Vesselplasty using SrHA New cement (Osteo-G®)

D A.

Citation

Abstract
Object: Vesselplasty system, was percutaneous Osteoplasty technique (moulding the bone) to treat the symptomatic vertebral compression fractures (VCFs), by injection of bone filler materials (BFMs): polymethyl metacrylate (PMMA), other kinds of bone cement, or different kind of osteoinductive / osteoconductive materials. Since 2004 over two hundreds vesselplasty were done using a mixture of PMMA 70% + Ca sulfate 30% + radioopaque dye in viscous condition. The point of this mixture is to reduce the heat, extend the setting time longer, and the visibility of cement during the procedure through C-arm imaging. The viscous condition is used as a hydrostatic pressure to restore the vertebral body’s height while injecting inside the vessel container. In certain condition the vesselplasty was performed in bilateral or unilateral through trans-pedicle or extra-pedicle routes, and through a proper procedure this system is able to prevent risk of leakage of BFMs. A New SrHA cement (Osteo-G®) from A-Spine Holding Co was used as BFMs in vesselplasty. The purpose of this study was to review the advantage of SrHA cement compare to the previous mixture of PMMA and Ca sulfate cement. Methods: A non randomized prospective study of vesselplasty using new SrHA cement was done either bilateral, unilateral, through trans- or extra-pedicle routes. The heat, viscosity, setting time of the cement, the short term, mid- and long term result inside the vertebra of the patients were evaluated by X-ray and Ct-scan. Results: 8 cases of VCFs that have been treated using vesselplasty and new SrHA cement. Two cases dropped and only 6 cases can be evaluated and reported. Conclusions: The results of Vesselplasty technique are excellent. This technique allows the stabilization and restoration of vertebral body height of VCFs, with the advantage in controlling the volume of the injected BFMs, the pressure inside BFC, also preventing the leakage of BFMs, and left as an implant body expander. The preliminary results of new SrHA cement show that the heat, viscosity, and setting time of the cement are ideal for vesselplasty, but to evaluate the result inside the vertebra in short-, mid- and long term need longer follow up and bigger number of samples.

References
Author Information
Darwono A., Bambang
M.D., Department of Orthopaedic Surgery, Gading Pluit Hospital