Barts Health NHS
NHS Trust

Does the use of a sternal support have a positive outcome post-operatively?

Alex SHIPOLINI, Alan HOBBS, Sammra IBRAHIM, Anita SITZBERGER, Stephanie AMARTEY, Claire BUCKLEY
Ana SOLER-CASTELL, and M.C. LIM.

Purpose:

Sternal supports are used intermittently in the care of patients who have undergone cardiothoracic surgery. We aimed to evaluate the efficacy of sternal supports in patients with a higher than average risk of developing post-operative complications.

Material and methods:

We conducted a limited study of 56 patients, aged between 50-91 years, of whom 36 used the 'SternaBra' and 'Sternasafe Pro'. All patients presented with at least 2 risk factors from the following:

BMI>30

Smoker (up to 6 weeks pre-op)

Renal impairment-EGFR <30

Osteoporosis

Age >85

Resternotomy

Of the selected 56, the average age was 71, 68% were current or ex-smokers, and 57% were diabetic. 91% of the patients we selected were in the moderate to high category for surgical site infection (SSI). The average BMI was 32.

The gender split was 50/50, and we used a total of 4 products supplied by two companies.

All patients were fitted with a sternal support either at the end of surgery, whilst still anaesthetised, or within 48 hours post-operatively.

All patients gave verbal consent to be contacted at around days 30, 60, and 6 months post-discharge.

Conclusion:

At day 60, 2 patients had died from complications that were unrelated to the sternum, and 2 patients, both of whom were non-compliant, sustained SSI's, giving the compliant group 100% uncomplicated recovery. No difference in efficacy was noted between the products from either company, and 88% (46/52) of the compliant group said that they felt more confident in their recovery, and had noticed an improvement in pain control.

Overall, we found that the use of products such as 'SternaBra' and 'SternaSafe Pro', in the trial group, had an unequivocal effect on improved patient comfort, and also reduced the occurrence of wound dehiscence, and infection.