

Table 2 shows the baseline data of patients in included studies.

Author, Year	Treatment					Sex (male)	Age (years)	Anthropometric			Metabolic and Biochemical								Liver histology							
	Intervention	Number	Dosage	Frequency	Co-Intervention			BMI (kg/m ²)	WC (cm)	Weight (kg)	TG (mg/dl)	TC (mg/dl)	HDL (mg/dl)	LDL (mg/dl)	FBS (mg/dl)	FPI (μU/mL)	HOMA-IR	AST (U/ml)	ALT (U/ml)	NAS	Steatosis grade	Ballooning grade	Fibrosis stage	Lobular Inflammation	Portal Inflammation	
Mosca et al, 2020 [Italy]	vitamin E	40	—	—	Hydroxytyrosol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	Placebo	40	—	—	None	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Khachidze et al. 2019 [Georgia]	vitamin E	52	400 IU	Once daily	vitamin C 500 mg/day + lifestyle modification	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	lifestyle modification	20	—	—	None	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	UDCA	35	15 mg/kg	Once daily	lifestyle modification	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Anushiravani et al. 2019 [Iran]	vitamin E	30	400 IU	Once daily	lifestyle	NA	47.0 ± 9.1	25.7 ± 3.3	90.9 ± 9.6	NA	154.2 ± 58.9	190.1 ± 43.6	53.2 ± 11.5	106 ± 38.9	101.1 ± 15.4	NA	NA	25.1 ± 9.1	30.7 ± 18.2	NA	NA	NA	NA	NA	NA	
	Placebo	30	—	—	lifestyle	NA		26.1 ± 3.1	92.8 ± 8.9	NA	150.2 ± 54.2	219.6 ± 55.4	58.4 ± 8.6	131.2 ± 48.8	107.7 ± 29.2	NA	NA	19.6 ± 11.7	22.8 ± 15.9	NA	NA	NA	NA	NA	NA	NA
	Metformin	30	500 mg	Once daily	lifestyle	NA		26.1 ± 3.5	93.3 ± 9.1	NA	160.2 ± 50.7	198.4 ± 47.8	60.3 ± 15.1	106.1 ± 39.3	100.7 ± 16.1	NA	NA	19.4 ± 7.8	23.3 ± 14.2	NA	NA	NA	NA	NA	NA	NA
	Silymarin	30	140 mg	Once daily	lifestyle	NA		25.1 ± 3.7	90.6 ± 10.5	NA	155.1 ± 83.7	193.2 ± 39.9	48.5 ± 9.1	113.7 ± 34.3	118.9 ± 56.4	NA	NA	23.3 ± 11.1	30.2 ± 18.1	NA	NA	NA	NA	NA	NA	NA
	pioglitazone	30	15 mg	Once daily	lifestyle	NA		25 ± 3.3	90.4 ± 9.8	NA	125.6 ± 67.2	185.1 ± 45.3	63.3 ± 15.1	96.6 ± 35.4	100.4 ± 9.4	NA	NA	28.4 ± 13.6	42.3 ± 22.6	NA	NA	NA	NA	NA	NA	NA
Bril et al. 2019 [United States]	vitamin E	36	400 IU	twice day	None	33	60 ± 9	33.8 ± 4.6	NA	NA	156 (126–210) *	174 ± 44	39 ± 9	98 ± 39	158 ± 41	22 ± 14	NA	41 ± 22	53 ± 32	3.9 ± 1.6	1.7 ± 0.8	0.9 ± 0.8	1.6 ± 1.2	NA	NA	
