

A NOVEL NEWBORN CLUBFOOT SCREENING CHECKLIST TO IMPROVE DISEASE DETECTION: A PILOT STUDY

¹Prabaharan Ravin; ¹Sahdi Haniza

¹Faculty of Medicine, Universiti Malaysia Sarawak, Kuching, Malaysia

INTRODUCTION:

Clubfoot also known as Congenital Talipes Equino Varus (CTEV) is a common foot deformity with the prevalence rate of 4.5 per 1000 live birth in Malaysia. Early initiation of treatment has shown to have favorable outcome. Screening for foot deformities including clubfoot is often done by non-orthopaedic trained personnel during routine neonatal check-up. Hence, early detection plays an important role in treatment and outcome of this disease. In this study, we examined the detection of clubfoot with and without an objective assessment screening tool. This study has the potential to raise awareness regarding clubfoot amongst health care personnel and provide a guide to diagnose clubfoot especially in primary health care centers.

This prospective study was conducted in Sarawak General Hospital, Kuching from November 2020 till June 2021.

REPORT:

A total of 596 new-borns (n (number of foot) = 1192) were recruited in this study. 306 (n=612) were screened with Newborn Clubfoot Screening Checklist (NCSC) and 290 (n=580) were screened without checklist. 2 cases (n=2) of clubfoot were detected using the checklist and no case of inaccurate diagnosis in the checklist group. 14 cases (n=28) of inaccurate diagnosis in the group without checklist was identified with no cases of true positive clubfoot. Sensitivity of the NCSC was 100% (95% Confidence Interval (CI) 15.81% to 100%) and specificity was 97.7% (95% CI 96.69% to 98.47%).

NEWBORN CLUBFOOT SCREENING CHECKLIST

Name code: _____
 Gender: _____
 DOB: _____

**Please refer the patient to the Paediatric Orthopaedic Unit, Dr Ravin Prabaharan Call whatsapp 0129383090

**Please indicate 1= if deformity is present or 0= if deformity is absent

Deformity	Left Foot	Right Foot
Cavus of sole <small>Big toe</small> Increased height of the medial arch of the foot Photo showing medial plantar part of the foot		
Adduction of forefoot <small>Big toe</small> Adduction of the forepart of the foot Photo showing plantar surface of the foot		
Varus of heel <small>Big toe</small> Inversion and adduction of the back of the heel Photo showing posterior part of the heel		
Equinus of foot <small>Big toe</small> Plantarflexion of the foot		
Total Score		

Name of referring doctor: _____
 Signature: _____
 Stamp: _____
 Date: _____

Figure 1: Newborn Clubfoot Screening Checklist

CONCLUSION:

Newborn Clubfoot Screening Checklist aids in detecting CTEV and reduce inaccurate diagnosis.

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