anesthesia had been achieved, ability to mask ventilate was judged using assisted ventilation, and propofol 30 mg with fentanyl 50 mcg were given intravenously. Oropharynx was topically anesthetized with 2 puffs of 10% lignocaine spray. Laryngoscopy with left molar approach was done using Macintosh blade #3 and after visualizing the glottis, the trachea successfully intubated with a 7 mm ID endotracheal tube. The peri-operative period was uneventful.

Our backup plan was maintaining anesthesia using inhalational agents with the help of nasopharyngeal airway through left nostril and intubating the trachea using left molar approach of laryngoscopy. Another plan was maintaining anesthesia using inhalational agents with the help of pediatric size endotracheal tube through right nostril after nasal decongestion and lubrication of the passage and intubating the trachea using fiberscope through other nostril. If this would not have been possible, we would have awakened the patient and counseled her to accept awake intubation later.

Rendell Baker Soucek mask is used in pediatric patients because of good seal around contours of cheek and chin. The use of the mask for ventilation through mouth only, in a patient with nasal tumor, has been described. The design of the mask can affect the effectiveness of ventilation. Transparent disposable masks with cushion rims are most commonly used in anesthesia today. It is crucial to obtain a tight seal with the mask to prevent leaks. Leaks may result from an improperly-inflated cushion, improper mask size, presence of beard or abnormal facial anatomy. In this case, abnormal facial anatomy was responsible for ineffective ventilation with facemask. The ability to achieve adequate mask ventilation should always thus be assessed pre-operatively. In patients with expected difficult mask ventilation, the safest approach is to plan for an awake intubation. Flexible fiberoptic laryngoscopy is an effective tool for managing a difficult airway.

Left molar approach of laryngoscopy has been advocated in cases of difficult intubation, which is an unconventional technique, in which the blade is inserted from the left corner of the mouth. This approach has been shown to provide a better view of the glottis than the conventional midline approach in cases of difficult intubation. We used this approach because only the left half of the mouth could be opened. Difficulties of left molar approach are requirement of a stylet and less availability of space. Despite improved laryngeal view, negotiation of tube may be difficult.

The use of the laryngeal mask airway and other supraglottic devices like combitube, laryngeal tube should be encouraged when facemask ventilation is difficult. These options were not possible in our case as only the left half of the mouth could be opened. Trans-tracheal jet ventilation may be considered when supraglottic ventilation devices fail, but the operator must be familiar with its use.

If all other measures fail to establish ventilation, cricothyrotomy or tracheostomy may be life-saving.

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Post-operative unmasked bilateral vocal cord palsy attributed to pre-operative radiotherapy

Dear Editor,
Radiotherapy used in head and neck cancers is capable of...
causing vocal cord palsy. Any associated surgical damage to other vocal cord can cause severe obstruction in the post-operative period. Pre-operatively, unilateral vocal cord palsy may only present as minor voice change, and this symptom is often attributed to primary pathology, for which patient received radiotherapy.

A 40-kg, 38-year-old man was scheduled for right-sided radical neck dissection for non-keratinizing carcinoma of nasopharynx \(T_2N_1M_0\). He had received 3 cycles of chemotherapy followed by radiotherapy (70 Gy in 30 fractions) 6 months earlier. Pre-operatively, he reported upper respiratory tract infection with mucopurulent sputum 6 weeks ago, which resolved after antibiotics and anti-histamines. There was no history of any other systemic illness. Systemic and airway examination was unremarkable.

Anesthesia was induced as per routine protocols, and no gross abnormality was noted in vocal cord position during laryngoscopy. Surgery lasted for 4.5 hours, after which neuromuscular blockade was reversed, and trachea was extubated at a Train of Four ratio of 0.9. Within 2 minutes of extubation, patient developed respiratory distress with tachycardia and desaturation. Respiratory distress continued to worsen with time, and the oxygen saturation (\(\text{SpO}_2\)) dropped to 82% despite administering 100% oxygen. The patient was fully awake with no signs suggestive of residual opioid effects or neuro-muscular blockade. The patient’s trachea was re-intubated; subsequently, oxygen saturation rose to 100% on IPPV. He was shifted to the intensive care unit for further management.

