Tracheal Compression

Purpose

To standardize the utilization of Tracheal compression as a therapeutic adjunct to elicit a reflexive cough mechanic in the patient to improve Tracheal-Bronchial toilet.

Policy

Accountabilities/Training
Tracheal compression may be administered by a Licensed Respiratory Care Practitioner trained in the proper procedure with understanding of age specific requirements of patient population treated.

Physician's Order

A written order by a physician is required and must specify:

- Tracheal compression as needed to induce cough.
- Tracheal stimulation/suction with O_2 order includes tracheal compression as well as suction catheter technique.
- Frequency of therapy.

If no written order is provided, and tracheal compression is indicated, a written order must be obtained from a physician.

Indications

This technique is indicated in any patient in whom voluntary effort is ineffective.

Contra-indications

Tracheal compression is contraindicated in patients with:

- Significantly enlarged thyroid - check with M.D.
- Hematoma in area of compression point.
- Recent tracheal surgery (tracheostomy, etc).

In patients with the following disorders, the physician should be consulted before tracheal compression is attempted:

- Recent neck surgery.
- Recent mediastinoscopy.
- Old tracheal trauma or surgery.
- Tracheal malacia.
- Easily bruised.
- Known carotid blockages or carotid compression hypersensitivity (e.g., patient with transient ischemic attacks).

Once attempted, tracheal compression should be discontinued if:

- There is unusual pain elicited.
- A rigid tracheal is found.
- No cough or no improvement over voluntary cough is elicited.

It is not necessary in patient’s known to have significantly decreased or absent cough reflex.

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Goals

To elicit an effective cough in a patient whose voluntary cough is ineffective.

To evaluate the patient's voluntary effort as compared to reflexive cough effort.

To educate the patient as to the strength of cough necessary to clear the lungs, then encourage voluntary effort toward that.

To provide safe, brief, effective, and informative therapy.

Procedure

Step	Action
1	Check patient's chart for orders and current status; check with physician.
2	Wash hands.
3	• Observe patient. • Position patient in sitting position or as allowed by condition, with incision braced as necessary. • Auscultate chest. • Demonstrate deep breath/cough technique. • Have patient mimic cough (voluntary cough effort).
4	If patient's voluntary effort is inadequate, explain tracheal compression technique and rationale to patient briefly. (e.g., "I am going to press your neck (or windpipe) to stimulate an automatic cough. It may be a little uncomfortable, but hopefully, it will stimulate a stronger cough than what you are doing on your own.")
5	Gently extend patient's neck, keep head mid-line, and provide head support.
6	Locate trachea with first and second fingers in areas of larynx. Then gently slide fingers down tracheal to mobile area of trachea just above the suprasternal notch.
Note:	In older patients the larynx may be low within the suprasternal notch. If this occurs, gently lift the larynx with your two fingers and place them below the level of the larynx against the trachea.
7	Apply firm but gentle pressure to the trachea displacing it posteriorly. Encourage patient to cough.

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Procedure Continued

Step	Action
Note:	Avoid moving fingers downward against trachea as this will elicit swallow reflex and avoid moving fingers upward toward larynx as this may cause unnecessary pain.
8	If any contraindications to the therapy are discovered at this time, discontinue therapy.
9	Note effectiveness of cough and sputum production.
10	Auscultate chest.
11	Repeat procedure as necessary.
12	Record pertinent data in the Respiratory Care Service flow sheet and on the RCS Treatment Card, per RCS Policies # 7.1.1 and # 7.1.2.

Discontinuation of Orders

Patients with orders by Respiratory Therapist will be evaluated after every treatment. A complete pulmonary assessment will be done every 72 hours as indicated. Based on the assessment the therapist will make recommendations for changes in therapy or discontinuance as needed.

Undesireable Side Effects

Pain: This procedure should not prove excessively painful to the patient. If it elicits excessive pain, the procedure should be discontinued and physician should be notified.
Hematoma: It is possible to cause a hematoma around the compression point. If this occurs, the therapy is to be discontinued and physician notified.

Assessment of Outcomes

Amount and character of sputum; breath sound, sound of cough effort (voluntary vs. reflexive in terms of strength, clarity and flow); chest x-ray.

Infection Control

Follow procedures outlined in Healthcare Epidemiology Policies and Procedures #2.24; Respiratory Care Services
http://www.utmb.edu/policy/hcepidem/search/02-24.pdf

Patient Teaching

Instruct the patient as follows:

Explain to the patient why tracheal compression is given. Relate it to injury or disease state.

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Patient Teaching Continued

Teach the patient to cough effectively - to note the difference between voluntary and reflex cough effort, and to work toward best cough.

- If the patient appears semi or unconscious, briefly tell what you are going to do and why, then perform therapy.

As a result of the educational aspects of this therapy, the alert, oriented patient should be able to verbalize and demonstrate understanding of this therapy.

Infection Control

Follow procedures outlined in Healthcare Epidemiology Policies and Procedures #2.24; Respiratory Care Services.
http://www.utmb.edu/policy/hcepidem/search/02-24.pdf

Correspond-ing Policies

Respiratory Care Services Policy # 4.4.4; Patient/Family Education

References

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