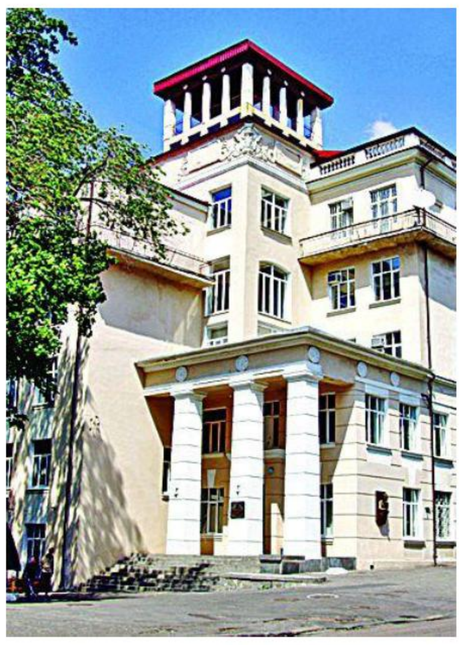
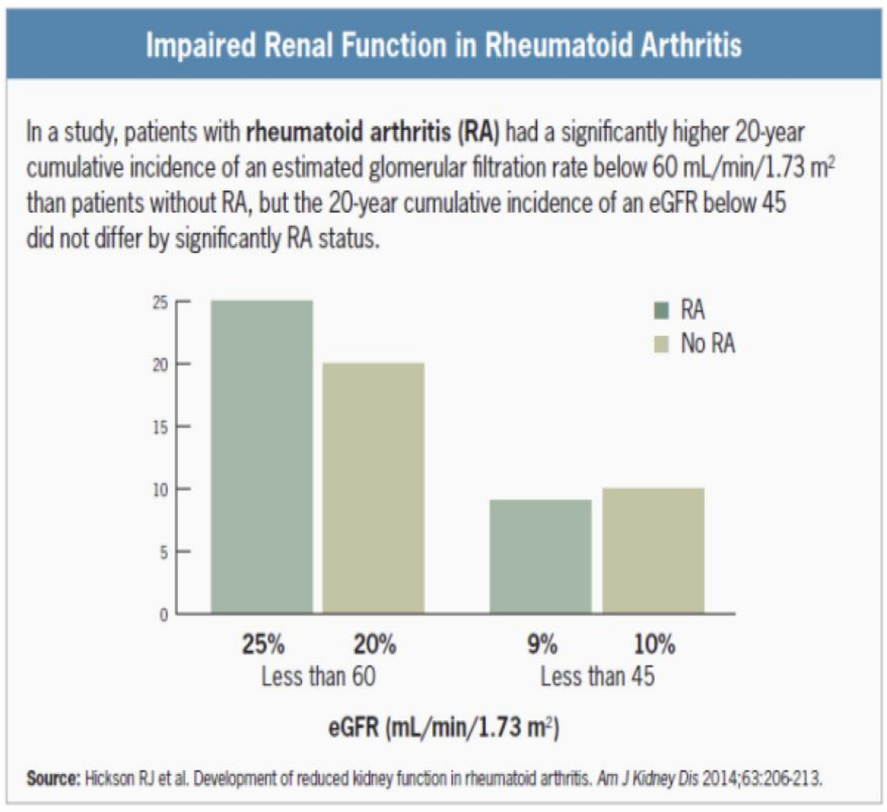
THE IMPACT OF ORAL L-ARGININE ON BLOOD PRESSURE CONTROL AND ENDOTHELIAL FUNCTION IN HYPERTENSIVE PATIENTS COMBINED WITH RHEUMATOID ARTHRITIS AND RENAL DYSFUNCTION

O.V. Kuryata, O.Y. Sirenko, D. Maksakov, L. Trunova
State Establishment «Dnipropetrovsk medical academy of Health Ministry of Ukraine», Ukraine



INTRODUTION

Rheumatoid arthritis (RA) is associated with renal dysfunction and increased cardiovascular risk. Hypertension and endothelial dysfunction are considered as independent risk factors for the progression of CKD and CVD in pts with RA. The role of L-arginine in pts with RA remains uncertain and requires more study.