	Placebo	32	—	—	None	30	57 ± 11	33.6 ± 4.0	NA	NA	154 (117–255) *	171 ± 40	39 ± 10	94 ± 33	153 ± 37	18 ± 13	NA	40 ± 23	53 ± 33	4.2 ± 1.6	1.8 ± 0.7	0.9 ± 0.8	1.5 ± 1.0	NA	NA	
	vitamin E	37	400 IU	twice day	pioglitazone 45 mg/day	30	60 ± 6	35.2 ± 4.3	NA	NA	163 (108–274) *	170 ± 53	38 ± 10	91 ± 44	144 ± 43	16 ± 10	NA	32 ± 18	40 ± 25	3.7 ± 1.3	1.6 ± 0.8	0.7 ± 0.6	1.4 ± 1.1	NA	NA	
Zohrer et al. 2017 [Italy]	vitamin E	20	39 IU	Once daily	choline 201 mg + DHA 250 mg	14	13.2 ± 2.3	27.6 ± 4.0	86.7 ± 10.3	68.0 ± 18.7	101.2 ± 51.3	150.1 ± 31.5	47.3 ± 7.9	84.0 ± 29.4	85.40 ± 7.5	21.9 ± 14.4	4.6 ± 3.1	36.2 ± 13.0	53.5 ± 32.6	4.35 ± 1.10	1.85 ± 0.72	1.35 ± 0.57	2.00 ± 0.80	1.15 ± 0.48	1.35 ± 0.48	
	Placebo	20	—	—	None	10	13.2 ± 2.1	28.3 ± 5.3	89.9 ± 9.7	66.3 ± 15.1	87.2 ± 46.2	154.5 ± 30.1	46.6 ± 8.3	100.8 ± 37.6	82.5 ± 7.2	22.3 ± 14.4	4.5 ± 3.0	33.1 ± 18.3	51.2 ± 51.6	NA	NA	NA	NA	NA	NA	
Aller et al. 2015 [Spain]	vitamin E	18	80 IU	Once daily	silymarin + hypocaloric diet + exercise	22	47.4 ± 11.2	36.8 ± 7.9	102.6 ± 10.2	91.6 ± 14	189.6 ± 84	NA	NA	NA	93.1 ± 13	NA	3.4 ± 2.2	35.6 ± 16	56.4 ± 27	-1.6 ± 1.8	NA	NA	NA	NA	NA	
	hypocaloric diet	18	—	—	None			35 ± 7.4	103.7 ± 13	92.2 ± 13	180.8 ± 68	NA	NA	NA	129.9 ± 46	NA	5.4 ± 4.1	41.6 ± 20	70.8 ± 41	-1 ± 1.9	NA	NA	NA	NA	NA	
Lavine et al. 2011 [United States]	vitamin E	58	800 IU	Once daily	diet + exercise	47	13.4 ± 2.3	34 ± 7	108 ± 18	91 ± 28	154 ± 107	179 ± 42	37 ± 9	114 ± 34	87 ± 8	NA	8.6 ± 7.8	70 ± 37	121 ± 65	4.8 ± 1.6	2.3 ± 0.8	1.0 ± 0.8	1.2 ± 1.0	1.6 ± 0.6	NA	
	placebo	58	—	—	diet + exercise	52	12.9 ± 2.6	33 ± 6	105 ± 12	86 ± 24	153 ± 92	176 ± 35	38 ± 10	108 ± 27	90 ± 9	NA	11.0 ± 17.6	74 ± 42	126 ± 62	4.6 ± 1.3	2.1 ± 0.8	0.8 ± 0.8	1.2 ± 1.0	1.7 ± 0.6	NA	
	metformin	57	1000 mg	—	diet + exercise	47	13.1 ± 2.4	34 ± 5	104 ± 13	88 ± 23	151 ± 103	174 ± 45	38 ± 7	105 ± 30	90 ± 10	NA	7.9 ± 5.4	69 ± 45	121 ± 68	4.5 ± 1.2	2.1 ± 0.8	0.8 ± 0.8	1.3 ± 1.0	1.6 ± 0.6	NA	
Sanyal et al. 2010 [United States]	vitamin E	84	800 IU	Once daily	None	32	46.6 ± 12.1	34 ± 7	107 ± 15	84 ± 24	166 ± 104	195 ± 40	44 ± 13	119 ± 35	95 ± 14	NA	5.2 ± 4.0	59 ± 33	86 ± 52	5.1 ± 1.4	1.9 ± 0.9	1.3 v 0.8	1.5 ± 1.0	1.8 ± 0.7	NA	
