supplementary Table S2 Studies that compare pulse wave velocity in patients with rheumatoid arthritis vs healthy subjects

Table 1 Studies that compare pulse wave velocity in patients with rheumatoid arthritis vs healthy subjects

Study	Authors	year	N arthritis	N controls	Female cases	Female controls	Age case	Age controls	DAS 28	Control variables	Measurement technique	PWV Cases [m/s]	PWV Controls [m/s]	P value
Rheumatoid arthritis is associated with increased aortic pulse-wave velocity, which is reduced by anti-tumor necrosis factor-alpha therapy.	Mäki-Petäjä KM et al	2006	77	142	62	104	57±13	57±11	4.33 ± 1.48	No	Sphygmo Cor, AtCor Medical, Sydney, Australia	8.35 (7.14–10.24)	7.52 (6.56–9.18)	0.005
Para articular trabecular bone loss at the ultradistal radius and increased arterial stiffening in postmenopausal patients with rheumatoid arthritis.	Tanaka K et al	2006	47	49	47	49	59.6 ± 14.1	56.7 ± 7.4	NA	No	Automatic waveform analyzer (model BP-203RPE; Colin, Komaki, Japan)	11.24 (10.4-11.75)	9.89 (8.19-10.54)	< 0.001
Forearm haemodynamics, arterial stiffness and microcirculatory reactivity in rheumatoid arthritis.	Arosio E et al	2007	65	40	65	40	47±6	45±5	3.7 ± 1.1		Doppler	9.3±0.2	8.4±0.4	<0.05

Non-invasive Assessment of Arterial Stiffness Indices by Applanation Tonometry and Pulse Wave Analysis in Patients with Rheumatoid Arthritis Treated with TNF-α Blocker Remicade (infliximab)	Cypiene A et al	2007	68	87	59	56	40.68 (10.07)	38.10 (8.69)	5.37 [0.94]	NO	Sphygmo Cor, AtCor Medical, Sydney, Australia	8.42±1.02	8.21±1.14	0.315
Increased arterial stiffness and indication of endothelial dysfunction in long-standing rheumatoid arthritis	Wallberg-Jonsson S et al	2008	30	30	23	23	53.5	54	3.83 [2.24]	NO	Sphygmo Cor, AtCor Medical, Sydney, Australia	6.0±2.0	5.5±0.6	<0.001
Osteopontin Is Associated with Increased Arterial Stiffness in Rheumatoid Arthritis	Bazzichi L et al	2009	41	18	30	13	57.2 ± 9.9	54.9 ± 7.8	3.60 ± 1.42	NO	Sphygmo Cor, AtCor Medical, Sydney, Australia	8.1 [4.7–16.4]	7.5 [4.1–10.4]	<0.01
A comparative study of arterial stiffness, flow-mediated vasodilation of the brachial artery, and the thickness of the carotid artery intima-media in patients with systemic autoimmune diseases.	Soltész P et al	2009	101*	36	77	26	52.3±13.3	50.3±10.4	NA	no	TensioClinic arteriograph system [TensioMed Kft., Debrecen, Hungary]	9.66±2.40	8.00± 1.46	<0.0002

Paradoxical Association of C-Reactive Protein with Endothelial Function in Rheumatoid Arthritis	. Holmes M et al	2010	59	123	48	73	50.85±8.63	48.97±9.87	5.786 ± 1.10		Sphygmo Cor, AtCor Medical, Sydney, Australia	8.696± 0.18	8.026±0.12	<0.01
Arterial stiffness in a muscular artery in women with long standing rheumatoid arthritis compared with healthy controls and patients with traditional cardiovascular risk factors.	Pieringer H et al	2010	30	30	30	30	45.6 ±8.0	44.4 ±6.3	3.7 ± 1.6	NO	Sphygmo Cor, AtCor Medical, Sydney, Australia	8.6±0.9	8.1±0.7	<0.02
Relationship between pulse wave velocity and serum YKL-40 level in patients with early rheumatoid arthritis	Turkyilmaz A et al	2012	42	35	33	28	43.1 ± 5.8	41.0 ± 5.9	5.8 ± 0.7	NO	Sphygmo Cor, AtCor Medical, Sydney, Australia	9.8 ± 2.9	6.9 ± 1.5	<0.05
Relationship of osteoprotegerin to pulse wave velocity and carotid intima-media thickness in rheumatoid arthritis patients	Beyazal MS et al	2015	68	48	56	37	48.4±8.1	46.6±6.2	3.73 ± 1.4	NO	Sphygmo Cor, AtCor Medical, Sydney, Australia	8.2±1.9	6.2±1.2	<0.001

