CONTRAINdications to NIV

There are no absolute contraindications to NIV (Elliot, 2005) although guidelines do suggest very careful consideration with certain groups. Cautions associated with NIV are listed in Box 3.

SELECTING EQUIPMENT

There are numerous ventilators available to deliver NIV but selecting one model for use across a hospital simplifies training, makes it easier for staff and reduces the risk of errors as staff are familiar with equipment.

Optimising medical treatment

It is essential to optimise medical treatment, such as bronchodilators and steroids (for managing COPD), and carry out blood tests, including blood gases, and chest X-rays before considering NIV. Other treatments may be needed, such as antibiotics to treat infection or diuretics for pulmonary oedema.

Oxygen must be titrated to maintain a target saturation (SpO₂) of 88-92%. This ensures adequate hypoxaemia treatment while minimising the risk of high oxygen concentrations increasing hypercapnia and worsening acidosis. Reducing oxygen concentrations to achieve this target is likely to improve acidosis and may exclude the need for NIV (BTS Emergency Oxygen Guidelines Group, 2008).

Patients presenting with a critical illness should be treated with high concentrations of oxygen until stable and re-evaluated at the earliest opportunity. Repeat blood gas should demonstrate a respiratory acidosis before proceeding with NIV.

PATIENT MONITORING

Nurses must monitor patients’ respiratory rate, level of consciousness, chest movement and accessory muscle use and comfort every 15 minutes after NIV starts; this frequency can be reduced as their condition improves.

Pulse oximetry and electrocardiogram monitoring should be continuous for the first 12 hours. Blood gases must be taken one hour after starting NIV, after setting changes and then every 4-6 hours once patients are stable. It is important to monitor for leaks around the mask and that patients’ breathing and the ventilator are synchronous.

DISCONTINUING NIV

NIV should be continuous for the first 24 hours with short breaks to eat, drink, attend to hygiene needs or receive other treatments. It is helpful to discontinue NIV during the day as patients are more vulnerable to deterioration at night. Sometimes weaning may take a number of days. A small number of patients who are repeatedly admitted for AHRF may need to be assessed for home NIV (BTS Standards of Care Committee, 2002).

CONCLUSION

Nurses on acute wards have an important role in providing acute NIV for the treatment of AHRF. Setting up a well run service with good support structures, local protocols, audit and training on the essential components is crucial. Adequate resources are important but there is no method to calculate minimum staffing levels required.

REFERENCES


**CONCLUSION**

Nurses on acute wards have an important role in providing acute NIV for the treatment of AHRF. Setting up a well run service with good support structures, local protocols, audit and training on the essential components is crucial. Adequate resources are important but there is no method to calculate minimum staffing levels required.

**REFERENCES**


