

6th International Conference on

WOUND CARE, DERMATOLOGY AND ORTHOPEDICS

December 05-06, 2022 | Dubai, UAE

Received date: 03.09.2022 | Accepted date: 05.10.2022 | Published date: 10-01-2023

A novel method for sternal fixation in cardiac surgery: Initial experience

Jitao Yang^{1,2}, Zeshu Li¹, Han Lei¹, Li Peng¹, Fu Qingtao¹, Wang lei¹ and Nie Fei¹

¹Shandong Provincial PKUcare Luzhong Hospital, China

²The Second Affiliated Hospital, Zhengzhou University, China

Objectives: To investigate whether the Ni-Ti-shaped memory alloy embracing plate is an effective treatment for post-sternotomy complications and to see if it can improve the mechanical stability of sternal closure and to evaluate its initial outcome.

Methods: One-hundred twenty patients from January 2012 through December 2015 underwent sternal fixation with the Ni-Ti-shaped memory alloy embracing plate in cardiac surgery. Sternal healing was evaluated by physical examination, wound healing complications and the computed tomography (CT) showings of coaptation the sternal halves. The pain scores were recorded preoperatively and postoperatively on day 3 to 7, discharge, 4 weeks and 3 and 6 months.

Results: The patients with Ni-Ti-shaped memory alloy embracing plate fixation had less postoperative complications, such as fat liquefaction, mediastinitis, sternal dehiscence. The postoperative pain scores were significantly lower in patients with sternal fixation of embracing plates than that with wire cerclage. The life quality was improved in embracing plate fixation patients.

Conclusion: The Ni-Ti-shaped memory alloy embracing plate

significantly improved the sternal stability closure and life quality and reduced postoperative pain in cardiac surgery.

Recent Publications

1. Yang J, Li Z, Lei H, Peng L, Qingtao F, et al. A Novel Method for Sternal Fixation in Cardiac Surgery: Initial Experience. *J Angiol Vasc Surg* 2022. 7: 096.
2. Jitao Yang, Xian'en Fa. Effect of Low Level Laser Irradiation Preconditioning On Infarct Size and Ventricular Remodeling in the Rat Heart. *Adv Bioeng Biomed Sci Res* 2022. 5(3): 195-199.
3. Jitao Yang, Zeshu Li, Lei Han, Peng Li, Qingtao Fu, Fei Nie, Lei Wang Preliminary experience with a 1470 nm diode ring laser with echosclerotherapy in lower limb varicose veins. *Medical & Clinical Research* 2022. 7(11):01-05.

Biography

Jitao Yang has completed his MM at the age of 27 years from Zhengzhou University, China. Now, he is studying for the degree of medical doctor. He is the lecturer of Weifang Medical College, China. Currently, working as an attending doctor in thoracic and cardiovascular surgery in Shandong Provincial PKUcare Luzhong Hospital, PR China. He is skilled at the microinvasive therapy of ischemic heart diseases and valvular disease and hybrid therapy of aortic disease. He has over 7 publications.

e: yjtyang@163.com