

Novel skin crease incision for the repair of OA



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Background

- Posterolateral or standard axillar incision for the pediatric thoracic surgery sometimes cause poor functional and cosmetic results.

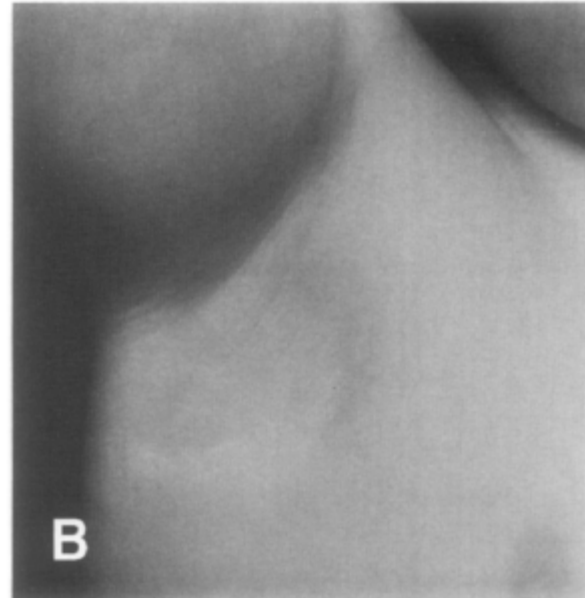
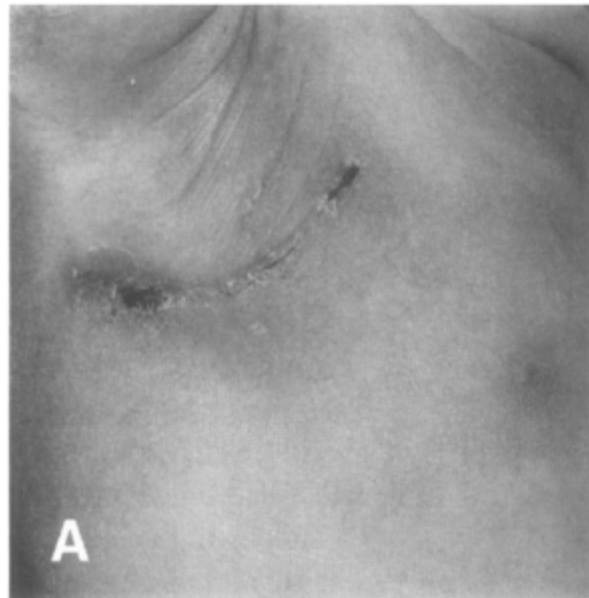


- Muscle sparing axillar skin crease incision was initially proposed by Bianchi (1998) followed by Kalman and Verebely (2002) resulting in satisfactory cosmetics.

Aesthetics and Lateral Thoracotomy in the Neonate

By A. Bianchi, O. Sowande, N.K. Alizai, and B. Rampersad
Manchester, England

- **Bianchi A**, et al. *J Pediatr Surg* 33:1798-1800, 1998
– Esophageal atresia 27cases, PDA 2 cases

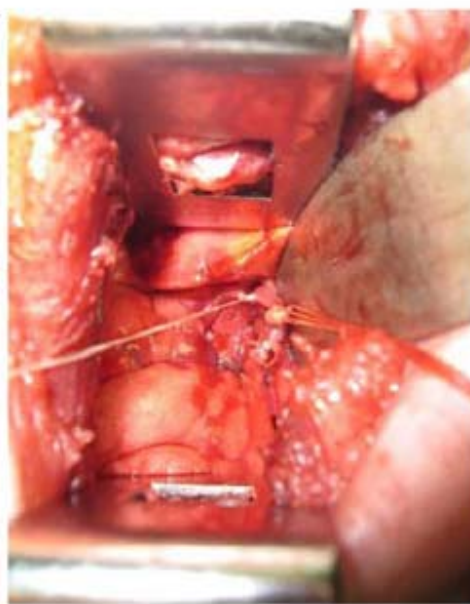


The utility of muscle sparing axillar skin crease incision for pediatric thoracic surgery

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(Skin incision)

