

A

Study or Subgroup	Experimental		Control		Weight	Risk Ratio	
	Events	Total	Events	Total		M-H, Random, 95% CI	
1.1.1 >50% re-pigmentation(facial vitiligo)							
Kanokrungeesee S et al, 2016	6	12	6	12	52.8%	1.00	[0.45, 2.23]
Subtotal (95% CI)		12		12	52.8%	1.00	[0.45, 2.23]
Total events	6		6				
Heterogeneity: Not applicable Test for overall effect: Z = 0.00 (P = 1.00)							
1.1.2 >50% re-pigmentation(refractory vitiligo)							
Cunha PR et al, 2016	2	4	0	4	13.8%	5.00	[0.31, 79.94]
Shin J et al, 2011	1	10	0	10	11.6%	3.00	[0.14, 65.90]
Vachirammon V et al, 2015	6	26	1	26	21.8%	6.00	[0.78, 46.42]
Subtotal (95% CI)		40		40	47.2%	4.90	[1.15, 20.93]
Total events	9		1				
Heterogeneity: Tau ² = 0.00; Chi ² = 0.14, df = 2 (P = 0.93); I ² = 0% Test for overall effect: Z = 2.14 (P = 0.03)							
Total (95% CI)		52		52	100.0%	2.10	[0.67, 6.61]
Total events	15		7				
Heterogeneity: Tau ² = 0.48; Chi ² = 4.48, df = 3 (P = 0.21); I ² = 33% Test for overall effect: Z = 1.26 (P = 0.21) Test for subgroup differences: Chi ² = 3.52, df = 1 (P = 0.06), I ² = 71.6%							

B

Study or Subgroup	Experimental		Control		Weight	Mean Difference	
	Mean	SD	Mean	SD		IV, Random, 95% CI	
1.4.1 physician improvement score(facial vitiligo)							
Kanokrungeesee S et al, 2016	2.2	1.8	2.2	1.9	12	9.5%	0.00 [-1.48, 1.48]
Subtotal (95% CI)					12	9.5%	0.00 [-1.48, 1.48]
Heterogeneity: Not applicable Test for overall effect: Z = 0.00 (P = 1.00)							
1.4.2 physician improvement score(refractory vitiligo)							
Shin J et al, 2011	0.9	1.1	0.2	0.4	10	39.6%	0.70 [-0.03, 1.43]
Vachirammon V et al, 2015	1.4	1.4	0.5	0.9	26	50.9%	0.90 [0.26, 1.54]
Subtotal (95% CI)					36	90.5%	0.81 [0.33, 1.29]
Heterogeneity: Tau ² = 0.00; Chi ² = 0.16, df = 1 (P = 0.69); I ² = 0% Test for overall effect: Z = 3.32 (P = 0.0009)							
Total (95% CI)					48	100.0%	0.74 [0.28, 1.19]
Heterogeneity: Tau ² = 0.00; Chi ² = 1.21, df = 2 (P = 0.55); I ² = 0% Test for overall effect: Z = 3.16 (P = 0.002) Test for subgroup differences: Chi ² = 1.05, df = 1 (P = 0.31), I ² = 4.5%							

C

Study or Subgroup	Experimental		Control		Weight	Risk Ratio	
	Events	Total	Events	Total		M-H, Random, 95% CI	
1.2.1 <=25% re-pigmentation(facial vitiligo)							
Kanokrungeesee S et al, 2016	4	12	5	12	6.3%	0.80	[0.28, 2.27]
Subtotal (95% CI)		12		12	6.3%	0.80	[0.28, 2.27]
Total events	4		5				
Heterogeneity: Not applicable Test for overall effect: Z = 0.42 (P = 0.68)							
1.2.2 <=25% re-pigmentation(refractory vitiligo)							
Cunha PR et al, 2016	2	4	4	4	8.1%	0.56	[0.22, 1.40]
Shin J et al, 2011	7	10	10	10	38.4%	0.71	[0.47, 1.09]
Vachirammon V et al, 2015	14	26	23	26	47.2%	0.61	[0.42, 0.89]
Subtotal (95% CI)		40		40	93.7%	0.64	[0.49, 0.85]
Total events	23		37				
Heterogeneity: Tau ² = 0.00; Chi ² = 0.43, df = 2 (P = 0.81); I ² = 0% Test for overall effect: Z = 3.17 (P = 0.002)							
Total (95% CI)		52		52	100.0%	0.65	[0.50, 0.85]
Total events	27		42				
Heterogeneity: Tau ² = 0.00; Chi ² = 0.57, df = 3 (P = 0.90); I ² = 0% Test for overall effect: Z = 3.17 (P = 0.002) Test for subgroup differences: Chi ² = 0.15, df = 1 (P = 0.69), I ² = 0%							

D

Study or Subgroup	Experimental		Control		Weight	Mean Difference	
	Mean	SD	Mean	SD		IV, Random, 95% CI	
1.5.1 Patients' overall satisfaction(facial vitiligo)							
Kanokrungeesee S et al, 2016	8	2.8	7.7	2.5	12	17.2%	0.30 [-1.74, 2.34]
Subtotal (95% CI)					12	17.2%	0.30 [-1.74, 2.34]
Heterogeneity: Not applicable Test for overall effect: Z = 0.29 (P = 0.77)							
1.5.2 Patients' overall satisfaction(refractory vitiligo)							
Shin J et al, 2011	1.7	1.6	0.4	0.7	10	52.6%	1.30 [0.22, 2.38]
Vachirammon V et al, 2015	5.7	2.9	3.5	2.6	26	30.2%	2.20 [0.70, 3.70]
Subtotal (95% CI)					36	82.8%	1.61 [0.73, 2.49]
Heterogeneity: Tau ² = 0.00; Chi ² = 0.91, df = 1 (P = 0.34); I ² = 0% Test for overall effect: Z = 3.60 (P = 0.0003)							
Total (95% CI)					50	100.0%	1.40 [0.53, 2.27]
Heterogeneity: Tau ² = 0.07; Chi ² = 2.25, df = 2 (P = 0.32); I ² = 11% Test for overall effect: Z = 3.15 (P = 0.002) Test for subgroup differences: Chi ² = 1.34, df = 1 (P = 0.25), I ² = 25.2%							

Fig S3. Efficacy of fractional carbon dioxide (CO₂) laser add-on to vitiligo. (A) Treatment success greater than 50% re-pigmentation rate, (B) physician improvement score, (C) re-pigmentation rate 25% or less, (D) patient's overall satisfaction. [Control] represents conventional treatment alone; [Experimental] denotes fractional CO₂ laser add-on to conventional therapy. CI: confidence interval.