

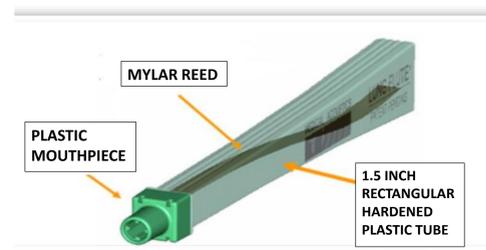
ADJUNCT TREATMENT OF PNEUMONIA IN CHILDREN 6-18 YEARS OLD USING A HAND HELD SPUTUM INDUCTION DEVICE

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INTRODUCTION

Pneumonia is consistently a leading cause of morbidity and mortality in the Philippines ¹. Treatment is mainly therapeutic depending on the cause. Lung Flute is a safe, hand device that helps in the effective induction of sputum ⁷.



The objective of this study is to evaluate the effectiveness of Lung Flute in sputum induction for relief of cough in children 6-18 years old admitted for Pediatric Community Acquired Pneumonia (PCAP) PCAP B and PCAP C.

METHODS

Children ages 6-18 years old admitted with a diagnosis of PCAP B or PCAP C were included. Patients diagnosed with PCAP A, PCAP D and hyperreactive airway were excluded. Each subject was enrolled to Lung Flute group or Control group by systematic randomization. Patients in the Lung Flute group used Lung Flute 3x a day in addition to the treatment provided by the physician. Pretested questionnaire on cough was answered by both groups. McNemar test was used.



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RESULTS

Of the 35 subjects (CI 80%, alpha error .05), there were more males than females (19:16) with a mean age of 9 years old (6-18 yrs old). There were more PCAP B than PCAP C patients in both the lung flute group (11:4) and the control group (17:3). In the Lung Flute group, frequency of cough improved on Day 2 (p value 0.049, Table 1), and quality of cough improved on Day 2 (p value 0.003, Table 2) and Day 3 (p value 0.023, Table 2). There was significant improvement in the quality of life on Days 1 and 2 (Table 3). Effective sputum induction was earlier noted in the Lung Flute group.

Table 1

Proportion of patients still with frequent cough	Control group	Lung Flute group	p value
Day 2	5/9	2/12	.049
Day 3	3/20	0/15	.060

Table 2

Proportion of patients "with improvement" on quality of cough	Control group	Lung Flute group	p value
Day 2	3/20	9/15	.003
Day 3	13/20	14/15	.023

Table 3

Parameters	Control group (Day 1 vs Day 2) p value	Overall (Day 1 vs Day 2) p value
Did the cough affect your child's sleep?	.063	.0005
Did the cough trigger difficulty of breathing?	.250	.0020
Did the cough interfere with usual activities?	.002	.0000

CONCLUSION

Lung Flute is an effective device in promoting sputum induction and may someday be used as an adjunct in the treatment of pneumonia.

BIBLIOGRAPHY

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