

Table 2. Kyphoplasty for Osteoporotic Vertebral Fractures – Outcomes

Study/yr	N	F/U	Outcome measure	Pre-treatment	Post-treatment	p-value ¹	Comments
<i>Case series</i>							
Ledlie 2003	96	1 wk to 1 yr (range)	Pain (0-10 VAS)	8.6	<u>1 wk(89)</u> 2.7 <u>1 mo(85)</u> 2.3 <u>3 mos(73)</u> 2.1 <u>6 mos(52)</u> 1.5 <u>1 yr(29)</u> 1.4	<0.0001	(n) number of patients evaluated at specific time point
			% pts fully ambulatory	35	79 81 88 87 92	NR	
Coumans 2003	78	≥1 yr	Pain (0-10 VAS)	7	<u>Post-op</u> 3.2 <u>Last f/u (≥1 yr, mean 18 mos)</u> 3.4	<0.0001	n=40 at last f/u
			Disability (ODI 0-100)	48	33 35	<0.001	
			SF-36: Phys Fxn	22	38	<0.005	
			Mental Hlth	51	64	<0.001	
			Gen Hlth	58	48	NS	
			Pain	20	42	<0.001	
			Vitality	27	36	<0.05	
			Social Fxn	36	58	<0.001	
			Role Phys	3	29	<0.005	
			Role Emot	50	74	<0.05	
Lieberman 2001	30	12 wks	SF-36: Phys Fxn	11.7	<u>Post-op</u> 47.4	0.002	
			Mental Hlth	59.2	71.1	0.02	
			Gen Hlth	55.0	61.0	NS	
			Pain	11.6	58.7	0.0001	
			Vitality	24.8	47.9	0.001	
			Social Fxn	28.6	69.0	0.0004	
			Role Phys	1.2	29.8	NS	
			Role Emot	68.0	62.0	NS	
Phillips 2003	29	NR	Pain (0–10 VAS)	8.6	<u>1 wk(36)</u> 2.6* <u>1 yr(19)</u> 0.6**	*<0.0001 **<0.004	(n) number of vertebrae in analysis
Berlemann 2004	24	≥1 yr	Pain (0–10 VAS)	8.4	<u>Post-op</u> 3.8 <u>2 mos</u> 1.7 <u>1 yr</u> 1.5	NR	1 pt lost to long term evaluation

¹p-values for pre- post- (within-group) comparisons unless otherwise specified

Abbreviations: See Appendix Table

Table 2. Kyphoplasty for Osteoporotic Vertebral Fractures – Outcomes (cont’d)

Study/yr	N	F/U	Outcome measure	Pre-treatment	Post-treatment		p-value ¹	Comments
Crandall 2004	47	18 mos (mean)	Pain (0–10 VAS)		<u>2 wks</u>	<u>6 wks</u>		“90% pain relief” Number of patients at later f/u not reported
			Acute	7.3	4.3	4.3	0.001	
			Chronic	7.3	4.3	4.0	0.001	
			Medication use, Combined groups	5.4		<u>last f/u</u> 3.6	0.001	
Rhyne 2004	49	9 mos	Pain (0-10 VAS) Disability Score	9.16 19.3	<u>Post-op</u> 2.91 8.1		<0.05 <0.05	
Gaitanis 2004	32	9 mos	Pain (0-10 VAS)	8.5	<u>1 wk</u>	<u>1 mo</u>	0.001	Vertebral height also analyzed but not abstracted.
			Oswestry (0–100)	60	2.5	1.5 28	0.001	
<i>Comparative studies</i>								
Kasperk 2005	40 20	6 mos	Pain (50-0 VAS): KP	26.2	<u>3 mos</u>	<u>6 mos</u>	3mos: 0.012 6 mos: 0.007 3 mos: 0.205 6 mos: 0.031 (all between- group)	Vertebral height and kyphosis angle analyzed but not abstracted. Change in pain medication use not formally analyzed.
			Ctrl	33.6	42.4	44.2		
			EVOS (60-0): KP	43.8	33.9	35.6		
			Ctrl	39.8	52.7	54.4		
Komp 2004	19 17	6 mos	Pain (0-100): KP	91	<u>6 wks</u>	<u>6 mos</u>	NR	Uncertain whether outcome measures represent mean or median
			Ctrl	91	20	25		
			NASS pain: KP	5.4	88	83		
			(0-10) Ctrl	5.2	1.9	2.0		
			NASS neuro: KP	1.1	4.9	4.8		
			(0-10) Ctrl	1	1.1	1.1		
			Oswestry: KP	84	1.1	1.1		
			(100-0) Ctrl	82	22	24		
		78	76					

¹ p-values for pre- post- (within-group) comparisons unless otherwise specified

Abbreviations: See Appendix Table