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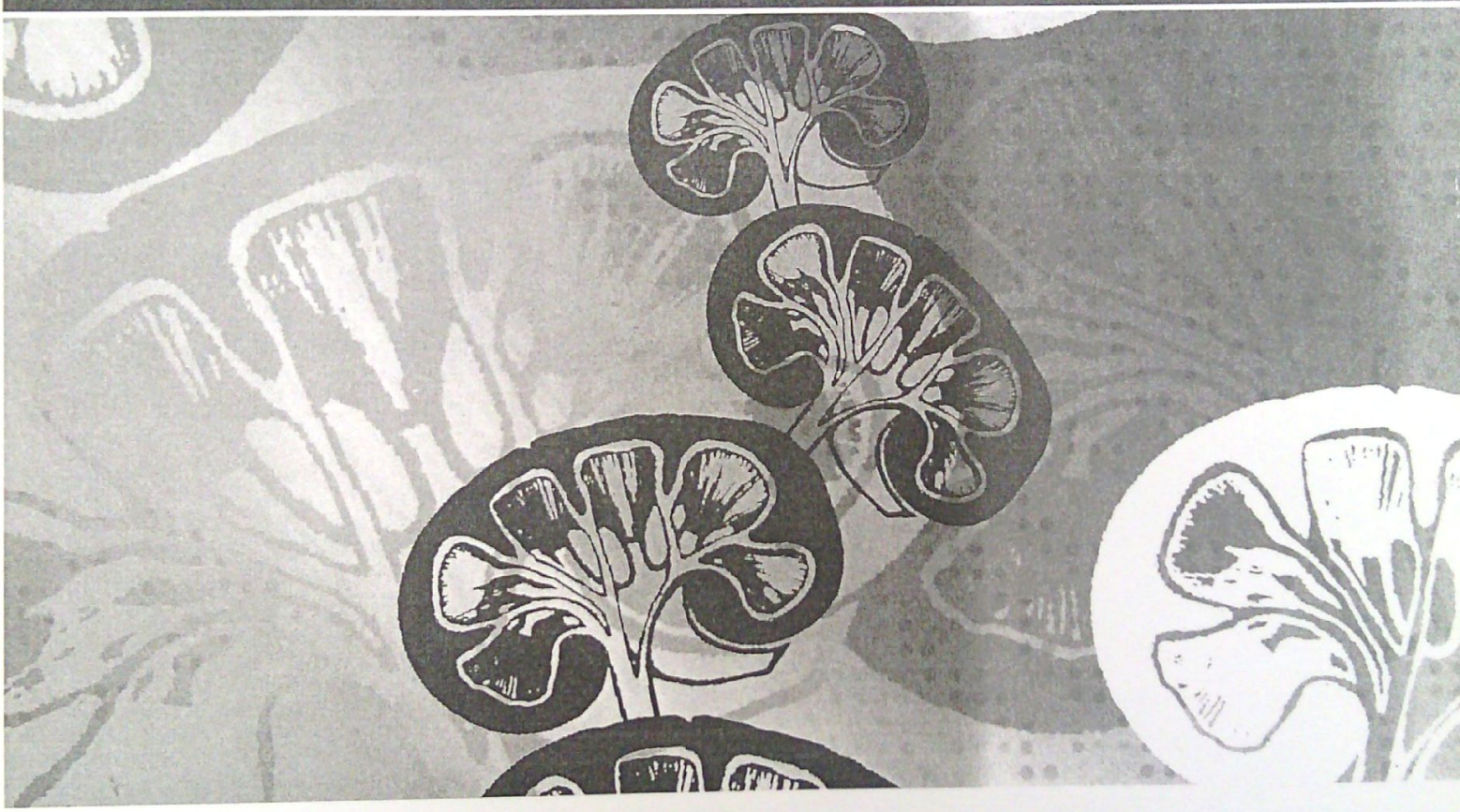

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OP 5

EARLY STAGE OF HYPERTENSIVE RETINOPATHY: IS IT REALLY IMPORTANT?

