The first UK experience with Posthorax® vest - Prophylactic use results in reduced sternal wound complications following sternotomy.



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SCTS ANNUAL MEETING & CT FORUM - BRIGHTON - 17TH - 19TH MARCH 2013

Deep Sternal Wound Complication DSWC

- Sternal instability
- Drainage
- <u>+</u> Fever / Septic Shock

Increased mortality and morbidity

Depression
Poor quality of life
Long term illness

DSWC Implications

>400% length of stay

П

Longer occupancy of beds and repeated use of theatres

Loss of new admissions

Abx, Vac Pump HDU/ITU-RRT

DSWC

Pre operative

Hygiene

MRSA screer

Antibiotic

Skin preparation

Operative

Type/Length of

Laminar air floy

↓ OR traffi

Carrellia de la

Closure technique

x/Electrocaut

Post operative

Ward cleanliness
Dressings care
Glycemic control
↓ blood transfusion

Personal Hygiene

Sternum Stability



J. Losanoff et al. Biomechanical comparison of median starnotomy clasures Ann Thorac Surg 2004;77:203-209
 Fyrin-Thompson et. al. Methods for reduction of starnal wound infection Semin Thorac Cardiovasc Surg 2004 Spring 16(1):77-80

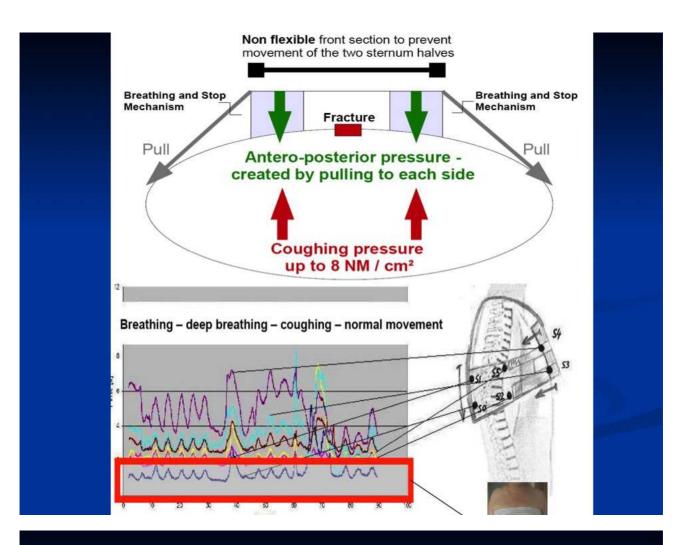
POSTHORAX®



- The Posthorax Vest is a **post-operative jacket** for patients who have undergone heart surgery via sternotomy
- Provides support for the chest without restricting breathing

Function of Posthorax®

- Anteroposterior stabilazation of the sternum (2 front cushions)
- Different sizes
- Ergonomical fit for males and females
- Lateral straps for optimum fit and stop mechanism which allows normal breathing but stops hyperextension of the thorax
- Individual sizing at the shoulder straps to prevent vertical malposition



Function of Posthorax®

- Anteroposterior stabilazation of the sternum (2 front cushions)
- Different sizes
- Ergonomical fit for males and females
- Lateral straps for optimum fit and stop mechanism which allows normal breathing but stops over expansion of the thorax
- Individual sizing at the shoulder straps to prevent vertical malposition

Selection process/ Data collection

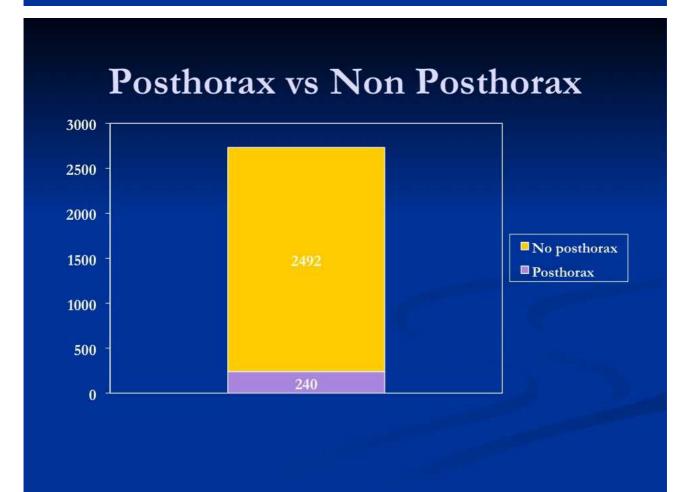
- Pre operative decision (clinic or in hospital)
- Documentation in the notes (suitability, reason, size)
- Application by trained staff
- Ideally, application immediately after extubation
- Recommended use for up to 6 weeks
- 1st year Prospective collection
- 2nd year Retrospective collection

