Online Supplementary Table S1 MOVES Investigation Group

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Online Supplementary Table S2 Inclusion and exclusion criteria

Inclusion criteria
Age ≥40 years
Diagnosis of primary osteoarthritis (American College of Rheumatology criteria[1])
Radiological stages II or III osteoarthritis (Kellgren and Lawrence criteria[2])
Pain in the knee on most days in the month before entering the trial
Moderate-to-severe pain (WOMAC pain score[3 4] >301) at the inclusion visit
No clinical or significant laboratory abnormalities (in the judgment of the investigator)
Negative pregnancy test at screening and use of an acceptable method of birth control for the duration of the study in women of child-bearing potential
Not participating in another clinical trial
Agree to attend all study-related visits. Patients provided written informed consent to participate in the study before initiating any study-related activities.
Provide written informed consent to participate in the study before initiating any study-related activities.
Subject exclusion criteria
Known allergy to chondroitin sulphate or glucosamine hydrochloride, hypersensitivity to celecoxib, who have demonstrated allergic-type reactions to sulphonamides, experienced asthma, urticarial, or any allergic-type reaction after taking sulphonamides, aspirin, lactose, or non-steroidal anti-inflammatory drugs (NSAIDs)
Allergy to shellfish
History of intolerance to acetaminophen
Active malignancy or history of a malignancy within the past 5 years
Any history of illness that, in the opinion of the investigator, might confound the results of the study or pose additional risk to the patient
Concurrent arthritic disease (antecedents and/or current signs) that could confound or interfere with the evaluation of pain efficacy (e.g. chondrocalcinosis, Paget's disease of the ipsilateral limb to the target knee, rheumatoid arthritis, aseptic osteonecrosis, gout, septic arthritis, ochronosis, acromegaly, haemochromatosis, Wilson's disease, osteochondromatosis seronegative spondyloarthropathy, mixed connective tissue disease, collagen vascular disease, psoriasis, inflammatory bowel disease)
Pain in other parts of the body greater than the knee pain that could interfere with the evaluation of the index

joint

Patients with fibromyalgia

History of arthroscopy in the affected joint within 6 months prior to study entry

Subjects who have undergone total knee replacement in the contralateral knee within 6 months prior to the Screening Visit and throughout the study

Subjects who plan surgery during the trial

Subjects with a history of heart attack or stroke, or who have experienced chest pain related to heart disease, or who have had serious diseases of the heart such as congestive heart failure (functional classes II–IV of the New York Heart Association)

Patients with high risk of cardiovascular events, according to the American Heart Association assessment of cardiovascular risk tables

Subjects with any significant diseases or conditions, including emotional or psychiatric disorders or substance abuse that, in the opinion of the investigator, are likely to alter the course of osteoarthritis, or the subject's ability to complete the study

Subjects with poorly controlled diabetes mellitus, defined as haemoglobin A_{1c} level >8%

Subjects with poorly controlled hypertension (sustained systolic blood pressure of >150 mm Hg or diastolic blood pressure >95 mm Hg)

Subjects with any active acute or chronic infections requiring antimicrobial therapy, or serious viral (e.g. hepatitis, herpes zoster, HIV positivity) or fungal infections

Subjects with a history of recurrent upper gastrointestinal ulceration or active inflammatory bowel disease (e.g. Crohn's disease or ulcerative colitis), a significant coagulation defect, or any other condition, which in the investigator's opinion might preclude the chronic use of celecoxib

Subjects who have been diagnosed as having or have been treated for oesophageal, gastric, pyloric channel, or duodenal ulceration within 30 days prior to receiving the first dose of study medication

Subjects with chronic liver or kidney disease, as defined by alanine transaminase or aspartate aminotransferase >1.0 two times the upper limit of normal) or blood urea nitrogen or serum creatinine > two times the upper limit of normal, at the screening visit

Subjects who have a history of alcohol or substance abuse within 3 years

Subjects receiving any investigational drug within 30 days or 5 half lives (whichever is greater) prior to the inclusion visit

Female subjects who are breastfeeding

Treatment-related exclusion criteria

Subjects using corticosteroids (oral, injectable), therapeutic dose of glucosamine, chondroitin sulphate, or diacerein during the 12 weeks preceding inclusion

Subjects using hyaluronic acid (intra-articular target knee) during the 26 weeks preceding inclusion

Subjects using natural health products, homeopathy, and creams or analgesic gels during the week preceding inclusion

Subjects subjected to radioactive synovectomy (target knee)

Subjects receiving analgesics including opioids such as tramadol and codeine, or NSAIDs during the week preceding inclusion. Aspirin (up to 325 mg/day) for cardiovascular reasons could be continued

Subjects who require acetaminophen at daily doses >3000 mg (3 g) most of the days of the month prior to inclusion

Subjects who are taking lithium carbonate, phenytoin or anticoagulants (e.g. warfarin) (with the exception of aspirin up to a maximum daily dose of 325 mg)

Subjects who use oral or topical COX-2 inhibitors during the week preceding inclusion

REFERENCES

1 Altman R, Asch E, Bloch D*, et al.* Development of criteria for the classification and reporting of osteoarthritis. Classification of osteoarthritis of the knee. Diagnostic and Therapeutic Criteria Committee of the American Rheumatism Association. *Arthritis Rheum* 1986;29:1039-49.

2 Kellgren JH, Lawrence JS. Radiological assessment of osteo-arthrosis. *Ann Rheum Dis* 1957;16:494-502.

3 Bellamy N. Pain assessment in osteoarthritis: experience with the WOMAC osteoarthritis index. *Semin Arthritis Rheum* 1989;18:14-7.

