

【Discussion】 This study suggests that the muscle layer within the capsule becomes thick in the larger species, which increases the pumping action of the lymph node. In some human inguinal lymph nodes, the capsule is ruptured by the entry of fat, which may lead to age-related edema.

6-3. Effect of Obstructive Sleep Apnea on Left Atrium Size and Left Atrial Low-voltage Area in Patients with Atrial Fibrillation

(循環器内科)

○高田 康之、椎名 一紀、矢崎 義直、
楠目 宝大、寶田 顕、里見 和浩、
富山 博史、近森大志郎

【Background】 While it has been noted that obstructive sleep apnea (OSA) is a risk for atrial fibrillation (AF), its underlying mechanisms have not been clarified. The aim of this study was to determine the relationship between OSA, left atrium (LA) size, and the low-voltage area (LVA) known as arrhythmogenic substrate for AF.

【Methods and Results】 We studied 22 patients who underwent catheter ablation for AF (5 paroxysmal AF, 13 persistent AF, 4 long standing persistent AF) and full polysomnography. Patients were divided in two groups: 16 with severe OSA (apnea hypopnea index: $AHI \geq 30$), 6 with no severe OSA ($AHI < 30$). In all cases, LA maps were created with 3-dimensional electro-anatomical mapping system in sinus rhythm or pacing from right atrium. LVA were defined as bipolar voltage < 0.5 mV. As a result, there was no difference in LA size between the two groups ($P=0.967$). On the other hand, LVA (%), which is ratio of LVA to LA size, was larger in patients with severe OSA as compared to no severe OSA ($P=0.004$).

【Conclusion】 Thus, the widening of LVA may be one of underlying mechanisms for the association of OSA with AF.

7-1.

Comprehensive profiling of microRNAs present in vitreous and serum exosomes in ocular sarcoidosis

(大学院博士課程3年眼科学分野)

○小松 紘之

(東京医科大学: 眼科学分野)

臼井 嘉彦、朝蔭 正樹、菅原 莉沙、

後藤 浩

(東京医科大学: 医学総合研究所)

吉岡 祐亮、落谷 孝広

【Background】 Exosomes are a class of endosomally derived extracellular vesicles around 100 nm in size. Exosomes are known to play various roles including activation of immune response in inflammatory diseases such as pulmonary sarcoidosis, but their roles in ocular sarcoidosis remain unknown. This study investigated the profiles of microRNAs (miRNAs) isolated from vitreous and serum exosomes in ocular sarcoidosis.

【Methods】 Vitreous and serum samples from three patients diagnosed with ocular sarcoidosis at Tokyo Medical University Hospital were analyzed and compared with vitreous samples from patients with epiretinal membrane and serum samples from healthy individuals as controls. Vitreous and serum exosomes were isolated by ultracentrifugation, and the presence of exosomes was confirmed using NanoSight. Then, miRNAs were extracted and subjected to comprehensive analyses.

【Results】 A total of 2565 and 2564 miRNAs were detected in vitreous and serum exosomes, respectively, in ocular sarcoidosis. Compared to controls, 30 miRNAs in vitreous and 24 miRNAs in serum were expressed differentially in ocular sarcoidosis. The expression of 25 miRNAs in vitreous and 36 miRNAs in serum were significantly altered compared to controls. In addition, 13 miRNAs present in both vitreous and serum showed significantly decreased expression in ocular sarcoidosis compared to controls.

【Conclusions】 This study identified exosomes in vitreous and serum containing various miRNAs with altered expression in ocular sarcoidosis. These exosomes may be associated with the pathogenesis of ocular sarcoidosis.