

Evidence Based Osteoarthritis Research Database (eBOARD)

Weiya Zhang
Academic Rheumatology

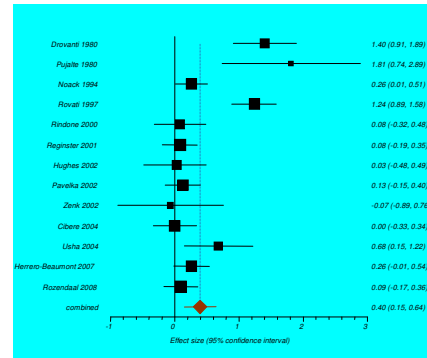


eBOARD

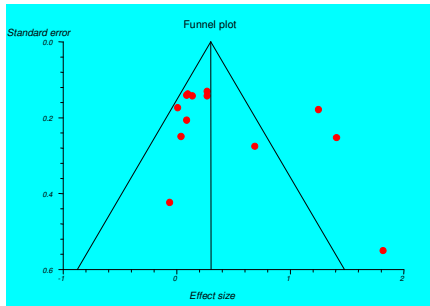
- a coherent research database containing all published trials in the therapeutic area of OA
- trials characterised with study features, quality scores, sample size, efficacy (ES, NNT), safety (RR/OR) and cost effectiveness (cost/QALY)

	Drug	Dosage	duration, wks	joint	Jadad score 0-5	Sponsor	n1	n2	ES	95%CI_low	95%CI_upper
Croft 1980	GS	400mg IM etc 3 wks	3	not specified	3		15	15	1.28	0.49	2.08
Drovanti 1980	GS	500mg tid 4 wks	4	not specified	3		40	40	1.4	0.91	1.89
Pujalte 1980	GS	500mg tid 8 wks	8	knee	4	Rotapharm	10	10	1.81	0.74	2.89
D'Ambrasio 1981	GS	400 M etc 3 wks	3	not specified	3		15	15	5.33	3.71	6.94
Vajardi 1981	GS	16 wks 5 wks	5	knee	3	Rotapharm	28	28	0.76	0.22	1.33
Noack 1984	GS	500 tid 4 wks	4	knee	5		126	126	0.26	0.01	0.51
Rovati 1987	GS	1500mg/day 12 wks	12	knee	5	Rotapharm	79	77	1.24	0.86	1.58
Haupt 1989	GH	500mg tid 4 wks	4	knee	3	Fierro Pfanstahl	46	53	0.12	-0.27	0.52
Rindone 2000	GS	500mg tid 2 mons	4	knee	3	Appelhart	49	49	0.08	-0.32	0.48
Register 2001	GS	1500mg/day 3 yrs	156	knee	4	Rotapharm	106	106	0.08	-0.19	0.35
Hughes 2002	GS	500mg tid 6 mons	26	knee	5	Health Perception	39	39	0.03	-0.48	0.49
Pavlika 2002	GS	1500mg/day 3 yrs	156	knee	5	Rotapharm	101	101	0.13	-0.15	0.4
Zerk 2002	GS	500mg tid 6 wks	6	knee/hip	4		13	10	-0.07	-0.89	0.75
Cibere 2004	GS	1500mg/day 24 wks	24	knee	5	Vitahealth	71	66	0	-0.33	0.34
McAlintoc 2004	GH	1500mg/day 12 wks	12	knee	5	Physiologics Algotapharm	101	104	-0.05	-0.33	0.22
Usha 2004	GS	12 wks	12	knee	4	Healer	30	28	0.68	0.15	1.22
Clegg 2006	GH	1500mg/day 24 wks	24	knee	5	Fierro Pfanstahl	317	313	-0.03	-0.18	0.13
Herrero-Baumont 2007	GS	1500mg/day, 6 mons	26	knee	5	Rotapharm	106	104	0.26	-0.01	0.54
Rozendaal 2008	GS	1500mg/day 2 yrs	104	hip	5	Erasmus Med Ctr Bredaestafge	111	111	0.09	-0.17	0.36

ES (pain relief) for oral GS

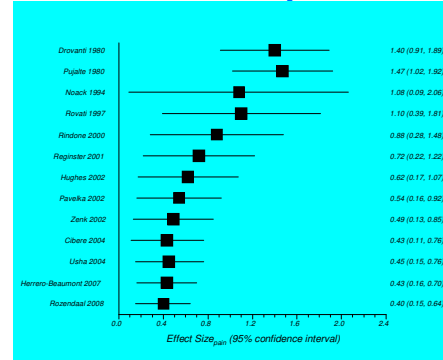


publication bias for oral GS

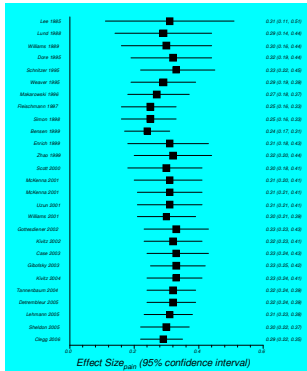


Begg-Mazumdar: Kendall's tau = 0.333333 P = 0.1289
Egger: bias = 2.735726 (95% CI = -1.395296 to 6.866748) P = 0.1729

