Wound infiltration with levobupivacaine, ketorolac and adrenaline for postoperative pain control after spinal fusion surgery: a group-control study

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Abstract

Group-control study on postoperative pain management in spinal fusion spinal patients.

To demonstrate that the combination of levobupivacaine, ketorolac and adrenaline as intra-operative wound infiltration is effective in improving postoperative pain control in patients undergoing spinal fusion surgery.

No consensus on optimum post-op pain management in spinal surgery.

140 patients enrolled. Retrospective data collection. 2 groups: 75 patients received a wound infiltration with the combination of levobupivacaine (200mg), ketorolac (30mg) and adrenaline (0.5mg); 65 patients received other types of local anaesthetics. PCA use, morphine consumption, length of stay, days of physiotherapy, pain score, side effects and complications were recorded. A satisfaction questionnaire was used.

Group 1: 31 male and 44 female patients (mean age: 48.2). PCA used postoperatively: 51% in day1, 16% until day2. Daily use of oral morphine: 18.2 mg overall, 18.1 mg in day1, 22.3 mg in day2. Pain score: 1.34 overall, 1.59 in day1, 1.64 in day2. Duration of physiotherapy: 4.5 days (4.1 excluding patients with complications). Average length of stay: 6.8 days overall (5.1 days excluding patients with complications). Patients happy overall: 86%.

Group 2: 22 male and 43 female patients (mean age: 46.8). PCA used postoperatively: 62% in day1, 22% until day2. Daily use of oral morphine: 23.1 mg overall, 20.9 mg in day1, 24.1 mg in da 2. Pain score: 1.61 overall, 1.95 in day1, 1.89 in day2. Duration of phyiotherapy: 5.6 days (5.3 excluding patients with complications). Average length of stay: 7.9 overall (6.2 excluding patients with complications). Patients happy overall: 74%.

Our data suggest that the studied wound infiltration is a safe and feasible option to provide good postoperative pain control without significant side effects.

Image

	Group 1	Group 2
PCA used day 1	51%	62%
PCA used day 2	16%	22%
Daily use of morphine (overall)	18.2 mg	23.1 mg
Daily use of morphine (day 1)	18.1 mg	20.9 mg
Daily use of morphine (day 2)	22.3 mg	24.1 mg
Pain score day 1	1.59	1.95
Pain score day 2	1.64	1.89
Days of physiotherapy	4.5	5.6
Length of stay	6.8	7.9
Patients' satisfaction	86%	74%

Recent Publications :

1) Introduction of clerking pro forma for surgical spinal patients at the Royal National Orthopaedic Hospital NHS Trust (London): an audit cycle.
Pace V, Farooqi O, Kennedy J, Park C, Cowan J.
Postgrad Med J. 2018 Mar 14. pii: postgradmedj-2017-135498. doi: 10.1136/postgradmedj-2017-135498.

2) Return to sport activity after anterior cruciate ligament reconstruction in skeletally immature athletes with manual drilling original all inside reconstruction at 8 years follow-up.
Placella G, Bartoli M, Peruzzi M, Speziali A, Pace V, Cerulli G.
Acta Orthop Traumatol Turc. 2016 Dec;50(6):635-638.

3) Acute patellofemoral instability in children and adolescents.
Antinolfi P, Bartoli M, Placella G, Speziali A, Pace V, Delcogliano M, Mazzola C.
Joints. 2016 Jun 13;4(1):47-51.

Biography:

Valerio Pace has completed his MBBs at the age of 27 years from University of Perugia. He worked at FY, SHO and T&O Registrar level in the UK between 2013 and 2017, working at the Royal National Orthopaedic Hospital from April 2015 to October 2017. He is now a T&O Resident Doctor at the University of Perugia (Italy). He also has a "Honorary Research Contract" at the Royal National Orthopaedic Hospital. He has published 6 papers in reputated journals, presented at several conferences and carrying on plenty of ongoing research projects.

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