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## AIM

The aim of the study is to determine the clinical usefulness of pressure support ventilation in children breathing spontaneously with a Proseal LMA.

## Patients and Methods

We studied 100 ASA I patients, from 1 year to 12 years scheduled for surgery under combined general and regional anaesthesia with Proseal LMA. All the patients were ventilated with positive end expiratory pressure (PEEP) of 4cm H<sub>2</sub>O, the minimum flow triggering without auto-triggering and the minimum level of pressure support above PEEP to obtain a 10ml/kg of tidal volume. During our study the following variables were recorded: level of pressure support required, flow-trigger, pulmonary compliance, airway resistance, EtCO<sub>2</sub>, oxygen saturation, heart rate and noninvasive blood pressure. The respiratory parameters were collected using a side stream spirometry module with Pedi lite and D-lite supplied by Datex-Ohmeda. We also monitored the comfort of the surgeon, recovery of the patients and usefulness of PSV during the entire period of anaesthesia and at the end of the surgery.

## Discussion

The PSV mode is an invaluable addition to the practice of anaesthesia. The use of PSV allows patients to breathe spontaneously while reducing the patient's work of breathing especially in children. Though Pressure Support Ventilation (PSV) has been available in the intensive care setting since 1981, it has only recently become available for use during general anaesthesia. The Proseal LMA, coupled with newer anaesthetic agents has encouraged clinicians to allow patients to breathe spontaneously supported by the Pressure Support Ventilation.

## Results

Our study showed that PSV incorporated into an anaesthesia workstation with a circle absorber and flow triggering can be used in spontaneously breathing children, aged 1 year to 12 years undergoing various surgical procedures.

## Conclusion

We conclude that PSV with a Proseal LMA provided by an anaesthesia workstation with a flow triggering is an effective, safe and easy ventilation mode in children to maintain their spontaneous effort.

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