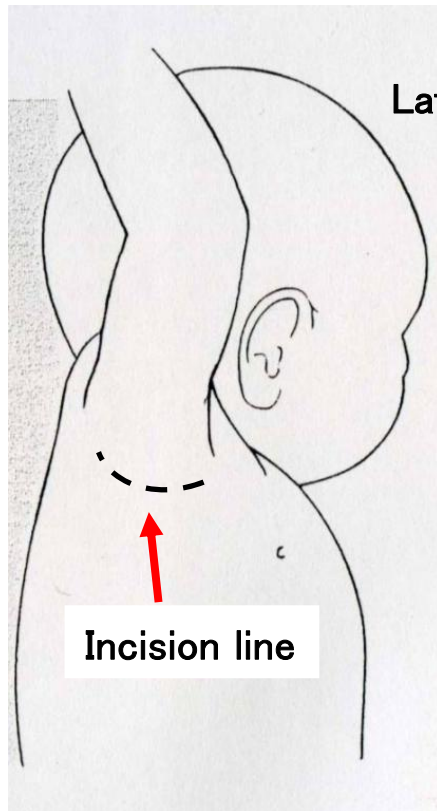


(Rt. Lower lobectomy)
The 6th ICS

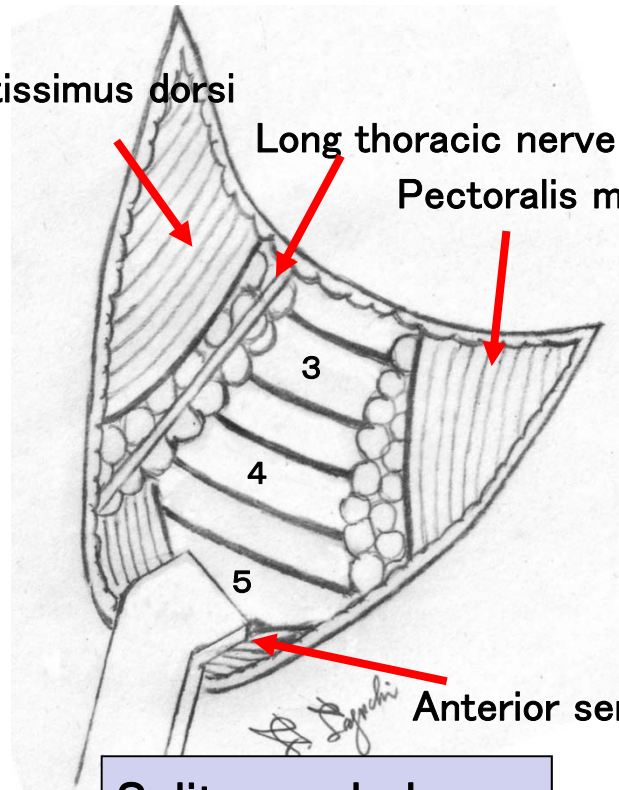


(8 months after operation)

Operative Procedure



Latissimus dorsi



Long thoracic nerve

Pectoralis major

Anterior serratus

Split muscle layers

1. Skin crease incision
2. Split muscles and fat tissue
 Pectoralis major
 Latissimus dorsi
 Axillary fat pad
3. Preserve nerves
 Long thoracic nerve
4. Approach to the window ICS
5. Split anterior serratus muscles
6. Thoracotomy and proceed to each operative procedure

Patients and Methods

2006~2015

44 cases (neonate and infant)

- Esophageal atresia** **23 cases**
- CPAM** **14 cases**
- Extralobar pulmonary sequestration** **4 cases**
- Intralobar pulmonary sequestration** **1 case**
- CDH** **2 cases**

Results-1

(Surgical field)

- For good surgical field !
 - Esophageal atresia
 - Most cases are neonates.
 - Devices
 - Long and fine tip needle holder and forceps
 - 5-0 or 6-0 PDS with the two needles in both ends
 - CPAM and pulmonary sequestration
 - Most cases are infants.
 - One lung ventilation provides a good surgical field especially for lower lobectomy.

Results-2

(Intraoperative management)

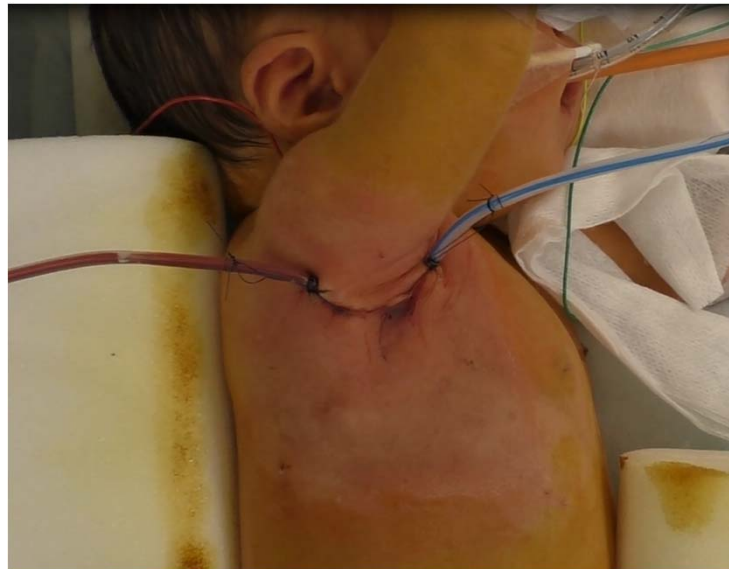
- Transient arm paralysis (1 week) 2 cases
→ Pulse-oxymeter with extended arm for monitoring peripheral blood pulse and saturation of oxygen



Result-3

(Perioperative complication)

- No evidence of elevation of complication rate
 - anastomotic leakage or stenosis
- Wound disruption due to fat necrosis 5 case
 - Subcutaneous negative pressure drainage



Results-4 (cosmetics)

- Good cosmetics
- Satisfactory for patients, families and medical staffs



Results-5

(Long-term complication)

- No chest deformity and scoliosis
 - Up to this time (Oldest Pt 12yrs)



Conclusion

- Muscle sparing skin crease incision technique preserves a learning opportunity of standard open surgery for trainee and cosmetic satisfaction for patients.
- Muscle sparing skin crease incision for esophageal atresia may become the standard approach.



Thank you for your attention !

