

Indirect laryngoscopy

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Contraindications

Caution is needed in suspected cases of acute epiglottitis; however, in 1 *adult* study,¹ no cases of acute laryngospasm were provoked.

Applications

Visualization of the vocal cords and glottis—including upper tracheal rings, larynx, and hypopharynx—in cases of unexplained dysphonia or hoarseness, foreign body sensation, or dysphagia.

Equipment necessary

- Laryngeal mirror, size 4 or 5 (or dental mirror)
- Adequate lighting, ideally a strong headlight
- Gauze sponges
- Local anesthetic (spray or viscous solution)
- Protective eye wear
- Alcohol lamp or hot water

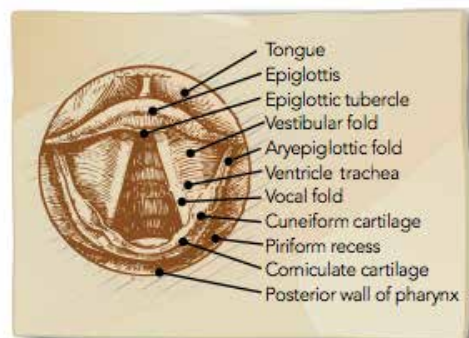
Set-up

This procedure works best in a brightly lit room, so turn on all lighting. Use a headlight or mirror light to direct light parallel to your field of vision. Warm the mirror over an alcohol lamp or with warm water to prevent fogging.

The patient should be sitting upright with a straight back, leaning slightly toward you with chin pointing upward (“sniffing position”). Sit to the patient’s side, and be higher than the patient. Apply anesthetic to the patient’s pharynx and ask patient to gargle and spit. Test the temperature of the mirror before commencing the procedure to ensure it is not dangerously hot.

Procedure

1. Ask the patient to relax and to stick out his or her tongue. Cover the tongue in gauze and pull it with the thumb and middle finger of your nondominant hand. Your index finger should be free to lift up the upper lip if necessary.
2. With the patient breathing in and out, direct the mirror into the mouth and toward the back of the throat, making sure the glass side is downward. When at the back of the throat, press the mirror upward, against the uvula and soft palate. Avoid the gag reflex by not touching the posterior pharyngeal wall or tongue base. Slightly alter the mirror and try various angles to visualize the desired structures. Ensure the patient’s head, chin, and body are still in the correct position.
3. Make sure the patient is breathing in and out. Take note of the vocal cords while they are at rest. Then ask the patient to make a loud sound and watch the vocal



cord activity. If the mirror begins to fog up, reheat it and repeat from step 1.

Evidence

Although expert opinion and small studies support either indirect or video (direct) laryngoscopy to investigate hoarseness² or foreign body ingestion,³ a well-designed study⁴ confirmed that video laryngoscopy was superior in terms of visualization and patient comfort. However, it is not available in all settings.

Diagnostic confirmation

The epiglottis should be slightly curved and have a regular upper edge (sometimes acutely curved and conical). It might bend backward and obscure the view of the vocal cords in the relaxed state or hang forward to hide the valleculae. Note the colour (normal is pearly white), movement (restrictions), surface (ulcerations), and edge (irregularities) of the vocal cords. If the anterior commissure is not visible, apply gentle posterior pressure onto the exterior thyroid cartilage. Patients with any worrisome findings or high-risk patients (eg, smokers) with persistent symptoms should be referred to an ears, nose, and throat specialist for video laryngoscopy.

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References

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4. Dunklebarger J, Rhee D, Kim S, Ferguson B. Video rigid laryngeal endoscopy compared to laryngeal mirror examination: an assessment of patient comfort and clinical visualization. *Laryngoscope* 2009;119(2):269-271.



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