Supplementary material. Excluded studies

Study	Intervention	Reason for exclusion Study description	Benefit for intervention
Evaluation of treatment			
Benazzo et al. 2008[1]	Pulsed electromagnetic fields	Commenced <2weeks Patients with ACL reconstruction irrespective of pain randomised	Shorter recovery time
Billet et al. 2014[2]	Dorsal root ganglion neurostimulation	Not trial 2 patients with post-surgical knee pain case series	Intervention was effective in controlling of intractable, neuropathic pain
Birch et al. 1993[3]	Sodium diclofenac or physiotherapy or control	Commenced <2weeks Patients with arthroscopy irrespective of pain status randomised	Neither intervention showed benefit for Noyes knee score up to 6 weeks
Bouche et al. 2011[4] Bouche et al. 2011[5]	Peripheral subcutaneous field stimulation	Not trial 5 patients with intractable pain after knee surgery	Excellent pain relief before and after permanent stimulator implantation
Chaiyakit et al. 2012[6]	Peri-articular steroid injection	Not trial 28 patients (29 knees) with chronic pain at mean 5 months after TKR	VAS pain, knee and function scores improved up to 3 months after injection
Cupal and Brewer 2001[7]	Relaxation and guided imagery	Supported recovery Patients with ACL reconstruction	Pain and anxiety reduced at 24 weeks

		irrespective of pain status randomised	
Drakes et al. 2013[8]	Ultrasound guided radiofrequency ablation of the saphenous nerve	Not trial 1 patient with pain after multiple knee surgeries	Significant pain relief at 9 months
Eastlack et al. 2005[9]	Lower body positive-pressure exercise	Not trial Patients with knee surgery irrespective of pain status	Significant pain relief
Giaquinto et al. 2010[10]	Hydrotherapy compared with gym based rehabilitation	Supported recovery Patients with TKR irrespective of pain status randomised	WOMAC pain, function and stiffness improved
Gooch et al. 2012[11]	Clinical pathway	Supported recovery Patients with TKR irrespective of pain status randomised	Improved WOMAC score
Hall et al. 2012[12]	Neuromuscular exercise	Protocol Patients with arthroscopic partial medial meniscectomy irrespective of pain status randomised	Protocol only
Koulousakis 2013[13] Abstract only	Peripheral subcutaneous nerve stimulation	Not trial 405 patients with neuropathic pain including some with post-operative knee pain not randomised	70% showed pain relief up to 3 years
Kramer et al. 2003[14]	Clinic or home-based rehabilitation	Supported recovery Patients with TKR	Similar outcomes

		irrespective of pain status randomised	
Lee Dellon et al. 1996[15]	Partial denervation	Not trial 70 patients with persistent pain after TKR, trauma or osteotomy not randomised	Improvement in VAS pain and knee score at around 2 years
Liang et al. 2006[16]	Traditional Chinese medicine and rehabilitation	<2 weeks Patients with arthroscopic ACL reconstruction irrespective of pain status randomised	Improved pain, swelling and function
Losina et al. 2013[17]	Motivational-interviewing-based telephone intervention	Protocol Supported recovery Patients with TKR irrespective of pain status randomised	Protocol only
Lowry et al. 2010[18]	Spinal cord stimulation	Not trial 1 patient with persistent knee pain after TKR	Improvement to pain and function
Madsen et al. 2013[19]	Group-based rehabilitation or individual supervised home-training	Supported recovery Patients with TKR irrespective of pain status randomised	No difference between groups at 6 months
Mast et al. 1995[20]	Acupuncture	<2 weeks Patients with TKR irrespective of pain status randomised	Pain reduction at 24 hours

Moretti et al. 2012[21]	Pulsed electromagnetic fields	<2 weeks Patients with TKR irrespective of pain status randomised	VAS pain, knee score and SF-36 improved
Muoneke et al. 2003[22]	Secondary patella resurfacing	Not trial 20 patients with chronic anterior knee pain after TKR without patellar resurfacing not randomised	Knee score and function improved but may increase dissatisfaction and need for revision
Nahabedian et al. 1998[23]	Selective denervation	Not trial 13 patients with chronic knee pain secondary to neuromata from prior surgery or trauma	10/13 rated pain outcome as excellent or good
Naylor et al. 2012[24]	Group-based or monitored home-based rehabilitation	Supported recovery Patients with TKR irrespective of pain status randomised	No difference between groups at 8 weeks
Pellino et al. 2005[25]	Kit of nonpharmacologic strategies for pain and anxiety	<2 weeks Patients with TKR irrespective of pain status randomised	No difference in pain but lower opioid use and anxiety on postoperative day 1
Richards et al. 2013[26]	Morphine plus oxycodone or oxycodone and acetaminophen	Acute pain Patients with moderate to severe pain after TKR randomised	For BPI pain outcomes, flexible dose morphine/ oxycodone was superior to low-dose morphine/ oxycodone and comparable to oxycodone/