	placebo	83	—	Once daily	None	34	45.4 ± 11.2	35 ± 7	109 ± 14	99 ± 21	165 ± 89	199 ± 40	43 ± 11	125 ± 35	95 ± 14	NA	5.5 ± 5.1	55 ± 30	81 ± 48	4.8 ± 1.4	1.9 ± 0.8	1.3 ± 0.7	1.6 ± 1.1	1.6 ± 0.7	NA	
	pioglitazone	80	30 mg	Once daily	None	33	47.0 ± 12.6	34 ± 6	108 ± 14	97 ± 23	162 ± 84	195 ± 37	45 ± 12	120 ± 31	92 ± 12	NA	5.0 ± 3.8	54 ± 26	82 ± 45	5.0 ± 1.4	2.0 ± 0.8	1.1 ± 0.8	1.4 ± 0.9	1.8 ± 0.7	NA	
Balmer et al. 2009 [Switzerland]	vitamin E	14	400 IU	twice day	UDCA 12–15 mg/kg/day	9	47 ± 14	31 ± 7	NA	NA	NA	NA	NA	NA	6.17 ± 1.68 **	35.4 ± 68.32	8.2 ± 12.9	NA	NA	NA	2.6 ± 1.2	NA	NA	NA	NA	
	placebo	13	—	—	None	7	46 ± 13	31 ± 5	NA	NA	NA	NA	NA	NA	5.81 ± 1.88 **	33.3 ± 7.89	10.7 ± 2.7	NA	NA	NA	2.9 ± 0.7	NA	NA	NA	NA	
	UDCA	14	12–15 mg/kg	Once daily	None	8	47 ± 12	30 ± 5	NA	NA	NA	NA	NA	NA	7.19 ± 4.76 **	15.9 ± 10.4	4.6 ± 3.4	NA	NA	NA	3.0 ± 0.9	NA	NA	NA	NA	

Wang et al. 2008 [China]	vitamin E	19	150 IU	Once daily	None	13	13.4 ± 1.6	29.36 ± 3.11	NA	NA	1.51 ± 0.33 **	4.61 ± 1.03 **	NA	NA	4.22 ± 0.43 **	15.42 ± 1.10	2.89 ± 0.32	78.55 ± 23.11	139.98 ± 19.82	NA	NA	NA	NA	NA	NA	
	lifestyle intervention	19	—	—	None	13	13.4 ± 2.5	29.61 ± 1.48	NA	NA	1.38 ± 0.38 **	4.82 ± 0.91 **	NA	NA	4.15 ± 0.39 **	15.54 ± 4.50	2.87 ± 0.88	93.26 ± 38.94	152.26 ± 49.30	NA	NA	NA	NA	NA	NA	
	no intervention	38	—	—	None	26	14.04 ± 1.8	29.81 ± 2.41	NA	NA	1.44 ± 0.35 **	4.70 ± 1.18 **	NA	NA	4.26 ± 0.42 **	15.50 ± 2.10	2.93 ± 0.44	86.63 ± 21.54	144.77 ± 26.73	NA	NA	NA	NA	NA	NA	
Nobili et al. 2008 [Italy]	vitamin E	25	600 IU	Once daily	ascorbic acid 500 mg/day + low-calorie diet + exercise	14	12.8 (5.7–17.1) *	24.9 (20.6–30.9) *	NA	56 (30–84) *	87 (33–177) *	167 (75–222) *	NA	NA	83 (74–99) *	9.2 (3.5–18) *	2.10 (0.67–4.22) *	44 (20–127) *	71 (14–192) *	4 (2–7) *	2 (1–3) *	0 (0–1) *	0 (0–2) *	1 (0–2) *	0 (0–2) *	
	placebo	28	—	—	low-calorie diet + exercise	23	11.7 (6.2–18.8) *	26.8 (20.1–31.4) *	NA	61 (40–101) *	89 (28–145) *	156 (111–180) *	NA	NA	87 (70–130) *	12.8 (5.20–30.7) *	2.68 (1.02–6.66) *	49 (21–87) *	63 (14–126) *	4 (2–7) *	1 (1–3) *	1 (0–2) *	1 (0–1) *	1 (0–2) *	1 (0–2) *	
