SAFETY AND EFFICACY OF MANUAL VENTILATION AS COMPARED TO MECHANICAL VENTILATION IN COMMON KRAIT ENVENOMATION

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Introduction: Indian common krait is the commonest cause of neuroparalytic sneak bite at our institute. In this study, we looked at the mortality in patients ventilated manually (using AMBU bag) and mechanical ventilators.

Subjects and methods: The prospective cohort study was conducted in the emergency medicine department of our hospital. All the patients presenting with neuroparalysis without local signs and symptoms following snake bite were included in the study from January to December, 2010. Data extracted included demographic details like age, sex, the time of snake bite, site of bite, symptoms and signs, need for ventilation, type and duration of ventilation, duration of the hospital stay and final outcome were noted. Data was presented as numbers, percentages, mean±SD and median (IQR). Logistic regression and univariate analysis were used to predict the effect of various confounding factors on the outcome and duration of hospital stay, respectively. P value <0.05 was considered statistically significant.

Results: 69 patients presented with neuroparalytic snake bite during this period. 78.3% victims were males. Mean age was 29±3.5 years (age range 19-58 years). Identical representation of the study population from urban and rural areas was noted. More than half of the patients were illiterate and were labourers. 85% were bitten during the night time between 8 pm till 8 am. 68% patients were bitten between 2 am till 8 am and 17% were bitten between 8 pm and 2 am. The most common site of bite was upper limb (32%) followed by lower limb (29%). Out of 69 patients, 90% required ventilation. 39% were manually ventilated by AMBU bag, 50% were mechanically ventilated with 37% mechanical ventilated within 12 hours of admission and 13% mechanically ventilated after an initial period of >24 hours of bag ventilation. Over all mortality was 8.7% with 88.4% patients improving, 2 patients did not complete treatment left against medical advise. 7.4% (2/27) patients died in manual ventilation group while 8.5% (3/35) mechanically ventilated patients died (p=0.076). No major complications were noted in either group.

Conclusion: Manual ventilation was as safe and effective as mechanical ventilation in neuroparalysis following common krait envenomation.