

SUPPLEMENTARY MATERIAL

**Supplementary material**

**Table i.** Comparison of the effect of treatment between the groups: subgroup analysis

			Conservative treatment	Vertebroplasty	Effect of treatment (95% CI)	p-value*	
Patients >75 yrs old	No. of patients		109	58			
	Pain VAS	At 3 wks	4.5 (SD 1.3)	5.3 (SD 1.1)			
		Vertebroplasty undertaken					
		At 4 wks	3.5 (SD 1.0)	2.4 (SD 1.2)	-1.345 (-1.673 to -1.017)	< 0.001	
		At 6 wks	2.9 (SD 0.9)	2.4 (SD 1.1)	-0.392 (-0.749 to -0.035)	< 0.001	
	At 12 wks	2.0 (SD 1.1)	2.0 (SD 0.9)	-0.163 (-0.486 to 0.160)	0.321		
Patients with high body mass index (> 25 kg/m <sup>2</sup> )	No. of patients		75	53			
	Pain VAS	At 3 wks	4.6 (SD 1.2)	5.3 (SD 1.1)			
		(Vertebroplasty was done)					
		At 4 wks	3.6 (SD 1.0)	2.8 (SD 1.3)	-0.882 (-1.293 to -0.472)	< 0.001	
		At 6 wks	2.9 (SD 0.9)	2.6 (SD 1.1)	-0.412 (-0.767 to -0.058)	0.032	
	At 12 wks	2.0 (SD 1.1)	2.1 (SD 1.0)	-0.037 (-0.349 to 0.422)	0.898		
Patients with medical comorbidity	No. of patients		190	106			
	Pain VAS score	At 3 wks	4.5 (SD 1.3)	5.3 (SD 1.2)			
		(Vertebroplasty was done)					
		At 4 wks	3.5 (SD 1.0)	2.6 (SD 1.2)	-1.156 (-1.417 to -0.896)	< 0.001	
		At 6 wks	2.9 (SD 0.9)	2.5 (SD 1.2)	-0.520 (-0.767 to -0.272)	< 0.001	
	At 12 wks	1.9 (SD 1.0)	2.1 (SD 0.9)	-0.025 (-0.213 to 0.263)	0.839		
Patients with previous fracture	No. of patients		75	45			
	Pain VAS score	At 3 wks	4.4 (SD 1.3)	5.2 (SD 0.8)			
		Vertebroplasty undertaken					
		At 4 wks	3.6 (SD 1.0)	2.6 (SD 1.3)	-1.249 (-1.661 to -0.836)	< 0.001	
		At 6 wks	3.0 (SD 1.0)	2.3 (SD 1.2)	-0.830 (-1.238 to -0.422)	< 0.001	
	At 12 wks	2.1 (SD 1.1)	2.0 (SD 0.9)	-0.200 (-0.556 to 0.236)	0.425		
Patients with longer pain duration before the diagnosis (> 2 wks)	No. of patients		68	32			
	Pain VAS score	At 3 wks	4.5 (SD 1.1)	5.2 (SD 1.1)			
		(Vertebroplasty was done)					
		At 4 wks	3.6 (SD 1.1)	2.7 (SD 1.2)	-1.007 (-1.510 to -0.505)	< 0.001	
		At 6 wks	2.9 (SD 0.9)	2.6 (SD 1.0)	-0.448 (-0.864 to -0.032)	0.035	
	At 12 wks	1.9 (SD 1.1)	2.1 (SD 1.0)	0.153 (-0.327 to 0.633)	0.528		
Patients with decreased bone mineral density of femur (T-score < - 3.0)	No. of patients		112	63			
	Pain VAS score	At 3 wks	4.4 (SD 1.2)	5.2 (SD 1.2)			
		(Vertebroplasty was done)					
		At 4 wks	3.5 (SD 1.0)	2.7 (SD 1.3)	-1.061 (-1.398 to -0.723)	< 0.001	
		At 6 wks	2.9 (SD 0.9)	2.5 (SD 1.2)	-0.613 (-0.933 to -0.294)	< 0.001	
	At 12 wks	2.0 (SD 1.0)	2.0 (SD 0.8)	-0.146 (-0.432 to 0.139)	0.313		
Patients with increased anterior vertebral body compression ratio (> 40%)	No. of patients		87	54			
	Pain VAS score	At 3 wks	4.5 (SD 1.3)	5.2 (SD 1.2)			
		Vertebroplasty					
		At 4 wks	3.5 (SD 1.1)	2.7 (SD 1.2)	-1.027 (-1.389 to -0.664)	< 0.001	
		At 6 wks	3.0 (SD 1.1)	2.6 (SD 1.2)	-0.600 (-0.968 to -0.233)	0.002	
	At 12 wks	2.2 (SD 1.1)	2.2 (SD 1.0)	-0.067 (-0.410 to 0.276)	0.701		
Patients with increased canal encroachment (> 20%)	No. of patients		40	27			
	Pain VAS score	At 3 wks	4.3 (SD 1.3)	5.4 (SD 1.0)			
		Vertebroplasty undertaken					
		At 4 wks	3.4 (SD 1.1)	2.8 (SD 1.3)	-0.940 (-1.554 to 0.326)	0.003	
		At 6 wks	2.9 (SD 1.0)	2.4 (SD 1.2)	-0.766 (-1.347 to -0.185)	0.011	
	At 12 wks	2.0 (SD 1.0)	2.3 (SD 1.0)	0.110 (-0.405 to 0.625)	0.670		
Patients with increased Cobb's angle (> 15°)	No. of patients		132	88			
	Pain VAS score	At 3 wks	4.5 (SD 1.2)	5.4 (SD 1.3)			
		Vertebroplasty undertaken					
		At 4 wks	3.5 (SD 1.1)	2.5 (SD 1.2)	-1.211 (-1.525 to -0.897)	< 0.001	
		At 6 wks	3.0 (SD 0.9)	2.6 (SD 1.2)	-0.584 (-0.874 to -0.294)	< 0.001	
	At 12 wks	2.1 (SD 1.0)	2.2 (SD 1.0)	-0.051 (-0.335 to 0.234)	0.725		
Patients with increased sagittal vertical axis (> 5 cm)	No. of patients		118	41			
	Pain VAS score	At 3 wks	4.5 (SD 1.2)	5.1 (SD 1.2)			
		Vertebroplasty undertaken					
		At 4 wks	3.5 (SD 1.0)	3.7 (SD 1.2)	-0.105 (-0.461 to 0.252)	0.563	
		At 6 wks	3.0 (SD 0.9)	3.0 (SD 1.2)	-0.165 (-0.497 to 0.167)	0.329	
	At 12 wks	2.1 (SD 1.0)	2.3 (SD 1.0)	0.123 (-0.241 to 0.488)	0.505		

\*analysis of covariance including adjustment for the pain VAS score of three weeks after diagnosis (which means pre-operative value for the vertebroplasty group)

VAS, visual analogue score; CI, confidence interval, SD, standard deviation