As he could generate adequate tidal volume, he was allowed to breathe spontaneously with a continuous positive airway pressure of 5 cm of \(H_2O\) on a 0.5 inspired oxygen fraction. Overnight elective ventilation was planned; his biochemical, hematological investigations, and chest X-ray were normal. After tracheal extubation the next day, he again developed labored breathing, chest retractions, was unable to vocalize, and \(\text{SpO}_2\) fell to 90% in 10 minutes despite oxygen supplementation. Fiberoptic bronchoscopy showed bilateral vocal cord palsy without any apparent edema. The surgical team denied any possibility of surgical damage to left cord, as surgery was limited to right side only. A tracheostomy was done.

Pre-operatively, patient had no history suggestive of vocal cord paralysis, although such a condition can be present without any symptoms. Neoplasms of nasopharynx can cause vocal cord palsy due to anatomical involvement of Vagus nerve of same side. The incidence of cranial nerve palsy after radiotherapy of the head and neck region is around 3%\(^,[1,4]\) Delayed recurrent laryngeal nerve involvement due to radiotherapy (>12 month) has already been reported.\(^,[1,5]\)

Bilateral vocal cord palsies can also occur after prolonged intubation though unilateral palsy is more common but is unlikely after only 4.5 hours of intubation.\(^,[6]\) Idiopathic vocal cord paralysis is also seen after herpes infections and can remain asymptomatic with minor voice change.\(^,[4]\) Our patient had history of recent upper respiratory tract infection bacterial (muco-purulent) but did not have its sequelae. It is likely that our patient developed unilateral vocal cord paralysis following radiotherapy, and the surgical trauma lead to paralysis of the right vocal cord, which resulted in respiratory distress in the post-operative period.

We recommend that a routine pre-operative indirect laryngoscopy to be done in patients for neck surgery receiving radiotherapy in the head and neck region. This small intervention can avoid catastrophic post-operative obstruction. Both the surgeon and anesthesiologist can later be blamed to have caused the palsy.

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Dear Editor,

We report a case of incidental internal jugular vein (IJV) thrombosis in a patient presenting for aneurysm clipping and its implications for anesthesiologist. A 67-year-old female, weighing 55 kg, presented with sudden onset throbbing headache and vomiting. Computed tomography (CT) revealed subarachnoid hemorrhage. CT Angiogram showed a right posterior communicating artery aneurysm measuring 8 mm × 9 mm in size. Her coagulation profile was normal and she did not have any known risk factors for deep vein thrombosis (DVT). She was scheduled for a right pterional craniotomy and aneurysm clipping with neck control of right internal carotid artery.

After establishing baseline monitoring, invasive arterial line was secured under local anesthesia. General anesthesia was induced with propofol and fentanyl and endotracheal intubation was facilitated using vecuronium. Anesthesia was maintained with sevoflurane in oxygen and air. Due to surgical requirement, central venous cannulation was planned on the left side (IJV). Ultrasound was used (Site Rite® Ultrasound System, Bard Limited) to guide cannulation, which revealed a non-compressible hyper echoic lesion partially occluding the lumen of the left IJV [Figure 1a]. Screening of the right IJV revealed a patent lumen [Figure 1b]. Screening of bilateral subclavian vein was difficult. Hence, a peripherally inserted central cannula (PICC) was placed through the right brachial vein. The surgery was uneventful and patient recovered well.

Gbaigudi et al. [1] have shown that among all cases of DVT, IJV thrombosis occurs in 1.5% and can be bilateral in 15% of cases. Female gender, elderly age group and prior central venous catheterization are associated with increased incidence. Spontaneous IJV thrombosis found incidentally can be asymptomatic because of adequate collateral circulation with high venous flow rate. [2] However, it can complicate as septic embolism, pulmonary embolism, elevated intracranial pressure or intracranial venous thrombosis. [3,4]

Sub-arachnoid hemorrhage (SAH) induces a prothrombotic state with moderate risk (10-40%) for developing DVT. [5] Presence of reduced intravascular volume can further increase this risk as occurs in SAH. Routine ultrasound screening of IJV before cannulation in this patient group will avoid inadvertent cannulation of thrombosed veins, which can result in dislodgement of thrombus, hemodynamic instability, arrhythmias and pulmonary or systemic embolism. If IJV thrombosis is detected by ultrasound, cannulation of the contralateral IJV also needs to be avoided, as it can result in bilateral IJV thrombosis, compromised venous return from brain, venous infarct, cerebral edema, and raised intracranial pressure. The safe approach would be to cannulate the subclavian vein or a PICC as was carried out in this case.

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Figure 1:
(a) Ultrasound snapshot image demonstrating thrombus in the left internal jugular vein (IJV). (b) Ultrasound snapshot image showing a patent right IJV. Common Carotid Artery (CCA) is demonstrated adjacent to the IJV.