OBJECTIVES

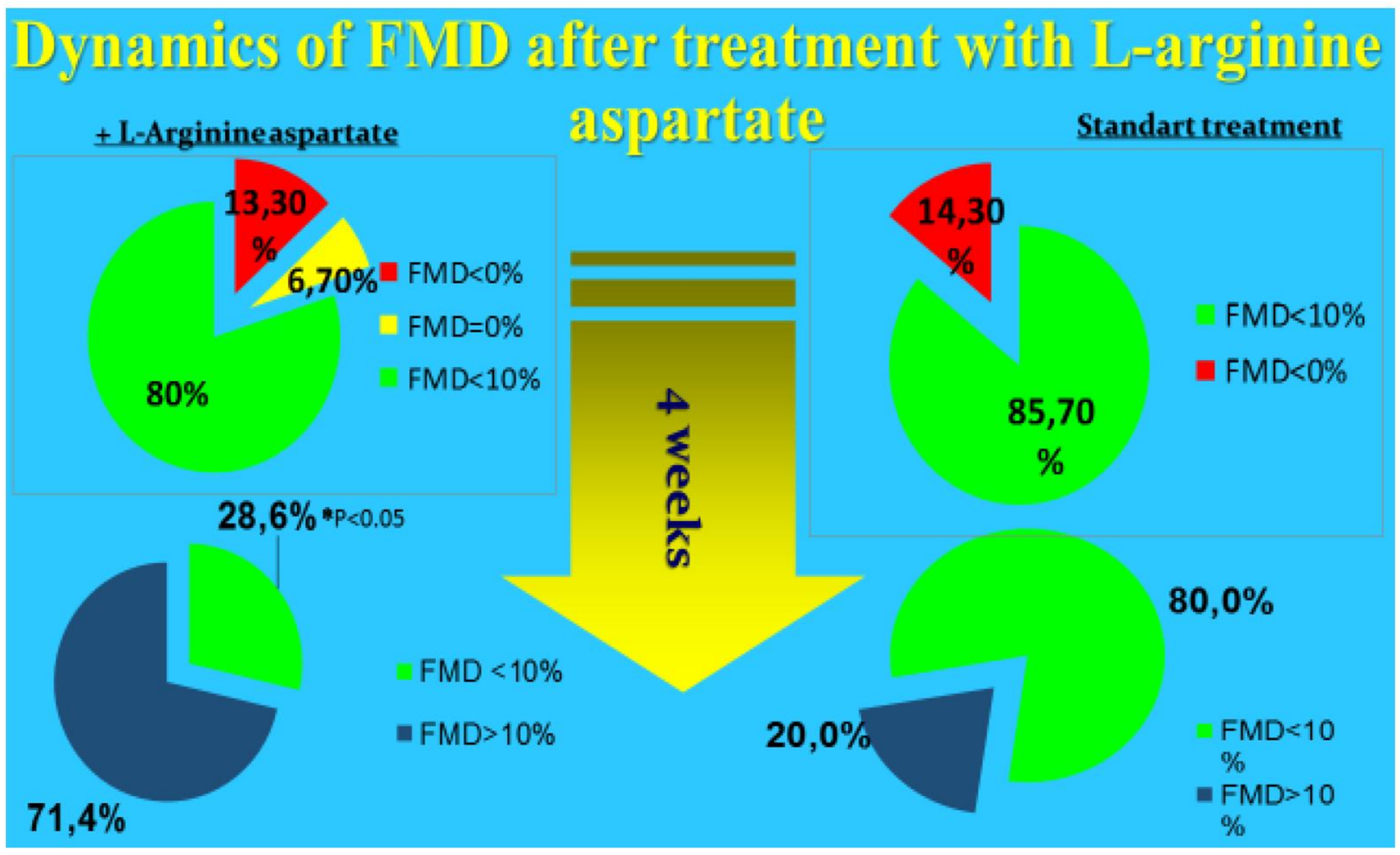
We aimed to evaluate the effect of L-arginine on blood pressure control and endothelial function in hypertensive pts with RA and renal dysfunction.

