

Scar Management After Pediatric Open Heart Surgery

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ABSTRACT: Parents of pediatric patients worry about the appearance of scars and lifelong disfigurement. They are the ones who initiate treatment, and are usually very diligent in applying the product to the patient. Silicone gels have long been used to help prevent abnormal scar formation after surgery, and to promote an aesthetic scar outcome. Ease of use, patient compliance and tolerability make it a viable alternative to silicone gel sheets, with multiple published scar treatment guidelines recommending its use. This case illustrates an excellent aesthetic outcome of a pediatric open heart surgery scar with parent supervised application of a topical silicone gel.

PROTOCOL: This case demonstrates the effectiveness and tolerability of NewGel+E (Newmedical Technology, medical grade silicone gel with <1% cosmetic grade vitamin E), when used on an infant. Treatment was initiated 5 weeks after surgery, and gel was applied twice daily for 12+ weeks.

PROCEDURE: Three month old female patient underwent open heart surgery by medical team listed above to repair both Atrial Septal Defect (ASD) and Ventricular Septal Defect (VSD). The parents report being devastated by the size of the scar and not wanting their daughter to grow up with a noticeable scar on her chest. The mother observed that the scar was raised and lumpy, particularly the lower portion. Five weeks after surgery the patient's mother began twice daily treatment of the chest scar with NewGel+E. The treatment was recommended by a family friend; the patient's doctors did not make any recommendations for scar treatment. Treatment continued for 12+ weeks, with frequent photos documenting progress during treatment period.

RESULTS: Redness of the chest scar improved significantly by end of treatment period, as did the softness of the scar. The lumpiness improved and the scar flattened significantly. Fig. 3 shows a barely perceptible scar remaining four months after treatment was initiated. Mother reports no irritation at the treatment site due to the product, and the patient tolerated the twice daily application very well.

CONCLUSION: Parents are concerned about the impact of a bad scar on their child's self-confidence as they grow older. Parents will seek recommendations from friends, family and the internet if no specific product is recommended by their surgeon/physician. Clinical studies show that topical silicone gel does not penetrate the skin surface. This fact makes it a safer option for pediatric patients due to the risks inherent with using other systemically absorbed products such as hydrocortisone, onion extracts, etc. The photographs demonstrate significant improvement in the cosmetic appearance of the infant's scar. The parents are grateful for the improvement, and the patient's physician commented that it was hard to tell at times that she even had surgery unless you knew. He now recommends this product for his other patients. NewGel+E would be a valuable treatment option for similar pediatric scars.



Fig. 1 - Sept 2, 2014
2 weeks post-surgery



Fig. 2 - Nov 24, 2014
after 2 months of topical silicone gel
treatment (Newmedical Technology,
medical grade silicone gel with <1%
cosmetic grade vitamin E)



Fig. 3 - January 29, 2015
4 months after start of 12+ weeks
of treatment

Photos and information submitted by patient's family MKL107 V2