Additional file 4: Trials of intramuscular and oral dexketoprofen in acute back pain

<table>
<thead>
<tr>
<th>Reference</th>
<th>Methods</th>
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<th>Dosing regimen</th>
<th>Outcome measures</th>
<th>Efficacy results</th>
<th>Remission, exclusions, and adverse events</th>
<th>Safety results</th>
<th>Quality score</th>
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<tbody>
<tr>
<td><strong>Intramuscular</strong></td>
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<td>Zippel H, Wagener I. A multicentre, randomised, double-blind study comparing the efficacy and tolerability of intramuscular <strong>dexketoprofen</strong> versus diclofenac in the symptomatic treatment of acute low back pain. Clin Drug Investig 2007; 27:533-543.</td>
<td>RCT, DB, two IM doses over 2 days, parallel groups, 6 hr analgesic washout</td>
<td>Low back pain of less than 1 week duration</td>
<td>Dexketoprofen 50mg IM BID</td>
<td>Pain intensity 100mm VAS</td>
<td>Dexketoprofen 50mg</td>
<td>Remedication permitted</td>
<td>Dexketoprofen 50mg No with &gt;1 AE 50 All cause withdrawals 10 AE withdrawals 4</td>
<td>R 2 DB 2 WD 1 Total = 5</td>
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<tr>
<td></td>
<td>Assessed at (1st dose) baseline, 30, 60, and 90 mins, 2, 4, and 6 hrs; (2nd dose) baseline, 1, 2, 4, 6, and 8 hrs; (3rd dose) baseline, 1, 2, 4 and 6 hrs; (4th dose) baseline and 2 hrs</td>
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<td>Roland disability questionnaire</td>
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<td>Acute back pain of no more than 1 wk duration and moderate to severe intensity (≥50mm VAS)</td>
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<td><strong>Oral</strong></td>
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<td>Kubler U. Comparative clinical trial of the efficacy and tolerability of 25 mg <strong>dexketoprofen</strong> tid versus 50 mg tramadol tid in patients with acute lumbago of at least moderate severity. Clinical trial report 1999.</td>
<td>RCT, DB, 3 daily doses over 7 days, parallel group,</td>
<td>Acute lumbago of less than 2 days duration</td>
<td>Dexketoprofen 25mg TID N= 97</td>
<td>Pain on movement 100mm VAS</td>
<td>Dexketoprofen 25mg TID</td>
<td>Remedication permitted. Data for patient who withdrew before day 4 was excluded, LOCF used for patients withdrawing after day 4</td>
<td>Dexketoprofen tramadol 25mg TID No with &gt;1 AE 15 All cause withdrawals 16 AE withdrawals 2</td>
<td>R 2 DB 2 WD 1 Total = 5</td>
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<td>Assessed at baseline, day 4, and day 8</td>
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<td>Medication administered to patients with untreated back pain of at least moderate intensity (50mm) of no more than 48 hrs duration</td>
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<td>Tramadol 50mg TID N= 95</td>
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<td>Nocturnal pain 100mm VAS</td>
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<td>Schroenig's test of function for lumbar spine</td>
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<td>Global improvement - patient 7 pt VRS (very much improved, much improved, only slightly improved, unchanged, slightly worse, very much worse)</td>
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<td>Global improvement - physician 7 pt VRS (very much improved, much improved, only slightly improved, unchanged, slightly worse, very much worse)</td>
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<td>Global evaluation of efficacy - patient 4 pt VRS (very good, good, moderate, no effect)</td>
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<td>Global evaluation of efficacy - physician 4 pt VRS (very good, good, moderate, no effect)</td>
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<td>No major differences between the two treatments, though some outcomes and adverse events better for dexketoprofen</td>
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</table>
efficacy and safety of 50 mg) in the symptomatic treatment of patients with acute lumbar pain. Clinical trial report 1999

RCT, DB, three daily doses over 2 wks, parallel groups, 6 hr NSAID washout

Acute lumbar pain with no previous episodes within 6 months

Pain intensity assessed daily during the 1st wk, all other assessments at the end of wk 1 and wk 2

N=63

64 centres in

Spain

Dexketoprofen trometamol 25mg TID

N=32

Doxilucenac 50mg TID

N=31

Pain intensity

100mm VAS

Pain intensity

4-pt VRS (0 - no pain, 1 - mild, 2 - moderate, 3 - severe pain)

Schrober's function of lumbar spine

Global evolution of lumbar pain - patient

Global evolution of lumbar pain - physician

Pain at rest - physician

4-pt VRS (0 to 3)

Change in pain on movement (physician) none/mild 146

Change in pain at rest (physician) none/mild 134

Global efficacy (patient) good/very good 112

Global efficacy (physician) good/very good 112

Pain on palpitation - physician

4-pt VRS (0 to 3)

