

**VK100** is a mixture of Dimethyl Methylvinyl siloxane and Barium Sulphate. It is elastic, adhesive to bone, leaves 30 min before solidification without exothermic reaction, and shows a stiffness close to the intact vertebrae. The surgical procedure, called **elastoplasty**, is similar to a BKP. Clinical results obtained with this new silicone in pathological VCFs have been investigated.

41 cancer patients with symptomatic VCFs (70 vertebral bodies), underwent percutaneous and open elastoplasties. Post-operative leakages, pulmonary embolism (PE) and adjacent fractures were carefully evaluated with neuroimaging. KPS, VAS and Dennis Pain Score were calculated pre- post-operatively and at the last follow-up.

**RESULTS:** The mean volume of silicone inserted in each vertebra was 3.8 cc. Complications included seven leakages (17%), two asymptomatic PE (4.3%) and 3 post-operative adjacent fractures (7.3%). Median follow-up was 29 months. A significant improvement was observed in KPS, VAS and Dennis Pain Score ( $p < .0001$ ). The 1-yr survival rate was 76.9%.

Elastoplasty appears a safe and effective palliative treatment of VCFs in oncologic patients. Useful qualities of VK100 are the lack of exothermic reaction and the wider working window. The influence of biomechanical properties of silicone on reduction of adjacent level fractures requires further investigations <sup>1)</sup>.

<sup>1)</sup>

Telera S, Pompili A, Crispo F, Giovannetti M, Pace A, Villani V, Fabi A, Sperduti I, Raus L. Kyphoplasty with purified silicone VK100 (Elastoplasty) to treat spinal lytic lesions in cancer patients: A retrospective evaluation of 41 cases. Clin Neurol Neurosurg. 2018 Jun 15;171:184-189. doi: 10.1016/j.clineuro.2018.06.018. [Epub ahead of print] PubMed PMID: 29929175.

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