

# **Use of fibrin glue in combination with autologous bone graft as bone enhancer in posterolateral spinal fusion. An experimental study in New Zealand rabbits. [Spanish]**

Authors: Zarate-Kalfopulos B., Estrada-Villasenor E., Lecona-Buitron H., Arenas-Sordo M.L., Garza-Hernandez A.C., Reyes-Sanchez A.

Publication Date: 2007

## **Abstract:**

**BACKGROUND:** Currently there are different strategies to increase the fusion rate in spine surgery in the presence of autologous bone graft. The use of fibrin glue has multiple applications in surgery, but there is controversy about the use of fibrin glue as a bone enhancer. **METHODS:** The purpose of the study was to determinate the effectiveness of fibrin glue as a bone enhancer in posterolateral arthrodesis in New Zealand rabbits. Posterolateral arthrodesis was done in ten New Zealand rabbits at the level of L5-L6 using autologous bone graft in the right side (control side) and autologous bone graft plus fibrin glue in the left side (study side). The rabbits were harvested at 8 weeks, obtaining the lumbar spine for radiological, manual palpation and light microscopic analysis. **RESULTS:** Solid arthrodesis was obtained in 100% of the controls and in only 60% of the study animals. There were no differences among methods for determination of solid arthrodesis whether by radiological, manual palpation or light microscopic analysis. In 40% of non-unions, only in one (10%) was fibrocartilage obtained. In the remaining 30%, only inflammatory cells were obtained in the gap between the transverse process. **CONCLUSIONS:** Fibrin glue does not have a positive effect in the success of solid fusion in posterolateral arthrodesis in rabbits. The use of fibrin glue significantly decreased the rate of solid fusion; therefore, we do not recommend its use as a bone enhancer.