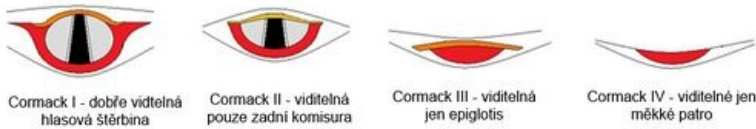


Difficult intubation



Definition

- A condition where we need more than three attempts for routine laryngoscopy and intubation or it takes more than 10 minutes.
- Difficult laryngoscopy: if the structures of the larynx visible during ordinary laryngoscopy are not visible or identifiable.
 - Incidence approximately 0.5-5%.
 - Evaluation using the Cormack and Lehane (1984) score of values I-IV
 - **Cormack I** - vocal cords are clearly visible;
 - **Cormack II** - only posterior edge of glottis visible;
 - **Cormack III** - only epiglottis visible;
 - **Cormack IV** - only soft palate visible (epiglottis not visible).

When can we expect difficult intubation?

Difficult intubation is expected in patients with the following diagnoses and anatomical conditions:

- Pregnancy,
- limited mobility of the cervical spine (e.g. Morbus Bechtěrev, limited mobility of the cervical spine),
- monstrous goiter, elongated trachea,
- overbite or protruding incisors,
- epiglottitis,
- macroglossia and acromegaly,
- small oral cavity (under 2 cm when maximally open),
- anatomical variants, tumors in the neck area, injuries to the neck and face,
- conditions after irradiation of the larynx,
- burns.

Clinical assessment of difficult intubation during preoperative examination



- Thorough anamnesis - focused on diseases or traumas in the neck and cervical spine and ENT area.
- Previous successful or failed intubations in previous surgeries.
- Evaluation according to **Mallampati**: aspect of the oral cavity and visibility of individual structures. Well visible are:
 1. soft palate, back wall of the pharynx, uvula, anterior and posterior palatine arch;
 2. soft palate, back wall of the pharynx, uvula;
 3. soft palate, base of uvula;
 4. soft palate only difficult to see.

Procedure for difficult intubation



Equipment for intubation, hose on top, air duct in the middle

If intubation is **expected to be difficult** we can perform **elective fiberoptic intubation while conscious**, or if the expected risk is lower, we can primarily prepare a video laryngoscope or other aids.

In case of **unexpectedly difficult intubation**, we can use the following procedures:

- A maximum of two to three attempts – positioning the patient's head, using different laryngoscopic spoons, using a tube guide (**buje**), pressure on the thyroid cartilage (**Sellick's maneuver**). We should change something every time we try.
- If we do not intubate the patient after three attempts, we continue to ventilate and **call for the help** of a more experienced colleague in time.
- **Avideolaryngoscope** can be used for intubation.
- If even a colleague fails, we will try to introduce a laryngeal mask or other device to secure the airways (we will assess whether it is appropriate to conduct the entire anesthesia with the pathways secured in this way; if so, we continue further, if not, we take the patient out of anesthesia).
 - It is also possible to try to insert an intubation cannula through the supraglottic device, either directly or with the help of a fiberoptic.
- **Air ducts** can be used when mask ventilation is difficult.
- **Can ventilate, can't intubate** if you can breathe with a mask, but you can't intubate, although it is necessary and the operation is urgent, we have to intubate with a flexible bronchoscope.
- ⚠ is an acute life-threatening condition, we cannot intubate the patient or ventilate with a mask (attempts to intubate and insert a laryngeal mask failed, the patient cannot be breathed even with a mask), we immediately call the team to perform a tracheotomy, or perform **coniotomy**.

Links

related articles

- Securing the airway
- Endotracheal intubation
- Coniotomy
- Tracheostomy

External links

- Difficult airway management - interactive algorithm + test (<https://www.akutne.cz/algorithm/cs/187--/>)
- Management of unexpected difficult intubation (<https://www.akutne.cz/algorithm/cs/19--/>)
- Predikce obtížného zajištění dýchacích cest, možnosti a algoritmy (<https://www.akutne.cz/res/publikace/2-predikce-obt-n-ho-zaji-n-d-ac-ch-cest-mo-nosti-a-algoritmy.pdf>) - LF MU, Akutně.cz

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