Recognizing intraoperative complications and their timely management are essential components of anaesthetic technique. Quite often young anaesthesiologists rely on single abnormal parameter/finding to identify a complication and provide early intervention in an attempt to prevent patient morbidity. We report an interesting scenario where a curious whistling sound suggestive of airway obstruction was attributable to the capnograph adapter.

A 36-year-old ASA I male patient underwent lieno-renal shunt surgery lasting for 6 h. Following adequate reversal of neuromuscular blockade, there was an accidental disconnection of the breathing circuit from the tracheal tube and a curious high-pitched whistling sound could be heard with every inspiration. No adventitious sound had been heard previously during the 6-h intraoperative period. The possible causes for the whistling sound could have been either bronchospasm, partial obstruction due to foreign body or any leak from the circuit–tube assembly. Because the respiratory movements were unobstructed with no use of accessory muscles and the chest auscultation as well as the capnograph trace of the patient was normal, it seemed unlikely that the sound was the result of bronchospasm. Further, the airway pressure values as well as the pressure volume loops recorded during this period were within normal limits.

While searching for the source of this whistling sound, we disconnected the straight capnograph airway adapter (BCI, USA) attached to the size 8 tracheal tube. There was an immediate disappearance of the whistling sound on disconnection, which could be heard again on reattachment of the adapter. Replacement of the capnograph straight airway adapter by a right-angled portex connector did not reproduce the whistling sound. It was now evident that the capnograph adapter was the cause of the whistling sound.

A careful examination of the adapter revealed that although the outer diameter seemed uniform, there was a sharp narrowing of the internal lumen of the adapter [Figure 1a and b]. This adapter had mimicked a hollow tube type of whistle,[1] where one end is open and is used as the mouth piece to blow air. A sharp edge is present on the side of this whistle that creates a slit or opening along its midsection. When air is blown in through the open end, the smooth flow of air is split on striking the edge and creates a turbulent vortex, which sends the air whirling. This further leads to compression and then expansion of the air, which generates vibrations and makes the characteristic whistling sound.[1,2] In our case, the slot for the sampling line was similar to the sharp-edged slit, while the sudden tapering of the lumen of the adapter just before the slot added to the turbulent flow input. When attached to a resonant chamber, such as lungs in our case, it produced the high-pitched sound, creating the unusual “whistling adapter” [Figure 1c].

This incident lays emphasis on the importance of having the knowledge of various scientific principles involved with the equipment in use, which may mimic some complications such as bronchospasm in this case. This can prevent us from jeopardizing the patients with unnecessary treatment in such situations. In addition, it stresses on giving importance to the clinical evaluation of the patient as a whole and not solely on one unusual finding, like the sound of whistle mimicking spasm as in this case.
Thus equipment check along with clinical examination of the patient should be done before attempting treatment based on single abnormal parameter/finding, no matter how obvious they may be.

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