A Review of Nurse-Led Home Care Education Program on Scar Management for Infants After Surgical Repair of Cleft Lip
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Introduction
Cleft Lip and Palate is a common congenital malformation with a frequency of around 1 in 700 live births. Children with cleft lip deformity face multiple physical and psychosocial problems related to facial disfigurement. Treatment process is long and arduous and demands multidisciplinary care. The Cleft Lip And Palate Service (CLAPS) in United Christian Hospital provides regional cross-clusters multidisciplinary cleft-care. Patients with cleft lip referred to our hospital for surgical care are managed in Neonatal Unit and Multidisciplinary Clinic for perioperative care as well as parental education for subsequent home care. The education program includes pre-operative lip-taping, feeding and postoperative scar massage techniques, application of silicone-gel, silicone-sheet and nasal retainer. Based on resourcefulness and knowledge in scar care, the CLAPS nurses lead different roles in the education process, including multi-disciplinary coordination and planning, counseling, education and assessment in ensuring knowledge, skills, confidence and compliance by care-givers in pursuing scar care at home.

Objectives
The purpose of this study was to review the effectiveness in preventing hypertrophic scar after the home care education program.

Methodology
A retrospective descriptive review of the clinical photo, searched the consultation data record as noticed with using skin pigmentation analyzer and pliability and thickness as scored by Vancouver Scar Scale. Patients receiving repair of Cleft Lip from January 2013 to August 2015 at our hospital. Patients undergone Scar massage, silicone gel, silicone gel sheet were include. The key post-operative scar management as coordinated by designated CLAPS nurse include: 1. Regular combined-clinic follow-up at 1, 2, 6, 10, 14, and 24 weeks after surgery and suture removal, which facilitate: 2. Education to care-givers regarding home-based treatment: daily
Scar massage, application of silicone-gel and silicone-sheet for at least 6 months. 3. Scar assessment by surgeon and trained nurse. Study parameters during follow-up include: a) Scar color and pigmentation measured by colorimeter, b) Pliability and thickness measured by Vancouver Scar Scale.

**Result**

**Results**  A total of 27 children underwent surgical repair of Cleft Lip and nurse-led home care education program during the study period. 21/27 (78%) of the children showed improvement in erythema gauge range: 84-55 unit initial post-operation Vs 62-51u post-scar-treatment program. 25/27 (92%) had flat scars after 6 months (mean VSS thickness score 3. The mean VSS Pliability Score improved from 5 to 3.

**Conclusions**  A nurse-led scar management home-care training-program via regular CLAPS Clinic follow-up ensures knowledge, skills, confidence and compliance by care-givers in pursuing appropriate scar care at home after cleft lip repair, preventing scar hypertrophy and contributing to optimal surgical outcomes in cleft lip patients.