MURAT KARAMAN[1], SEYİD AHMET AY[2], YALCIN BOZKURT[3], ÜMİT YOLCU [4], OMER KURT[5], FATİH BULUCU[5], LEVENT YAMANEL[6], KENAN SAGLAM[5], MUSATAFA CAKAR[5]

[1]Erzincan Military Hospital; [2]Eskisehir Military Hospital; [3]Gölcük Military Hospital; [4]Siirt Military Hospital; [5]GATA Department of Internal Medicine and [6]GATA Intensive Care Unit, Turkey

BACKGROUND: We investigated the relationship between endothelial dysfunction (ED) and vascular inflammation in patients with early stage hypertensive retinopathy (HT Rp).

METHODS: A total of 99 people consisting of patients with a diagnosis of HT (n = 73), healthy (n = 26) were included in the study. Flow mediated vasodilation (FMD) and nitroglycerin-mediated dilation (NMD) were measured to determine ED in patients. ADMA as a marker of ED, and hsCRP and sTWEAK levels were measured as markers of inflammation. Rp screening was done by the same person according to the Keith-Wagener staging.

RESULTS: 73 patients (f: 44 m: 29) and 26 healthy subjects (f: 20 m: 6), total 99 people were included. The mean age of the patient group was 48.74 ± 12.2, and the mean age of the control group was 38.62 ± 8.7 yr. In HT patients, mean hypertension duration was 6.7 ± 5.7 years. Of HT patients, 60.3% (n = 44) had Rp, 39.7% (n=29) did not. Of those with Rp, 52.1% were stage 1, and 8.2% were stage 2. Compared with controls, hsCRP, ADMA and sTWEAK levels were significantly higher in HT (+) group (p= 0.011, p = 0.001 and p= 0.001, respectively). FMD and NMD rates were significantly lower in patients with Rp (P = 0.033). The levels hsCRP, ADMA and STWEAK were significantly higher in patients Rp (+) (p=0,039, p=0,001 and p=0,001, respectively, compared to the Rp (−) patients). When the Rp (+) patients compared with Rp (−) patients, FMD-NMD measurements were significantly lower at Rp (+) group (P=0.012 and p=0.012, respectively). The patients with stage 1 and 2 Rp compared with healthy group had greater degree of ED.

CONCLUSION: Atherogenesis and vascular inflammation, which play an important role in ED, were more common in patients with early stage of Rp in hypertensive patients.

OP 6

*THE CHARACTERISTICS OF HOME SPHYGMOMANOMETERS IN A LARGE CITY IN TURKEY

KENAN TURGUTALP[1], TURKAY ÖZCAN [2], YAVUZ GÖZÜKARA[3], ZEYNEP EBRU ESER[1], AHMET KIYKIM[1]

Mersin University School of Medicine, [1]Division of Nephrology, [2]Department of Cardiology, and Mersin State Hospital, [3]Department of Internal Medicine, Mersin, Turkey

BACKGROUND: Home blood pressure monitoring (HBPM) is one of the measures that improves patient compliance with treatment, and has great potential to improve hypertension control. HBPM requires a precise measurement technique and an accurate sphygmomanometer. Most of the devices available in the market have not been evaluated independently for accuracy. The aims of this study were to assess the characteristics of home sphygmomanometers in a large city in Turkey.

METHODS: We assessed the hypertensive patients who have been followed in our outpatient center, and their home sphygmomanometers (HS). We asked the reasons influencing their choice of their sphygmomanometer. General evaluation of the device included basic features, validation status, and cuff size.

