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

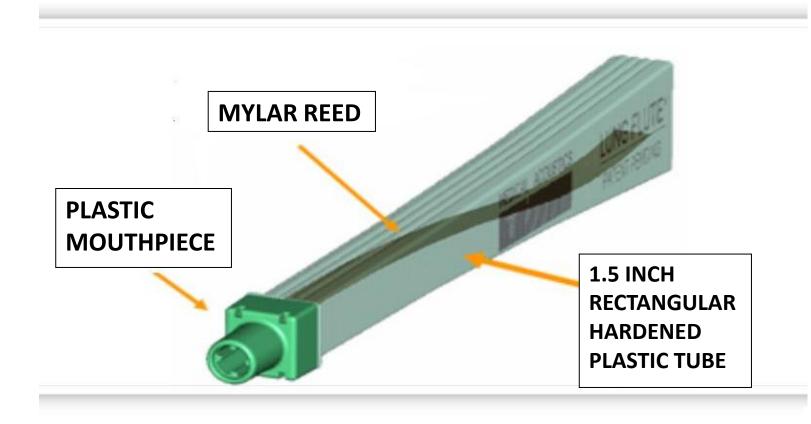
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INTRODUCTION

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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