



Vertebroplasty vs Sham Procedure for relieving pain in Acute Osteoporotic vertebral compression fractures

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The findings from a randomised clinical trial published in 'BMJ' explained that percutaneous vertebroplasty did not lead to statistically significantly greater pain relief as compared to a sham procedure during 12 months' follow-up among the patients with acute osteoporotic vertebral compression fractures.

The researchers examined whether the percutaneous vertebroplasty results in more pain relief as compared to the sham procedure in patients suffering from acute osteoporotic compression fractures of the vertebral body.

Cristina E Firanesco et al. performed a randomised, double-blind, sham-controlled clinical trial set in 4 community hospitals in the Netherlands from 2011 to 2015. Total 180 participants requiring treatment for acute osteoporotic vertebral compression fractures were randomised to either vertebroplasty in 91 participants or a sham procedure in 89 participants. At each pedicle, the participants received local subcutaneous lidocaine (lignocaine) and bupivacaine. The vertebroplasty group also received cementation, simulated in the sham procedure group.

The primary outcome measures comprised of mean reduction in visual analogue scale (VAS) scores at 1st day, 1st week, and 1, 3, 6, and 12 months. A decrease of 3 points in VAS scores from baseline was designated as clinically significant pain relief. The secondary outcome measures comprised of differences between groups for changes in the QoL for osteoporosis and Roland-Morris disability questionnaire scores during 12 months follow-up period.

It was found that the mean reduction in VAS score was statistically significant in the vertebroplasty and sham procedure groups at all the follow-up periods after the procedure as compared with baseline. Secondary outcomes did not depict statistically significant results. No statistically significant differences between the groups were perceived as the use of analgesics reduced significantly in both groups at all time points. The vertebroplasty group had two adverse events: vasovagal reaction and respiratory insufficiency.

"The findings of this study do not encourage using percutaneous vertebroplasty to treat acute osteoporotic vertebral compression fractures," noted the researchers. Future research is affirmed to prove that vertebroplasty is better than periosteal infiltration of local anaesthetic in hospital inpatients, as this has never been assessed.

Source	BMJ
Link:	https://www.bmj.com/content/361/bmj.k1551.long
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Authors:	Cristina E Firanesco et al.

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Exploratory, Lidocaine (lignocaine), Bupivacaine, Opioids, Analgesic, Vertebroplasty, Osteoporotic vertebral compression fractures, Vertebral body, VERTOS IV, Randomised double-blind sham controlled clinical trial, Acute, Visual analogue scale (VAS), Roland-Morris disability questionnaire scores, Percutaneous, Subcutaneous, Respiratory insufficiency, Vasovagal reaction