4 Bellamy N, Buchanan WW, Goldsmith CH*, et al.* Validation study of WOMAC: a health status instrument for measuring clinically important patient relevant outcomes to antirheumatic drug therapy in patients with osteoarthritis of the hip or knee. *J Rheumatol* 1988;15:1833-40.

Online Supplementary Table S3. Assessment of the presence or absence or joint swelling and/or effusion in study knees at each visit

Technique I. Useful for copious effusions and involves placing one hand on top of the patella and the other below it, applying pressure towards the centre of the knee almost as if to send the supposed effusion towards the patellar area. With both index fingers, apply pressure to the central area and observe how the patella lowers and is once again pushed up by the effusion. Technique II. In less copious effusions than those above, place the fingers of the detector hand on both sides of the patella while the other hand applies pressure inwards. If an effusion is present, you will note that the detector fingers move apart. Technique III. Useful in mild effusions. It involves sending all the fluid in the medial compartment laterally and subsequently, from there, sending it medially. Note the synovial thickening of this area. For this, the medial compartment can be emptied by moving the palms of your fingers up and down. Immediately afterwards, the same up and down emptying movement is performed with the backs of the fingers, thereby emptying the lateral compartment, whereupon the appearance of medial thickening can be observed.

Online Supplementary Table S4 Primary efficacy outcome: WOMAC pain score by visit

Visit (days)	**Chondroitin sulphate+ glucosamine hydrochloride***	**Celecoxib***	**p Value†**	**Treatment differences‡**
IUDR: PP population				
Inclusion	372.0 ± 41.8	370.6 ± 41.4		
30	267.7 (255.6; 279.9)	236.4 (224.1; 248.7)	<0.001	
60	231.0 (218.1; 243.8)*	206.0 (193.0; 219.1)*	0.008	–24.9 (–43.2; –6.6)
120	209.9 (196.4; 223.4)*	183.5 (169.7; 197.2)*	0.007	–26.4 (–45.7; –7.1)
180	185.8 (171.2; 200.4)*	184.7 (169.8; 199.6)	0.92	–1.1 (–22.0; 19.8)
Baseline observation carried forward:				
PP population				
Inclusion	372.0 ± 41.8	370.6 ± 41.4		
30	267.7 (255.5; 279.8)	236.3 (224.0; 248.6)	<0.001	–31.4 (–48.7; –14.1)
60	230.7 (217.9; 243.4)*	205.7 (192.8; 218.6)*	0.007	–25.0 (–43.1; –6.8)
120	208.2 (195.0; 221.4)*	183.6 (170.2; 196.9)*	0.010	–24.7 (–43.5; –5.9)
180	183.1 (169.1; 197.1)*	178.9 (164.7; 193.1)	0.68	–4.1 (–24.1; 15.8)
Available data only: PP population				
Inclusion	372.0 ± 41.8	370.6 ± 41.4		
30	267.5 (255.4; 279.7)	236.1 (223.8; 248.4)	<0.001	–31.4 (–48.7; –14.1)
60	229.3 (216.6; 242.0)*	203.0 (190.1; 216.0)*	0.005	–26.3 (–44.5; –8.2)
120	204.3 (191.2; 217.4)*	177.0 (163.6; 190.3)*	0.004	–27.3 (–46.0; –8.6)
180	176.4 (162.4; 190.3)*	171.3 (157.0; 185.6)	0.62	–5.1 (–25.1; 14.9)
IUDR: ITT population				
Inclusion	372.6 ± 41.8	371.2 ± 41.5		
30	269.3 (257.4; 281.1)	241.2 (229.3; 253.1)	0.001	–28.1 (–44.9; –11.3)
60	236.1 (223.4; 248.8)*	213.0 (200.1; 225.8)*	0.012	–23.1 (–41.2; –5.1)
120	216.9 (203.4; 230.3)*	192.8 (179.2; 206.4)*	0.014	–24.1 (–43.2; –5.0)

180	193.2 (178.7; 207.8)*	196.1 (181.3; 210.9)	0.79	2.9 (–17.9; 23.6)
Baseline observation carried forward:				
ITT population				
Inclusion	372.6 ± 41.8	371.2 ± 41.5		
30	270.1 (258.3; 282.0)	241.2 (229.3; 253.1)	<0.001	–28.9 (–45.7; –12.1)
60	233.7 (221.3; 246.2)*	211.5 (199.0; 224.0)*	0.014	–22.2 (–39.9; –4.6)
120	213.0 (200.0; 225.9)*	191.5 (178.5; 204.6)*	0.022	–21.4 (–39.8; –3.1)
180	188.9 (175.1; 202.6)*	187.9 (174.0; 201.7)	0.92	–1.0 (–20.5; 18.5)
Available data only: ITT population				
Inclusion	372.6 ± 41.8	371.2 ± 41.5		
30	269.0 (257.1; 280.8)	240.8 (228.9; 252.7)	0.001	–28.2 (–44.9; –11.4)
60	230.3 (217.8; 242.7)*	206.6 (194.0; 219.2)*	0.009	–23.7 (–41.4; –6.0)
120	205.8 (192.9; 218.7)*	181.1 (168.1; 194.2)*	0.008	–24.7 (–43.0; –6.3)
180	177.4 (163.7; 191.2)*	175.9 (161.8; 189.9)	0.88	–1.6 (–21.3; 18.1)

* Continuous variables are mean±SD at inclusion and baseline and adjusted least square means (95% CIs) for other measurements. Significant differences within-treatment as compared with the previous visit, from the 30-day visit onwards ($p<0.001$).

†p value of treatment effect.

‡Adjusted mean (95% CI).

ITT, intention to treat; IUDR, imputation using the drop-out reason; PP, per protocol.