COMPARISON OF EFFECT OF DRY CORD CARE VERSUS CHLORHEXIDINE CORD CARE ON CORD SEPARATION TIME IN HEALTHY NEWBORNS

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Background Umbilical cord infection (omphalitis) is a major cause of neonatal mortality and morbidity in developing country like Nepal. Detached umbilical stump is an important colonizing site for different types of bacteria and it also provides direct access to blood stream. Inadequate cord care may lead to omphalitis as well as neonatal sepsis. This study compares 2 cord care regimens.

Objectives General: To compare two different cord care regimens (dry cord care vs chlorhexidine)

Specific:

- To evaluate the cord separation time in both regimens.
- To find out the incidence of omphalitis

Methods Comparative observational study carried out in over a three month period of August 2019 to October 2019 in a tertiary hospital after receiving ethical clearance.

Study population consisted of healthy neonates born between 37–42 weeks. Consent was taken from parents. Babies admitted to NICU, with any umbilical disorders or requiring umbilical catheterization were excluded.

Babies were randomized in two groups dry cord care (group I) and chlorhexidine care (group II) via computer generated numbers. In group I after delivery, umbilical cord was kept dry and nothing was applied. In group II 4% chlorhexidine gluconate gel was applied once on the umbilical cord immediately after cutting.

In both the groups parents were counseled to avoid unhygienic cord care practices.

Sample size : 280

Personal data of the mother and the newborn's were recorded. A questionnaire was administered on regular neonatal follow up at well baby clinic or by phone on 15 days of life.

256 babies enrolled in group I as 24 babies did not follow up and 258 babies were enrolled in group II as 22 babies were lost to follow up.

Results 730 babies were delivered over three months period and 514 babies were enrolled. Among them 313 (60%) males.

Mean birth weight - 3057±443 grams, mean gestational age - 38.63±1.0 weeks, Mean maternal age - 27.2 years.

Abstract 100 Table 1 Showing basic demographics

	Dry cord care group	Chlorhexidine group	P value
Number of participants	256	258	
Birth Weight in gram(mean ±SD)	3048.75±453	3066.78±434	0.795
Gestational age at birth weeks	38.67±1.0	38.59±1.0	0.312
Male	148(57.8%)	165(64%)	0.175
Female	108(42.2%)	93(36%)	
Vaginal delivery	101 (39.5%)	116 (45%)	0.212
Caesarean section	155 (60.5%)	142 (55%)	
Maternal age (years)	27.04±3.2	27.44±3	0.103
Primiparous	139 (54.3%)	132(51.2%)	0.481
Multiparous	117(45.7%)	126(48.8%)	

Abstract 100 Table 2 Comparison of cord separation time and umbilical sepsis

	Dry cord care	Chlorhexidine	P value
Number	256	258	
Cord separation in days	7.70±1.2 (range 3–15)	7.77±1.4(range 4–18)	0.759
Omphalitis	0	0	

The key clinical and epidemiologic features of the two study groups are shown in table 1.

Both groups were comparable. mean cord separation time in dry cord care group was 7.70±1.2 days, and in chlorhexidine group it was 7.77±1.4 days. There was no significant difference between these two regimens. None of the newborns developed umbilical sepsis.

Conclusions There was no significant difference between the cord separation times in both cord care regimens. Both dry cord care and chlorhexidine cord care regimens were found to be safe and effective.

COMPARATIVE ANALYSIS OF VITAL CAPACITIES OF ATHLETES, SINGERS AND OTHER STUDENTS OF AGE 13–14 YEARS- A CROSS-SECTIONAL, OBSERVATIONAL STUDY

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Background Oxygen is vital for all bodily functions. Larger the vital capacity, more efficiently the body can distribute oxygen. A survey observed that more than a third of school children in four big cities of India suffer from reduced lung capacity, with Delhi showing the worst results. Poor air quality has been implicated for it.

Objectives With the hypothesis that playing sports and developing hobbies like singing could improve vital capacity and ability to tolerate air pollution, we compared the vital capacities of athletes, singers, and other students of 13–14 years with the objective of correlating the effect of exercise and singing on the pulmonary functions.

Methods The study was conducted over a period of 3 months in Springdales school on a sample size of 60 students divided in 3 groups of 20. Equal numbers of boys and girls of same age group were taken. Vital capacity of following groups was measured by Student's spirometer

Group A: athletes who have been actively participating in sports over the last one year,

Group S : singers who have been a part of the school choir over the last one year,

Group Non AS non-athletes, non singers.

After taking Informed consent and brief history, weight, height and vital capacity were measured. Quantitative variables were compared using unpaired t-test/Mann-Whitney Test and qualitative variables using Chi-Square test/Fisher's exact test. Univariate linear regression was used to identify significant factors affecting lung capacity. A p-value of less than 0.05 was considered statistically significant.

Results Anthropometric data was matched with spirometric parameter. Athletes (3452.5±696.7 cm³) and singers (3015 ±346.83 cm³) had significantly higher vital capacity than the control group (2625±543.74 cm³). The vital capacities of