			acetaminophen
Schroer et al. 2011[27]	Prolonged postoperative cyclooxygenase-2 inhibitor	<2 weeks Patients with TKR irrespective of pain status randomised at discharge	Better VAS pain, flexion, knee scores, OKS, SF-12 physical function after 6 weeks treatment
van den Akker-Scheek et al. 2007[28]	Theory-driven support programme	Supported recovery Patients with TKR irrespective of pain status randomised	No difference between groups at 26 weeks
Zorzi et al. 2007[29]	Pulsed electromagnetic fields	<2 weeks Patients receiving arthroscopic treatment of knee cartilage irrespective of pain status randomised	Improved KOOS at 90 days, reduced NSAID use. Better 3 year recovery
Evaluation of predictive model			
Ackland et al. 2010[30]	Cardiac risk index	Prediction of complications Patients with orthopaedic procedure. No evaluation	Risk index predicted postoperative morbidity and hospital stay
Adam et al. 2008[31]	Patient decision aids or shared decision making	Decision for surgery Joint replacement. Systematic review	Little evidence on the use of decision aids
Al-Arabi et al. 2009[32]	Risk classification	Prediction of complications TKR. No evaluation	Risk classification identified patients at risk of complications and longer inpatient stay

De Achaval et al. 2011[33]	Patient decision aid and computer-based values clarification exercise	Decision for surgery Elective TKR. No evaluation	Decision aid reduced decisional conflict but no benefit for additional computer-based tool
Enko et al. 2013[34]	Thomas-plot therapeutic algorithm	Prediction of anaemia Elective major orthopaedic surgery. No evaluation	Algorithm predicted need for blood
Fithian et al. 2005[35]	Treatment algorithm	Prediction of future surgery ACL reconstruction. No evaluation	Treatment algorithm effective in predicting risk of further knee surgery
Hunter 2009[36]	Stratification of risk for osteoarthritis progression	Osteoarthritis management Knee osteoarthritis. Narrative review	Risk stratification feasible using a number of different metrics
Jain et al. 2011[37]	Risk profile for post-surgical delirium	Prediction of complications Joint replacement. No evaluation	Risk profile was associated with risk of postoperative delirium
Jain et al. 2013[38]	Flexion deformity algorithm	Prediction of flexion deformity correction TKR. No evaluation	Flexion deformity algorithm predicted postoperative flexion deformity
Lewis et al. 2013[39]	Risk algorithm for prediction of need for knee replacement	Decision for surgery Knee replacement. No evaluation	Algorithm predicted need for knee replacement
Oldmeadow et al. 2004[40]	Pre-operative risk assessment	Prediction of complications Elective hip or knee replacement. Before	Use of risk assessment with targeted postoperative care improved time and

		and after study	destination of hospital discharge
Romine et al. 2013[41]	Peri-operative risk calculator	Prediction of complications TKR. No evaluation	Higher predicted risk associated with more complications
Sanchez-Santos et al. 2014[42]	Clinical risk prediction tool to predict OKS patient reported outcome	Predictive model with no evaluation Primary TKR. No evaluation	Good discrimination and calibration
Saragas et al. 2014[43]	Risk factor score	Decision for thromboprophylaxis Foot and ankle surgery. No evaluation	Specific non-weight-bearing and cast immobilised group require thromboprophylaxis
Simoes et al. 2014[44]	Algorithm to select patients for rheumatologist evaluation	Osteoarthritis management Knee osteoarthritis. Not evaluation	Algorithm did not predict under-diagnosis
Van Middelkoop et al. 2014[45]	Algorithm to predict success of intra-articular glucocorticoid treatment	Osteoarthritis management. Knee or hip osteoarthritis. No evaluation	Pain and inflammation predicted response to glucocorticoids

ACL anterior cruciate ligament; TKR total knee replacement; VAS visual analogue scale; WOMAC Western Ontario and McMaster Universities Osteoarthritis Index; BPI Brief Pain Inventory; OKS Oxford knee score; KOOS Knee injury and Osteoarthritis Outcome Score; NSAID non-steroidal anti-inflammatory drug

Supplementary material References

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