Position Statement:

**USE OF CARBON DIOXIDE FOR INSUFFLATION DURING ENDOSCOPIC PROCEDURES.**

DATE APPROVED: __________________________

REVISION DATE: __________________________

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**Position**

The Canadian Society of Gastroenterology Nurses and Associates supports the position that health care professionals (HCP) working in the collaborative environment of Endoscopy are knowledgeable and can demonstrate competency in assisting with the use of carbon dioxide for insufflation during endoscopic procedures.

**Background**

The safety of carbon dioxide has been documented as it has been used during laparoscopic surgery for many years, and was first indicated in colonic procedures in 1953. While the use of
CARBON DIOXIDE INSUFFLATION

Carbon dioxide insufflation is the standard of practice at some centers in Canada, most centers have been slow to adopt the use of C02. The short term cost implications (equipment and C02) is higher, however long-term cost implications are lower due to a decrease in procedure complications, decrease in procedure length, a decrease in the need for additional sedation, and a decrease in intra-procedure and post procedure bowel distention and discomfort. Carbon dioxide is absorbed quickly through the intestinal mucosa and expelled through the respiratory system. C02 is nonflammable and is absorbed 160 times more rapidly than nitrogen and 13 times more rapidly than oxygen. Other benefits include, a risk reduction of colonic explosion especially if electrocautery is used. There have been little studies in examining the use of C02 insufflation in patients with significant respiratory disease such as COPD.

Recommendations

1. Caution use of C02 insufflation in those with severe respiratory or cardiac compromise, high opioid analgesic users as they are known to have higher baseline pC02 levels. Patients with chronic obstructive lung disease are at a higher risk of hypercapnia.

2. C02 is favorable for lengthy procedures, or in the case of patients with irritable bowel syndrome, avoiding overextension of the colon.

3. Documentation of C02 use is recommended on the theatre record and may include C02 start and end time, and the flow rate used.

4. It has been noted that using C02 insufflation with capnography monitoring will demonstrate a mild increase of C02 levels on the waveform.
References


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