Sir,

Tracheostomies for morbidly obese patients can present significant challenges for both anesthesia and surgical teams. We present a case of a 44-year-old male with a body mass index (BMI) of 90 for whom creative positioning methods were needed for safe tracheostomy placement.

A 44-year-old, 285 kg man (BMI 90) was scheduled for tracheostomy for acute respiratory failure. His medical history was significant for:
1. Severe untreated obstructive sleep apnea,
2. Obesity–Hypoventilation syndrome with chronic CO\textsubscript{2} retention and home O\textsubscript{2} dependency (4 L),
3. Acute lower extremity and scrotal cellulitis, and
4. Recent cardiac arrest secondary to acute hypoxemia.

The patient was brought to the operating room and moved to the bariatric table. Head-up positioning was difficult to maintain as, despite the use of footboards, the patient slid caudally with each attempt at sitting or reverse trendelenburg position. When the patient was supine, rapid desaturation would occur. Ninety minutes were spent on attempts to find a position in which adequate oxygenation and surgical exposure could be accomplished simultaneously. When no such positioning was achieved, the procedure was aborted. The patient was transferred back to the Intensive Care Unit with the plan of optimizing his pulmonary status prior to another attempt at tracheostomy.

Ten days later, the patient returned for another attempt at tracheostomy. He was transferred to the bariatric table awake and placed in a modified beach chair position. Numerous straps were utilized to secure the patient and prevent sliding on the table. After 30 min of careful positioning, surgical exposure was still not acceptable. A chest-suspension technique was then proposed to the patient and surgical team. After short deliberation and patient consent, 1% lidocaine was infiltrated subcutaneously above the patient’s nipples bilaterally. Penetrating towel clips were then secured to the patient’s chest and suspended from the overhead beams [Figure 1]. The patient was then slowly reclined backward while the tension on the towel clips was kept constant. With his chest in suspension, lung expansion was greatly improved as was surgical exposure [Figure 2]. With the suspension, the patient was able to tolerate general anesthesia in near-supine position, and a four-flap epithelial lined tracheotomy was completed without incident. The patient was seen 9 months later and displayed a well-healed tracheostomy with no appreciable scarring from the towel clips.

While the technique of chest wall suspension for its ventilatory benefits has been practiced, as has the suspension of limbs from operating room booms for the purposes of surgical preparation, we are unaware of such a technique ever being used to facilitate both pulmonary mechanics and surgical exposure. We present a case in which creative use of a suspension technique resulted in conditions that were satisfactory to both the patient and surgeon when lengthy attempts at other positioning techniques had failed.

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I would like to acknowledge Henry Hoffman, Professor of Otolaryngology — Head and Neck Surgery, the University of Iowa Hospitals and Clinics.
Sir,

Chronic kidney disease (CKD) is a major public health problem and a leading cause of morbidity and mortality in India. Patients with the end stage renal disease (ESRD) on maintenance hemodialysis (MHD) commonly have a history of central venous catheter (CVC) insertion for hemodialysis (HD).

A 50-year-old male patient with ESRD on MHD since 2008 presented to the institute for the evaluation of living donor related renal transplantation. He was diagnosed with CKD in 2005 which progressed to ESRD in December 2008. Past history included the hypertension since 2008 and was controlled on anti hypertensive medication.

MHD was provided through a left brachio-cephalic fistula (BCF) created surgically in February 2009 that became functional only in September 2009 due to poor flow. During this 10 months, period MHD was achieved using HD double lumen catheter inserted in a right internal jugular vein (RTIJV) for 2 months and a cuffed HD catheter (penta cath) inserted in the right subclavian vein for the subsequent 7 months till the BCF became functional.

Intraoperatively after induction general anesthesia and endotracheal intubation, invasive blood pressure monitoring was achieved by cannulating the right radial artery. Central venous access was attempted under all aseptic precautions using the landmark technique on the right side. RTIJV was punctured, and venous blood aspirated, but the guide wire could not be navigated beyond 8 cm. Three separate attempts by two trained anesthesiologists using the landmark technique were unsuccessful.

RTIJV in short axis view [Figure 1] using a 10 MHz ultra sound probe did not reveal any intraluminal thrombus. Repeat puncture attempt under ultrasonography (USG) guidance was successful but still the guide wire could not be navigated beyond a distance of 8 cm.

The site of insertion was changed to the left internal jugular vein (IJV) which was cannulated in a single prick under USG guidance and guide wire navigated. A 7.5 French four-lumen silver coated CVC was inserted and fixed at the 11 cm mark after confirming the back flow in all four ports and confirmation of the CVP trace on the monitor. Surgery was uneventful, and the patient was shifted to the Intensive Care Unit. There was no oozing or hematoma formation at the CVC insertion site. Postoperatively, the patient did not report any difficulty or complication in previous CVC access before presenting to our institute.

References

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