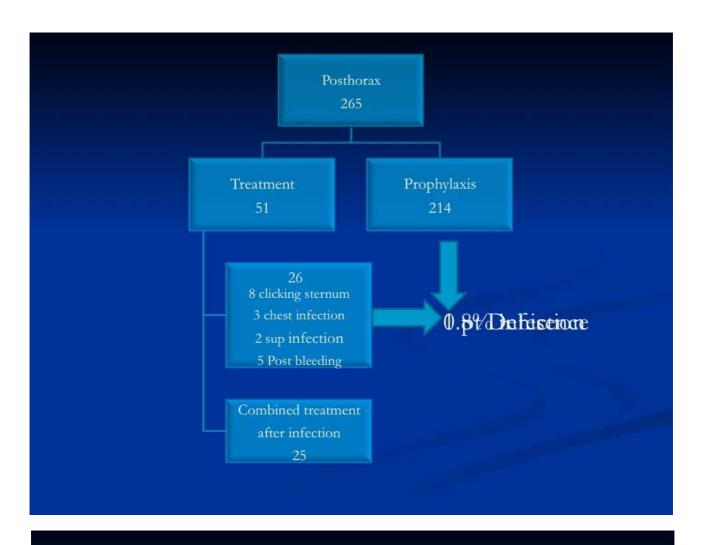
Indications (prophylactic use)

- High BMI (>30)
- Diabetes
- Steroids
- Reduced Lung Function
- Re operation
- Severe osteoporosis (Intraoperative finding)

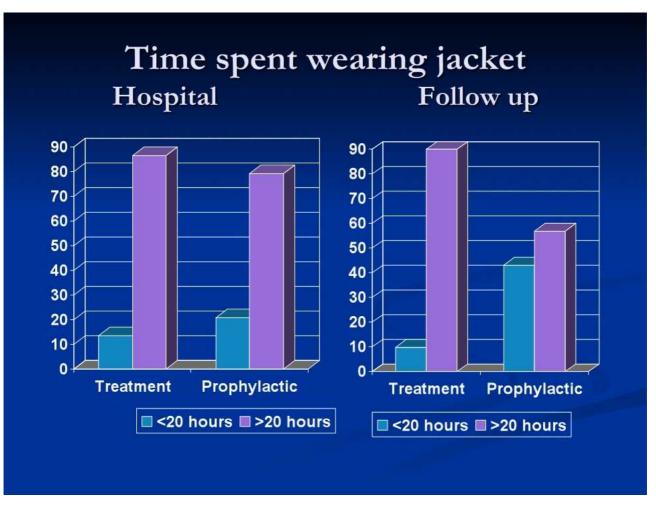
Indications (therapeutic use)

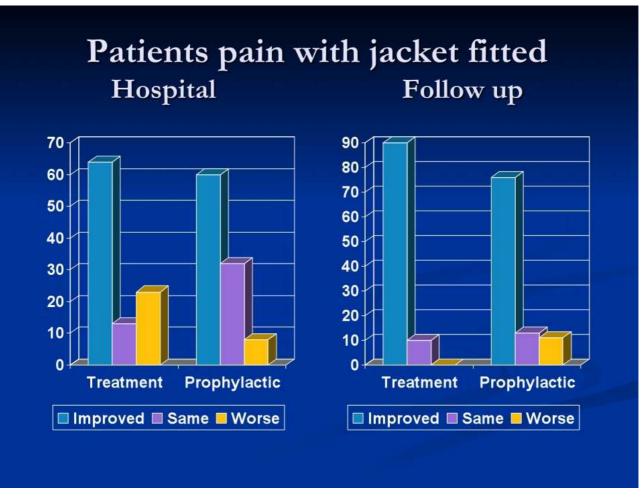
- Clicky sternum
- Severe Cough/ chest infection
- Superficial infection
- Delirium/agitation
- DSWC (on Vac Pump or post rewiring)



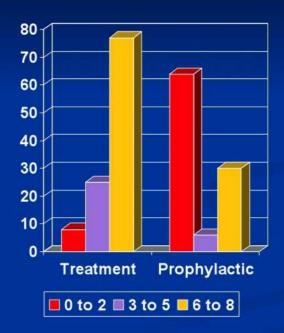


Risk Factors			
	Non Posthorax group	Posthorax group	P value
Age	69.3±11.7	69.2±11.4	p=ns
BMI	27.8±4.9	31.3±5.9	p<0.001
COPD	12%	17.3%	p=0.03
Diabetes	19.4%	25.6%	p=0.05
Previous operation	11.5%	16.3%	p=0.07
Logistic EuroSCORE	8.6%	8.1%	p=ns
X clamp time	68.4±32.2	67.7±32.9	p=ns
CPB time	105.1±46.3	101.2±42	p=ns
Urgency	38.8%	32.2%	p=ns

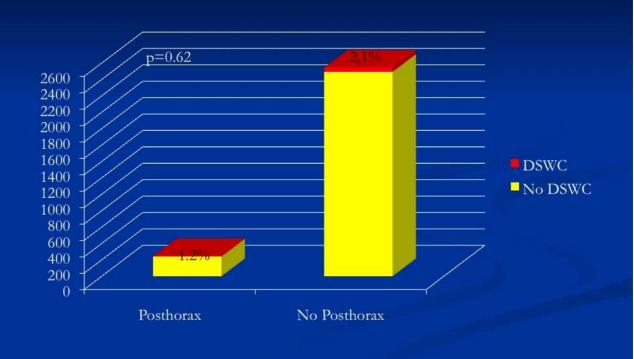












Conclusion

- Reduction of infection incidence
- Contributes to faster recovery
- Reassurance for the patient
- Cost effective