Change in pain on palpitation (physician) none/mild 120

Global efficacy (patient) good/very good 97

Global efficacy (physician) good/very good 100

Pain after treatment - patient

75.8 to 21.7mm

Night pain

Doo da ds functional index

Global efficacy (patient) good/very good 112

Global efficacy (physician) good/very good 112

R 2

DB 2

WD 1

Total = 5

OPVS = 12/16

Ram edication permitted

8 patients were excluded from analyses as lost to follow up within the 1st wk

No significant differences between the two treatments

Diclofenac 50mg TID

N=31

Tramadol 50mg TID

N=32

Pain intensity (VAS) wk1 66.3, wk2 25.8, wk3 14mm

Global evolution of lumbar pain (patient) little better/much better 96.3%

Global evolution of lumbar pain (physician) little better/much better 100%

No significant difference between the two treatments

Pain after treatment - patient

75.7 to 26.6mm

Night pain

Doo da ds functional index

Global efficacy (patient) good/very good 97

Global efficacy (physician) good/very good 100

No significant difference between the two treatments

Ram edication permitted

3 patients were excluded from the ITT analyses, 2 were lost to follow-up and no information for post-treatment evaluation was available for 1 patient

No with >1 AE

Total = 5

OPVS = 13/16

Medication administered to patients with untreated back pain of at least moderate intensity (50mm) of no more than 4 days duration

Low back pain within last 4 days

N=310

42 centres in Belgium and Germany

Doxilucenac 50mg TID

N=152

Tramadol 50mg TID

N=155

Pain intensity

100mm VAS

Pain at rest - physician

4-pt VRS (0 to 3)

Change in pain after treatment - patient

75.8 to 21.7mm

Change in pain at rest (physician) non/mild 146

Global efficacy (patient) good/very good 112

Global efficacy (physician) good/very good 112

Pain on palpitation - physician

4-pt VRS (0 to 3)

Change in pain on palpitation (physician) non/mild 146

Global efficacy (patient) good/very good 112

Global efficacy (physician) good/very good 112

Pain on movement - physician

4-pt VRS (0 to 3)

Change in pain on movement (physician) non/mild 124

Global efficacy (patient) good/very good 97

Global efficacy (physician) good/very good 100

Schubert index

Global efficacy - patient

4-pt VRS (0 to 3)

Global efficacy - physician

4-pt VRS (0 to 3)

RCT, DB, 3 daily doses over 3 days, parallel groups,
Patient assessed pain intensity at baseline, 1, and 4 hrs after administration, at night on day 1, and prior to medication in the morning and evening of day 2 and 3. Other assessment done on day 1 and day 4.
Medication administered to patients with back pain less than or equal to 50mm and of no more than 5 days duration

Low back pain within last 5 days

<table>
<thead>
<tr>
<th>Treatment</th>
<th>N=336</th>
<th>67 centres in France</th>
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<tbody>
<tr>
<td>Dexketoprofen trometamol 25mg TID</td>
<td>168</td>
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<tr>
<td>Dextropropoxyphene 30mg ± paracetamol 400mg BID</td>
<td>167</td>
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</table>

Pain intensity 100mm VAS

Lumbar pain - physician
4 pt VRS (0 - absent, 1 - mild, 2 - moderate, 3 - severe)

Global efficacy - patient
4 pt VRS (1 - excellent, 2 - good, 3 - moderate, 4 - poor)

Global efficacy - physician
4 pt VRS (1 - excellent, 2 - good, 3 - moderate, 4 - poor)

Effel function index

Lumbar contracture - physician
4 pt VRS (0 - absent, 1 - mild, 2 - moderate, 3 - severe)

Dexketoprofen trometamol 25mg TID
Global efficacy (patient) good/excellent 78%
Global efficacy (physician) good/excellent 82%

Dextropropoxyphene 30mg ± paracetamol 400mg BID
Global efficacy (patient) good/excellent 63%
Global efficacy (physician) good/excellent

No significant difference in pain between the two treatments

1 patient was excluded from the ITT analyses for failing to attend post-treatment follow-up

Dexketoprofen trometamol 25mg TID
No with >1 AE 21
All cause withdrawals AE withdrawals 6

Dextropropoxyphene 30mg ± paracetamol 400mg BID
No with >1 AE 18
All cause withdrawals AE withdrawals 2

Abbreviations: RCT = randomised controlled trial; R = randomised; DB = double blind; WD = withdrawal or dropout; OPVS = Oeifel Pain Validity Score; LOCF - last observation carried forward; ITT = intention to treat; N = number; LA = local anaesthetic; VAS = visual analogue scale; VRS = verbal rating scale; AE = adverse event; SPID = summed pain intensity difference; TOTPAR = total pain relief