AUTHOR'S REPLY

Laurent Audigé · B. Hanson · M. F. Swiontkowski

Answer to Handoll and Parker

Accepted: 5 November 2003 / Published online: 20 December 2003 © Springer-Verlag 2003

L. Audigé $(\boxtimes) \cdot B$. Hanson AO/ASIF Research Institute,

Clavadelerstraße, 7270 Davos, Switzerland

e-mail: laurent.audige@ao-asif.ch Tel.: +41-44-2002462

Fax: +41-44-2002460 M. F. Swiontkowski University of Minnesota, Minneapolis, MN, USA Dear Editor,

Recently *International Orthopaedics* published our systematic review on implant-related complications after treatment of unstable trochanteric fractures [1]. Handoll and Parker, however, expressed some concerns regarding the methods used and the conclusions we reached. We are grateful to their comments, as indeed some clarification and corrections are required.

Comparison: 01 DSIN versus DSP devices Outcome: 01 Post-operative cut-out

Study	DSIN devices n/N	DSP devices n/N	RR (95%Cl Random)	Weight %	RR (95%Cl Random)	% Unstable fractures
01 Stable and unstable fractu	ıres mixed					
O'Brien, 1995	3 / 53	1 / 49		5.6	2.77[0.30,25.78]	44
x Butt, 1995	0 / 47	0/48		0.0	Not Estimable	44
Adams, 2001	8 / 203	4 / 197	 =	19.9	1.94[0.59,6.34]	48
Ahrengart, 2002	14 / 210	4 / 216		23.3	3.60[1.20,10.76]	48
Goldhagen, 1994	2/35	0 / 40		—→ 3.1	5.69[0.28,114.75]	50
Baumgaertner, 1998	2/67	2/68		7.5	1.01[0.15,7.00]	51
x Kukla, 1997	0/60	0/60		0.0	Not Estimable	54
Park, 1998	1/30	1/30		3.8	1.00[0.07,15.26]	58
Bridle, 1991	2/49	3 / 51		9.2	0.69[0.12,3.98]	59
x Hoffmann, 1999	0/56	0 / 54		0.0	Not Estimable	64
x Hardy,1998	0 / 50	0/50		0.0	Not Estimable	71
Leung, 1992	2/113	3 / 113		8.9	0.67[0.11,3.91]	73
Subtotal(95%Cl)	34 / 973	18 / 976	-	81.3	1.79[1.00,3.22]	
Test for heterogeneity chi-sq	uare=5.16 df=7 p=0.i	34				
Test for overall effect z=1.93	5 p=0.05					
02 Unstable fractures only						
Madsen, 1998	2 / 55	3/44		9.2	0.53[0.09,3.05]	100
Harrington, 2002	1 / 50	1 / 52		3.7	1.04[0.07,16.18]	100
Guyer, 1993	1 / 26	3/24		5.8	0.31[0.03,2.76]	100
Subtotal(95%Cl)	4 / 131	7 / 120		18.7	0.51[0.15,1.74]	
Test for heterogeneity chi-sq	uare=0.47 df=2 p=0.1	79				
Test for overall effect z=-1.0	07 p=0.3					
Total(95%Cl)	38 / 1104	25 / 1096		100.0	1.42[0.84,2.40]	
Test for heterogeneity chi-sq				100.0	, .TE[0.0T ₁ E.T0]	
Test for overall effect z=1.29	•					
		.01	.1 1 10 urs DSIN devices Favours DSP de	100		

Fig. 1 Updated Fig. 1 in Audigé et al (2003) Implant-related complications in the treatment of unstable intertrochanteric fractures: meta-analysis of dynamic screw-plate versus dynamic screw-intramedullary nail devices. Int Orthop 27:197–203

As mentioned in our introduction, the objective of the review was focused on unstable fractures, without duplicating the review of Parker and Handoll [5]. We fully agree that results from sub-group analyses may be misleading and should be interpreted with caution. Our review therefore is exploratory, and given the nature of the data available, findings should be considered as a hypothesis for future studies. Contrary to Handoll and Parker, we believed that reporting a trend was appropriate in this context, although we acknowledge a stronger word of caution would have been necessary.

We excluded papers failing to report the percentage of unstable fractures. Hence, our review contains fewer studies than the review of Parker and Handoll [5]. For instance, Benum et al. [2] did not report the proportion of unstable fractures in their abstract, while later, Madsen et al. [4] reported specifically on the sub-group of unstable fractures from the same study. We searched carefully MEDLINE, EMBASE, and the Cochrane Library until December 2002 and excluded many duplicated publications. Nevertheless, one was missed, and thus data from Fornander et al. [3] indeed should be ignored in our review. We would like to encourage authors to cross-reference their earlier publications when publishing updated results.

We apologize for the very unfortunate mistakes occurring in our figure and provide a corrected figure and meta-analysis (Fig. 1). Consequently, we observe a minor change in the meta-analysis results. DSIN devices tended to cause a lower proportion of cut out than DSP devices when considering data for unstable fractures only (overall relative risk =0.51; 95% CI=0.15-1.7) and the reverse results from mixed data (overall relative risk =1.8;

95% CI=1.0-3.2). Our conclusions were targeted at unstable fractures, and thus we do not feel contradicted findings from Parker and Handoll [5].

We thank you for this opportunity to clarify some methodological issues in response to well-justified concerns, as well as to publish this erratum in your journal.

Yours sincerely L. Audigé

References

- Audigé L, Hanson B, Swiontkowski MF (2003) Implant-related complications in the treatment of unstable intertrochanteric fractures: Meta-analysis of dynamic screw-plate versus dynamic screw-intramedullary nail devices. Int Orthop 27:197–203
- Benum P, Grontvedt T, Broten M, Walloe A, Ekeland A, Raugstad S, Fasting O (1992) Gamma nail versus CHS in intertrochanteric and subtrochanteric femoral fractures—a preliminary report of a prospective randomized study. Acta Orthop Scand 63:7–8
- Fornander P, Thorngren K-G, Törnqvist H, Ahrengart L, Lindgren U (1994) Swedish experience with the Gamma nail versus sliding hip screw in 209 randomised cases. Int J Orthop Trauma 4:118–122
- Madsen JE, Naess L, Aune AK, Alho A, Ekeland A, Stromsoe K (1998) Dynamic hip screw with trochanteric stabilizing plate in the treatment of unstable proximal femoral fractures: a comparative study with the Gamma nail and compression hip screw. J Orthop Trauma 12:241–248
- Parker MJ, Handoll HH (2003) Gamma and other cephalocondylic intramedullary nails versus extramedullary implants for extracapsular hip fractures. In: The Cochrane Library, Issue 4, Wiley, Chichester