Nobili et al. 2006 [Italy]	vitamin E	45	600 IU	Once daily	vitamin C 500 mg/day	15	12.07 ± 3.29	26.49 ± 3.57	NA	64.50 ± 16.47	80.24 ± 3.08	152.76 ± 34.18	NA	NA	86.03 ± 12.47	13.14 ± 6.72	2.82 ± 1.48	45.21 ± 17.28	68.53 ± 33.34	NA	NA	NA	NA	NA	NA	
	placebo	43	—	—	diet + exercise	13	12.36 ± 3.02	25.46 ± 3.60	NA	59.84 ± 17.79	87.53 ± 52.01	154.39 ± 37.39	NA	NA	77.30 ± 9.19	11.05 ± 5.34	2.11 ± 1.09	41.22 ± 12.30	57.11 ± 23.63	NA	NA	NA	NA	NA	NA	
Dufour et al. 2006 [Switzerland]	vitamin E	15	400 IU	twice day	UDCA 12–15 mg/kg/day	10	46 ± 14	31 ± 7	NA	90 ± 7	NA	NA	NA	NA	NA	NA	NA	66 ± 36	88 ± 42	5.8 ± 2.0	2.6 ± 1.1	1.8 ± 1.1	1.8 ± 1.5	1.4 ± 1.0	2.0 ± 1.5	
	placebo	15	—	—	None	8	44 ± 14	30 ± 5	NA	83 ± 4	NA	NA	NA	NA	NA	NA	NA	50 ± 14	76 ± 43	6.0 ± 1.2	3.0 ± 0.7	1.8 ± 1.0	1.0 ± 1.0	1.2 ± 0.6	0.9 ± 1.2	
	UDCA	18	12–15 mg/kg	Once daily	placebo	13	47 ± 12	30 ± 4	NA	89 ± 4	NA	NA	NA	NA	NA	NA	NA	63 ± 38	112 ± 64	6.1 ± 1.6	2.9 ± 0.8	1.6 ± 0.9	1.4 ± 1.3	1.5 ± 0.9	1.8 ± 1.3	
Vajro et al. 2004 [Italy]	vitamin E	14	600 IU × 2 months	Once daily	diet	10	10.7 ± 3.45	24.50 ± 2.78	NA	NA	NA	4.00 ± 1.03 **	NA	NA	NA	NA	NA	NA	72.58 ± 17.46	NA	NA	NA	NA	NA	NA	
	150 IU × 3 months		Once daily																							
placebo	14	—	—	—	diet	11	9.88 ± 3.97	24.82 ± 2.35	NA	NA	NA	4.01 ± 1.05 **	NA	NA	NA	NA	NA	76.00 ± 23.45	NA	NA	NA	NA	NA	NA	NA	NA
Harrison et al. 2003 [United States]	vitamin E	23	1000 IU	Once daily	vitamin C 1000 mg/day + Diet + exercise	9	52.5	34.7	NA	NA	206.9	202.2	NA	NA	126	NA	NA	63.2	92.3	NA	NA	NA	1.8	NA	NA	
	placebo	22	—	—	Diet + exercise	11	50.2	30.8	NA	NA	227.5	212.7	NA	NA	124	NA	NA	80.2	109	NA	NA	NA	1.	NA	NA	

Abbreviations: **BMI** = body mass index; **WC** = Waist circumference; **TG** = Triglycerides; **TC** = Total cholesterol ; **HDL** = High-density lipoprotein; **LDL** = Low-density lipoprotein; **FBS** = Fasting Blood Sugar; **FPI** = Fasting Plasma Insulin; **HOMA-IR** = homeostatic model assessment- insulin resistance; **AST** = Aspartate aminotransferase; **ALT** = Alanine aminotransferase; **NAS** = NAFLD activity score
*: median (range); **: mmol/L