RESULTS: We interviewed 452 patients with hypertension (HT) (Male, n:253; Female, n:199) and assessed a total of 452 HS. Mean duration of HT was 7.9 ± 4.1 years. Two hundred and sixty nine (85 upper arm, 184 wrist) of the sphygmomanometers were automated and 149 of the devices were aneroid. Both the manufacturer and model were identifiable for all devices. We found only 24 devices listed in dabl Educational Trust website. The most common reason given for choosing the type and model of the sphygmomanometers that had been bought was familiarity with the device through advertisement (44%), followed by simplicity and ease of use (28.2%), physician recommendation (19.3%), belief in accuracy (<1%). None of the home sphygmomanometer owners bought the device based on documented validation.

CONCLUSION: Use of inadequate home sphygmomanometers is wide spread in our city. These characteristics may have a significant role in definition and control of HT.

*SECOND BEST ORAL PRESENTATION AWARD

OP 7

RELATIONSHIP BETWEEN UREMIA, VOLUME STATUS, AND ARTERIAL STIFFNESS IN PATIENTS NEWLY STARTED ON HEMODIALYSIS

UMUT ÇAKIROĞLU[1], HAKAN AKDAM[2], ALPER ALP[2], UFUK ERYILMAZ[3], ÇAĞDAŞ AKGÜLLÜ[3], ÖZGÜL ÖZBEK[4], ASLIHAN KARUL BÜYÜKÖZTÜRK[5], HARUN AKAR[2], YAVUZ YENİÇERİOĞLU[2]

Adnan Menderes University School of Medicine, [1]Departments of Internal Medicine, [2]Nephrology, [3]Cardiology, [4]Peritoneal Dialysis Unit and [5]Biochemistry, Aydın, Turkey

BACKGROUND: Arterial stiffness in chronic kidney disease (CKD) is an independent predictor of cardiovascular disease risk. Hypervolemia-induced vessel wall tension increases arterial stiffness. In this study we investigated the effects of changes in volume status and removal of uremic toxins on arterial stiffness in ESRD patients who recently started dialysis therapy.

METHODS: We present data from the first 28 patients without known cardiovascular disease who were started on hemodialysis due to ESRD. Pro-BNP levels, measurement of left atrial diameter and area with echocardiography and left atrial volume calculation, pulse wave velocity (PWV) and augmentation index measurements with oscillometric pulse wave analysis, volume status measurement by bioimpedance were measured before the first hemodialysis session and when patients reached dry weight after dialysis.

RESULTS: After 5.67 ± 1.82 sessions patients reached dry weight. When the patients reached their dry weight a statistically significant decrease in proBNP, cardiothoracic ratio, and left atrial volume was observed (Table 1). There were no correlations between augmentation index and pulse wave velocity with overhydration, pro-BNP, left atrial diameter and volume. Volume status and PWV relationship was not statistically significant. In addition, patients with ESRD have already increased adrenergic activity, which maybe further aggravated as a result of fluid removal during dialysis.

CONCLUSION: Findings show that increase in pulse rate is related to the activation of the adrenergic system. The long-term effects on arterial stiffness of achieving dry weight remain to be elucidated.

Table 1 | Results

	Before the first hemodialysis	Dry weight is reached	p-value
Weight (kg)	73.43 ± 2.90	68.44 ± 2.90	p<0.001
Pro-BNP (pg/ml)	369.34 ± 101.88	193.37 ± 59.56	p<0.009
Total body water (L)	34.42 ± 1.06	29.78 ± 0.91	p<0.001
Overhydration (L)	2.85 ± 0.77	0.57 ± 0.33	p<0.001
Cardiothoracic ratio (%)	54.96 ± 1.55	47.75 ± 1.03	p<0.001
Biplane left atrial volume (cm^3)	56.75 ± 5.33	40.16 ± 2.88	p<0.001
Average arterial pressure (mmHg)	108.64 ± 2.86	101.21 ± 4.82	p<0.130
Pulse rate	83.64 ± 2.43	90.82 ± 2.97	p<0.032
Augmentation index	24.89 ± 1.88	28.85 ± 2.28	p<0.140
Pulse wave velocity (m/sn)	8.58 ± 0.35	8.23 ± 0.41	p<0.073