as tibial rotation reference, it is important to understand the difference between distal and proximal AP axis in each cases, to prevent installation errors of rotation position.

6-2.

Association of high sensitivity C-reactive protein to aneurysm sac shrinkage in patients with abdominal aortic aneurysms undergoing endovascular aneurysm repair

(大学病院：心臓血管外科)

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【Background】 The factors associated with aneurysm shrinkage after endovascular aneurysm repair (EVAR) are not well established. Since inflammation is implicated in aneurysm pathophysiology, we

hypothesized that high sensitivity C-reactive protein (hsCRP) was associated with aneurysm shrinkage after EVAR and compared the preoperative hsCRP between patients with and without aneurysm shrinkage after EVAR.

【Methods】 From November 2013 to April 2019, 143 patients undergoing EVAR at our university hospital were included in this study. Aneurysm size was compared between that on preoperative computed tomography (CT) and that on postoperative CT. A change in aneurysm size ≥ 5 mm was considered to be significant, whether due to enlargement or shrinkage.

【Results】 Aneurysm size showed a significant decrease from 50.6 ± 9.8 mm to 47.1 ± 10.3 mm at 1 year. Aneurysm shrinkage was observed in 48 patients (34%), a stable aneurysm was noted in 93 patients (65%), and aneurysm enlargement was noted in 2 patients (1%). The mean preoperative hsCRP was 0.33 ± 0.54 mg / dL. Univariate analysis showed that preoperative hsCRP ($p = 0.029$) and renal cyst ($p = 0.002$) were associated with aneurysm shrinkage. Multivariable analysis showed that preoperative hsCRP (OR 0.22; 95% CI 0.05-0.96; $p = 0.042$) and renal cyst (OR 0.31; 95% CI 0.15-0.67; $p = 0.002$) were independent risk factors for aneurysm shrinkage.

【Conclusions】 Preoperative hsCRP was independently associated with aneurysm shrinkage after EVAR. This data suggests that hsCRP can be a negative predictor for aneurysm shrinkage after EVAR.

6-3.

Gross anatomical study on a vacant space of arteries in the transverse mesocolon

(医学部医学科4年)

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【Introduction】 Previous studies on the arterial distribution to the transverse colon have focused on only the bifurcation of arteries. Due to a lack of detailed studies on the positional relation between the transverse colon and the running course of the arteries, we

investigated gross anatomical patterns between them in the present study.

【Materials and methods】 The arteries in the transverse mesocolon were dissected in cadavers. The relative position of the arteries to the transverse colon was recorded.

【Results】 In the right half of the transverse mesocolon, there was no regularity in the arteries' routes because they ran close and/or far from the colon. On the other hand, an artery intimately ran along the colon as the marginal artery in the left half, resulting in a space without arteries at the inner area. Besides, there are some cases with arterial variations, crossing the space in the left half.

【Discussion】 The vacant space of blood vessels in the transverse mesocolon depends on the route of the middle colic artery (MCA) and some variations. The common space was not determined in the right half, possibly due to no regular route of the MCA. On the other hand, the typical course of the marginal artery contributes to the formation of vacant space in the left half unless there are no variations.

6-4.

Relationship between the changes of body composition and recovery of muscle after total knee arthroplasty

(社会人大学院博士課程4年整形外科)

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※抄録の掲載を辞退する。

6-5.

Differences in longitudinal associations of cardiovascular risk factors with arterial stiffness and pressure wave reflection in middle-aged Japanese men

(大学病院：循環器内科学)

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The present prospective observational study was conducted to examine the differences in longitudinal associations of the conventional risk factors for cardiovascular disease (CVD) with arterial stiffness and with abnormal pressure wave reflection. In 4,016 healthy middle-aged (43 ± 9 years) Japanese men without CVD at baseline, the conventional risk factors for CVD, brachial-ankle pulse wave velocity (baPWV) and radial augmentation index (rAI) were measured annually over a 9-year period. Mixed-model linear regression analysis demonstrated a significant independent positive longitudinal association of the mean blood pressure with both the baPWV (estimate = 5.51, standard error = 0.30, $P < 0.01$) and the rAI (estimate = 0.19, standard error = 0.02, $P < 0.01$). On the other hand, the serum levels of glycohemoglobin, low-density lipoprotein cholesterol and triglycerides showed longitudinal associations only with the baPWV and not the rAI. In addition, while the rAI was found to show a significant longitudinal association with the baPWV. In conclusion, the conventional risk factors for CVD showed heterogeneous longitudinal associations with arterial stiffness and/or abnormal pressure wave reflection. Elevated BP showed independent longitudinal associations with both arterial stiffness and abnormal pressure wave reflection, suggesting that BP is longitudinally associated with microvascular damage. On the other hand, abnormal glucose metabolism and dyslipidemia showed independent longitudinal associations with only arterial stiffness (macrovascular damage).