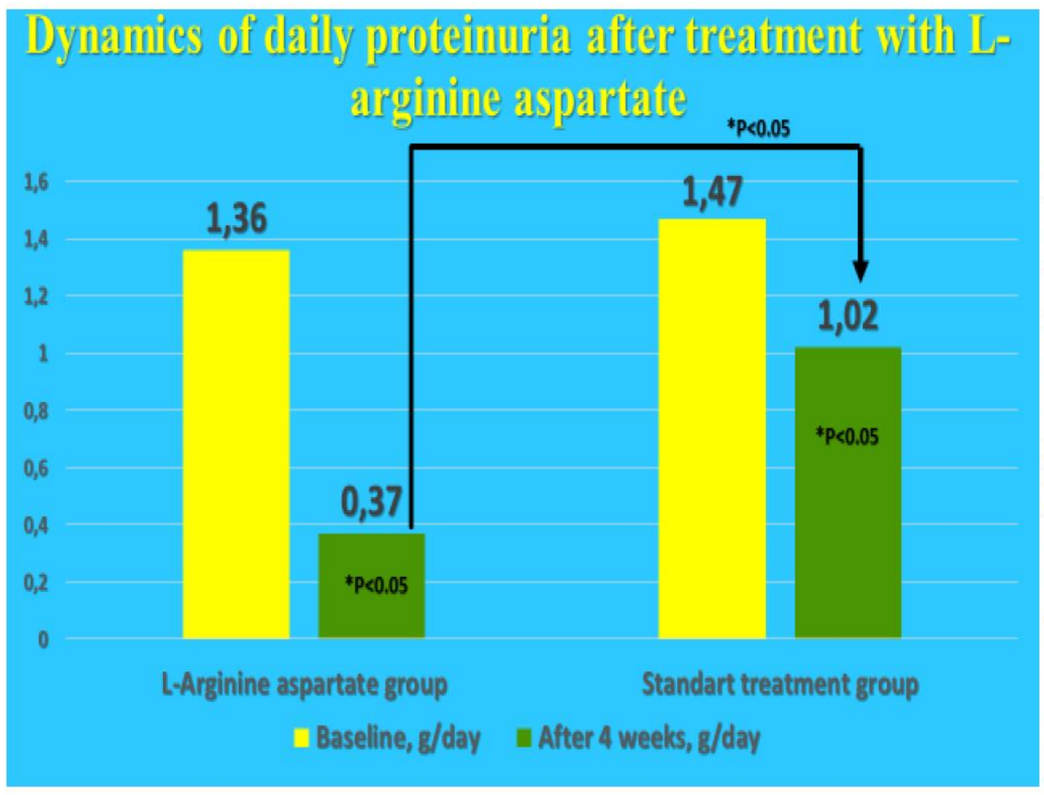
MATERIALS AND METHODS

- **27 pts (mean age – 56,76 ± 5,64 years, 24 females, 3 males, GFR – 77,74 ± 3,19 l/min/1.73m2) with CKD stage 1-2 are enrolled. Diabetic and CVD patients were excluded.**
- **14 (51,85 %) patients received the standard treatment and L-Arginine aspartate 30 ml/day during 4-6 weeks (study group), while 13 (48,15 %) (control group) – received only the standard treatment.**
- **All pts had established endothelial dysfunction determined at baseline and after treatment using the Echo – Doppler to measure the flow-mediated dilation (FMD < 10%) in the brachial artery during reactive hyperemia, daily proteinuria was performed at baseline and after treatment.**

RESULTS

After 4-6 weeks of treatment with L-Arginine *endothelial-dependent FMD* had been normalized in 8 pts (57.14%), compared with standard therapy - in 3 pts (23.08%, p <0.05). In general, the first group observed endothelial function improvement was to 58.8% (p <0.05) compared to the second group - 24.1% (p <0.05). The levels of mean arterial pressure at the end of the study has decreased by 35.8% among patients of study group and 28.7% among patients in control group (p <0.05), reducing the daily proteinuria – on 72.8% (p< 0.05) and 31.7% (p<0.05) respectively.





CONCLUSIONS

- **L-Arginine is effective and safe for hypertensive patients with rheumatoid arthritis and renal dysfunction. Its administration may show positive effects on endothelial function, daily proteinuria and blood pressure control that provides benefits for this pts.**

REFERENSES

1. Corrales Alfonso. Carotid ultrasound is useful for the cardiovascular risk stratification of patients with rheumatoid arthritis: results of a population-based study. / Alfonso Corrales, Carlos González-Juanatey, María E Peiró, Ricardo Blanco, Javier Llorca, Miguel A González-Gay // J. Annals of the Rheumatic Diseases. – 2014. – N. 73 – P. 722-27.
2. Doria A. Inflammation and accelerated atherosclerosis: basic mechanisms / Doria A., Sherer Y., Meroni P.L., Shoenfeld Y. // Rheum. Dis. Clin. North Am. – 2005. – N. 31(2) – P. 355–362.
3. Naranjo A. Cardiovascular disease in patients with rheumatoid arthritis: results from the QUEST-RA study / A. Naranjo, T. Sokka, M.A. Descalzo et al. //Arthritis Research & Therapy. – 2008 – Vol. 10, N. 2: R30.
4. Panoulas VF. Prevalence and associations of hypertension and its control in patients with rheumatoid arthritis / V.F. Panoulas, K.M. Douglas, H.J. Milionis, A. Stavropoulos-Kalinglou, P. Nightingale, M.D. Kita, A.L. Tselios, G.S. Metsios, M.S. Elisaf, G.D. Kitas // Rheumatology. – 2007. – Vol. 46, N. 9 – P.1477-1482.
5. Peters M.J. EULAR evidence-based recommendations for cardiovascular risk management in patients with rheumatoid arthritis and other forms of inflammatory arthritis / M.J. Peters, D.P. Symmons, D. McCarey // Annals of the Rheumatic Diseases. – 2010. – N. 69 – P. 325-331.
6. Hickson RJ. The presence of cardiovascular disease in RA patients increases their risk of impaired renal function / Am J Kidney Dis. – 2014- N. 63 – P. 206-213.
7. Hans-Joachim Anders. Renal co-morbidity in patients with rheumatic diseases / Arthritis Research & Therapy 2011, 13:222

DOI: 10.3252/pso.eu.52era.2015
ePosters supported by F. Hoffmann- La Roche Ltd.