



Emergency Medicine/Trauma

A Cervical Collar that Ensures an Open Airway

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Background

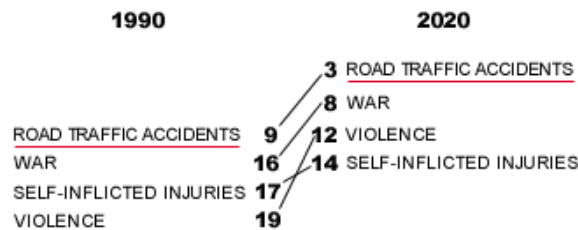
In emergency medicine and the treatment of trauma patients, it is often necessary to prevent movement of the vertebrae of the cervical spine, thereby protecting the spinal cord and preventing injury that can result in partial or complete paralysis or even death. Trauma patients might lose consciousness and thus the ability to maintain open airway and respiration. There are several invasive medical devices to maintain open airway, all of which might stimulate the gag reflex of the patient, causing him to vomit or try to pull out the device. The non-invasive way to open the airway of the trauma patient is by executing the jaw thrust maneuver (manually pulling the chin outwards, away from the skull).

There are various cervical collars that protect the cervical spine, but there is no medical device that combines protection of the cervical spine and opening the airway with the non-invasive jaw thrust maneuver.

Market

International Injury Statistics

Road traffic injuries are expected to take third place in the rank order of disease burden by the year 2020.



Worldwide: The WHO reports that 38,848,625 injuries were received by people involved in motor vehicle accidents in 1998.

Europe: In 1995, according to a 1998 World Health Organization Press Release, two million traffic accidents resulted in 120,000 deaths and 2.5 million injured people in the whole European region.

The Innovation

This invention is a non-invasive medical device that enables stabilization of the cervical spine and at the same time maintains an open airway. It is a cervical collar adapted for airway maintenance with cervical spine control for treating the pre-hospital trauma patient.

The device simultaneously protects the neck by restricting the movement of the head against the rest of the body, maintaining cervical spine control whilst maintaining an open airway in a non-invasive manner that is both simple and fast to operate. It consists of a “jaw-thrust”-like knob maneuvering the mandibles, pushing them forward towards the direction of the chin.

Main Advantages:

- **“Scoop and run”** - for unconscious patients and “unpredictable” spontaneous-breathing patients
- **Fast airway protection** enables the caregiver to address other urgent problems in the treated patient or in other patients in multi-trauma situations
- **Drugless** - preventing the iatrogenic deterioration of the consciousness level of the patient in order to take control of his airway by an invasive airway device
- **Enables cervical spine control** while performing invasive airway insertion
- **Requires minimal pre-training** to first-aid givers

R&D Program

A prototype has been developed and a clinical trial has been initiated.

Contact

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