Summary of included articles

Author	Year	Region	Study design	Surgical technique	Surgical method	Sample size	Age, years, mean ± SD	Gender, male, n (%)	Follow-up duration (months)	Quality assessment
Aldoheyan *et al.*	2017	Saudi Arabia	Prospective	Sleeve gastrectomy	NA	27	35.0±8.00	9 (33.33)	3	7
Barker *et al.*	2006	USA	Retrospective	Roux-en-Y gastric bypass	NA	19	47.6±6.23	2 (10.53)	21.95	8
Batman *et al.*	2019	Turkey	Retrospective	Sleeve gastrectomy	Laparoscopy	72	37.9±10.4	20 (27.78)	6	7
Endo *et al.*	2019	Japan	Retrospective	Sleeve gastrectomy	Laparoscopy	33	44.0±8.00	19 (57.58)	26	8
Billeter *et al.*	2016	Germany	Retrospective	Sleeve gastrectomy	NA	17	45.4±12.1	6 (35.29)	26	8
				Roux-en-Y gastric bypass	NA	17	52.8±10.3	6 (35.29)	12	
Cazzo *et al.*	2015	Brazil	Prospective	Roux-en-Y gastric bypass	NA	63	41.9±32.6	13 (20.63)	12	8
Caiazzo *et al.*	2014	France	Prospective	Adjustable gastric banding	NA	539	40.30±11.4	45 (18.29)	60	8
				Roux-en-Y gastric bypass	Laparoscopy	662	41.10±11.1	50 (29.94)	60	8
Cherla *et al.*	2020	USA	Retrospective	Sleeve gastrectomy	NA	66	49.0±10.6	22 (33.33)	53.4	7
				Roux-en-Y gastric bypass	NA	421	48.0±11.7	132 (31.35)	53.4	
Clark *et al.*	2005	USA	Retrospective	Roux-en-Y gastric bypass	Laparotomy	16	43.9±8.10	8 (50)	10.1	7
de Almeida *et al.*	2006	Brazil	Prospective	Roux-en-Y gastric bypass	Laparotomy	16	40.2±9.50	2 (12.50)	23.5	8
de Jonge *et al.*	2013	Netherlands	Prospective	Duodenal–jejunal bypass liner	NA	17	51.0±2.00	14 (82.35)	12	9
Dixon *et al.*	2004	Australia	Retrospective	Adjustable gastric banding	Laparoscopy	36	43.0±10.3	11 (30.56)	25.6	9
Furuya *et al.*	2007	Brazil	Prospective	Roux-en-Y gastric bypass	NA	18	46.6±7.30	1 (5.56)	24	8
Goldoni *et al.*	2021	Brazil	Retrospective	Roux-en-Y gastric bypass	Laparoscopy	16	38.6±11.3	5 (31.25)	12	6
				Sleeve gastrectomy	Laparoscopy	8	36.7±8.40	2 (25.00)	12	
Jaskiewitz *et al.*	2006	Poland	Prospective	Sleeve gastrectomy	NA	87	40±10	32 (36.78)	41	8
Kalinowski *et al.*	2017	Poland	RCT	Roux-en-Y gastric bypass	NA	33	44.6±10.4	10 (30.30)	12	–

				Sleeve gastrectomy	NA	33	44.3±10.5	8 (24.24)	13	
Karcz *et al.*	2011	France	Prospective	Sleeve gastrectomy	NA	87	–	–	36	8
Klein *et al.*	2006	USA	Prospective	Roux-en-Y gastric bypass	Laparoscopy	7	40.0±5.00	1(14.29)	12	8
Ledoux *et al.*	2019	France	Retrospective	Roux-en-Y gastric bypass	Laparoscopy	326	43.0±11.0	50 (15.34)	12	7
				Sleeve gastrectomy	Laparoscopy	207	43.0±11.0	31 (14.98)	12	
Leite *et al.*	2020	Brazil	Retrospective	Roux-en-Y gastric bypass	Laparoscopy	37	46.2±9.40	9 (24.32)	12	7
Liu *et al.*	2007	USA	Retrospective	Roux-en-Y gastric bypass	Laparoscopy	39	41.4±9	6 (15.38)	18	8
Mottin *et al.*	2005	Brazil	Retrospective	Roux-en-Y gastric bypass	NA	90	35.6±1.1	26 (28.89)	12	8
Netanel *et al.*	2021	Israel	Prospective	Sleeve gastrectomy	NA	26	44.1±4.80	18 (69.23)	12	8
Nikai *et al.*	2020	Japan	Prospective	Sleeve Gastrectomy	Laparoscopy	43	44.2±13.5	20 (46.51)	24	8
Ooi *et al.*	2017	Australia	Prospective	Adjustable gastric bands	Laparoscopy	84	49.3±9.81	29 (34.52)	12	8
Praveen *et al.*	2015	India	Prospective	Roux-en-Y gastric bypass	NA	10	–		6	8
				Sleeve gastrectomy	NA	20			6	
Pederson *et al.*	2021	Denmark	Prospective	Sleeve gastrectomy	NA	24	44±9	10 (41.67)	12	8
				Roux-en-Y gastric bypass	NA	16	44±2	7 (43.75)	12	8
Schneck *et al.*	2016	France	Prospective	Roux-en-Y gastric bypass	Laparoscopy	9	–	0 (0.00)	58	8
Stratopoulos *et al.*	2005	Greece	Prospective	Mason's vertical banded gastroplasty	NA	51	–	18 (35.29)	18	7
Schwenger *et al.*	2017	Canada	Prospective	Roux-en-Y gastric bypass	NA	42	48.1±9.98	10 (23.81)	12	8
Tai *et al.*	2012	Taiwan	Prospective	Roux-en-Y gastric bypass	Laparoscopy	21	30.90±8.10	8 (38.10)	12	8

Quality assessment was conducted with the Newcastle-Ottawa Scale for Cohort Studies and Cochrane Risk-of-Bias Tool for RCTs. NASH, non-alcoholic steatohepatitis; NAFL, non-alcoholic fatty liver disease; RCT, randomized controlled trial; SD, standard deviation.

	D1	D2	D3	D4	D5	**Overall**
Kalinowski 2017						

Domains:
D1: Bias arising from the randomization process
D2: Bias due to deviations from intended interventions
D3: Bias due to missing outcome data
D4: Bias in measurement of the outcome
D5: Bias in selection of reported results

Judgement:

 Low concern

 Some concerns