Rheumatoid arthritis is sufficient to cause atheromatosis but not arterial stiffness or hypertrophy in the absence of classical cardiovascular risk factors	Aikaterini A et al	2015	41	41	36	36	49.12±12.95	49.17±13.35	3.72 ± 1.35	NO	Sphygmo Cor, AtCor Medical, Sydney, Australia	7.65±1.37	7.54±1.32	0.678
Arterial stiffness is associated with left ventricular dysfunction in patients with rheumatoid arthritis	Ilter A et al	2016	35	25	30	17	47.1±6.3	46.8±6.9	3.9± 1.7	NO	Sphygmo Cor, AtCor Medical, Sydney, Australia	10.2±2.3	9.2±1	0.01
The Assessment of Subclinical Cardiovascular Dysfunction in Treated Rheumatoid Arthritis	Magda S et al	2016	29	17	28	16	55.5 ± 9,6	55.1 ± 10.1	NA	NO	Complior, Artech Medical, Paris, France	9.9 ± 2	10.1 ± 1.5	NS
Arterial stiffness is not increased in patients with short duration rheumatoid arthritis and ankylosing spondylitis.	Dzieża-Grudnik A et al**	2017	26	29	21	13	40 ± 9.7	32 ± 7.6	4.4 ± 1.5	NO	Complior, Colson, Garges-les-Gonesse, France	10 [8.8–10.9]	9.2 [8.3–11.4]	0.14
Atherosclerosis is not accelerated in rheumatoid arthritis of low activity or remission, regardless of antirheumatic treatment modalities	Arida A et al	2017	139	139	117	116	56.7 (11.7	55.6 (13.4)	<3.2	NO	Doppler Sphygmocor, AtCor, Sydney, Australia	8.4±1.8	8.7±2.2	0.152

Increased arterial stiffness in rheumatoid arthritis and Its relation to disease activity: A cross sectional study	Youssef G et al	2017	90	45	75	37	39.86 ± 9.39	37.82 ± 9.62	NA	NO	Doppler	8.57 ± 4.83	4.08 ± 1.13	0.001
Subclinical impairment of myocardial and endothelial functionality in very early psoriatic and rheumatoid arthritis patients: Association with vitamin D and inflammation	Lo Gullo A et al	2018	41	58	32	35	46 (32 – 62)	46 (32 – 62)	3.61 ± 0.88	NO	Doppler	7.91 ± 1.93	5.11 ± 0.83	<0.001
Association of non-invasive hemodynamics with arterial stiffness in rheumatoid arthritis	Anyfanti P et al	2018	104	52	82	41	60.0 ± 11.4	57.2 ± 8.2	3.5 ± 1.2	NO	Sphygmo Cor, AtCor Medical, Sydney, Australia	8.2 ± 2.1	7.4 ± 1.4	0.016
Stiffening of aorta is more preferentially associated with rheumatoid arthritis than peripheral arteries	Yang Y et al	2019	72	55	59	45	47.4 ± 6.88	46.2 ± 6.72	3.79, 2.7–6.1		Doppler	7.94 ± 2.07	6.70 ± 1.23	0.0001

DAS 28: Disease Activity Score. *: 101 with autoimmune disease, 14 with Rheumatoid arthritis. **There were no age differences between cases and controls except for this study. NS: non-significant