cumulative meta-analysis for oral GS



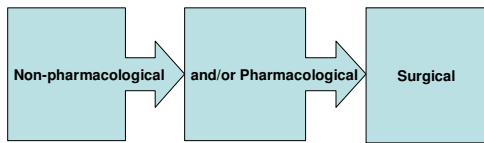
cumulative meta-analysis for NSAIDs



overall vs. high quality – ES for pain relief in OA

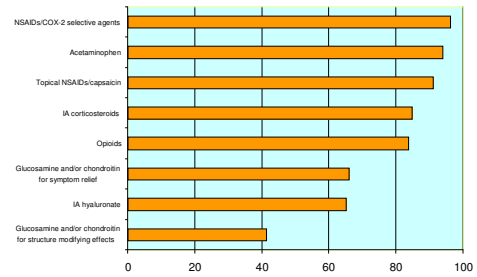
	Overall (Jadad score 1-5)	High quality (Jadad score=5)
Acetaminophen	0.16 (0.07, 0.24)	0.07 (-0.05, 0.19)
NSAIDs	0.29 (0.22, 0.35)	0.39 (0.24, 0.55)
Topical NSAIDs	0.44 (0.27, 0.62)	0.42 (0.19, 0.65)
Glucosamine sulphate	0.40 (0.15, 0.64)	0.29 (0.003, 0.57)
Chondroitin sulphate	0.68 (0.43, 0.93)	0.005 (-0.106, 0.116)
IA corticosteroid	0.55 (0.34, 0.75)	0.61 (0.25, 0.97)

OARSI toolbox



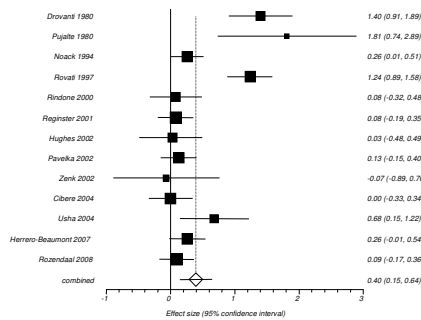
Treatment should be individualised according to patient features (eg, disease severity and co-morbidity) and trade-off between benefit and harm

Pharmacological treatments and SOR



Zhang et al. OAC 2008;16(2):137-62

ES (pain relief) for oral GS



Side effects

Intervention	Adverse events	RR/OR (95%CI)	Evidence
Acetaminophen	GI discomfort	0.80 (0.27, 2.37)	Meta-RCTs
	GI perforation/bleed	3.60 (2.60, 5.10)	Case control
	GI bleeding	1.2 (0.8, 1.7)	Meta-case control
NSAIDs	GI perforation/ulcer/bleed	5.36 (1.79, 16.10)	Meta-RCTs
	GI perforation/ulcer/bleed	2.70 (2.10, 3.50)	Meta-cohort
	GI perforation/ulcer/bleed	3.00 (2.50, 3.70)	Meta-case control
	MI	1.09 (1.02, 1.15)	Meta-observational
Topical NSAIDs	GI events	1.17 (0.99, 1.37)	Meta-case control
	GI bleed/perforation	1.03 (1.00, 1.07)	Meta-cohort
	GI bleed/perforation	0.81 (0.43, 1.56)	Meta-RCTs
Celecoxib	GI bleed/perforation	1.45 (0.84, 2.50)	Case control
	MI	2.3 (1.0, 5.1)	Meta-RCTs
Rofecoxib	MI	1.01 (0.73, 1.39)	Meta-case control
	MI	1.06 (1.00, 1.13)	Meta-cohort
	MI	2.24 (1.24, 4.02)	Meta-RCTs
Opioids	MI	1.19 (0.70, 2.01)	Meta-case control
	Any	1.25 (1.17, 1.34)	Meta-cohort
	Constipation	1.4 (1.3, 1.6)	Meta-RCTs
Glucosamine sulphate	Any	3.6 (2.7, 4.7)	Meta-RCTs

Zhang et al. OAC 2007;15:981-1000
Scott et al. APD 2007;86:1296-304
Fernandez-Lopez et al. ADR 07 (suppl II):

summary

- evidence is essential for clinical practice
- eBOARD attempts to summarise basic elements of original evidence to assist
 - guideline development and update
 - clinical decision-making
 - evidence based research