Letters to the Editor

References


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Blocked arrow central line


Sir,

Following the report of difficulty in threading the Arrow International Quin Lumen CVP line over the guidewire (1), the following letter was sent in reply from the company.

I have now received the final report from Arrow and details of modification to the catheter to address problems of inserting the catheter over the guidewire and removal of the guidewire. Unfortunately, it has taken an unacceptable period of time to receive a definitive response from Arrow. Please accept our apologies for this delay. However, following your report, modifications to the catheter are being made.

Arrow have reviewed the complaints for insertion issues and found them to be very low in comparison to increasing sales. I perused our database and found no significant trend in failures to consider that a corrective action was required at that time. However, they compared the complaints of this catheter with those of others and have decided to modify the hub of the Quin to the same design as other CVCs in their product range.

Arrow informs me that they are the only CVC manufacturer with a 5 Lm CVC which is 8.5 Fr. All other CVC manufacturers have a 5 Lm CVC which is 9 Fr. It is considered that some customers prefer to use the Arrow International 8.5 Fr catheter because it makes a slightly smaller hole in the patient. However, due to the challenge of obtaining 5 Lm in a smaller tube, the lumen for the guidewire felt tighter than with other Arrow International CVCs. Because of complaints of difficulty in removing the wire, they have been able to modify the cross section of the catheter and retain the same level of performance with respect to leak testing and flow rates while reducing the force needed to remove the guidewire to the same range as with CVCs where they have not received any negative customer feedback on guidewire withdrawal. This is of course in vitro data and Arrow expects roll-out of the new design shortly.

Once the modified Quin has been introduced, I would most appreciate it if you could inform MHRA of any further problems so that we can closely monitor the effectiveness of the modifications to this catheter.

R. Gupta

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Intubation of an infant with Pierre Robin sequence under dexmedetomidine sedation using the Shikani Optical Stylet™


Sir,

To our knowledge, the use of dexmedetomidine to facilitate awake tracheal intubation in an infant has not been reported. This case describes an infant with Pierre Robin sequence that underwent awake tracheal intubation using the Shikani Optical Stylet™ (Clarus Medical, Minneapolis, MN, USA) under dexmedetomidine sedation.

A 7-month-old 6.9 kg infant with severe gastroesophageal reflux disease (GERD), suspected nemaline rod myopathy, and Pierre Robin sequence presented for laparoscopic revision of a Nissen gastric fundoplication. On examination, generalized hypotonia, cleft palate, and micrognathia were noted. In light of the potential for encountering difficulty with tracheal intubation, we decided to pursue a sedated intubation technique that preserved spontaneous respiration. An anesthetic devoid of malignant hyperthermia triggering agents was chosen because of the suspected but unconfirmed diagnosis of nemaline rod myopathy.

The patient did not receive preanesthetic medication. Standard ASA monitors were applied upon arrival to the operating room. An intravenous catheter was placed, and 0.1 mg glycopyrrolate was administered intravenously (IV). A bolus of 7 mcg (1 mcg/kg) of dexmedetomidine was then administered IV over 10 min, followed by an infusion at 0.1 mcg/kg/h. The child became sedated and tended to sleep but was easily arousable. Her airway remained patent and her breathing unlabored. Thirty-five milligrams of 2% lidocaine (5 mcg/kg) was administered into the hyopharynx using a malleable atomizer. Three minutes later, a pediatric size Shikani Optical Stylet fitted with a 4.0 uncuffed tracheal tube was introduced orally, followed by glottic visualization. The tracheal tube was advanced through the glottis on the first attempt. Intubating conditions were excellent; coughing or gagging did not occur. Following intubation, anesthesia was induced with a propofol bolus and maintained with a propofol infusion. Oxygen saturation

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did not fall below 95%. A modest rise in blood pressure from baseline values was observed with the administration of the dexmedetomidine loading dose, with a maximum of 120/79. Heart rate decreased over this time period from a peak of 180 bpm (following glycopyrrolate administration) to 132 bpm.

We opted to use dexmedetomidine in this infant with generalized hypotonia because it provides sedation and analgesia without compromising respiratory drive. While sedation with dexmedetomidine may attenuate airway reflexes, we chose to accept the resultant potentially increased risk of aspiration over the risk of encountering a difficult intubation with a rapid sequence or modified-rapid sequence technique.

The Shikani Optical Stylet offered specific advantages in this patient. Intubation with the Shikani Optical Stylet can be performed without advancing the scope through the vocal cords. Additionally, compared with a flexible fiberoptic scope, the rigid optical stylet more readily displaces soft tissue, is easier to stabilize and is therefore less subject to movement from the tongue (1).

Recently, total intravenous anesthesia with dexmedetomidine as a single agent in infants undergoing laryngoscopy and bronchoscopy was reported (2). The case presented here demonstrates a novel use of this drug to facilitate tracheal intubation with the Shikani Optical Stylet in an infant with anticipated difficult tracheal intubation.

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References


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Complete tear of an endotracheal tube due to repeated sterilisation?


Sir,

A 53-year-old male was referred directly to the ENT-OR of a university hospital with massive bleeding following sinus surgery in an ambulatory surgery hospital. Upon arrival the patient was sedated, intubated and mechanically ventilated. Bleeding was still active and the oropharynx was filled with blood. A reinforced silicon tube (8.0 ID, SilcoClear Flex®, Rüsch, Germany) was placed orally. However, tube fixation with a tape (1.25 cm Leukotix®, Beiersdorf, Germany) had become loose because of blood soaking and manipulation during transport. It was therefore decided to renew the fixation before surgery. The tape detached easily from the skin, but when it was removed from the tube, the tube was torn in two parts. Using direct laryngoscopy the ruptured tube was removed and a new tube was inserted while oropharyngeal suction was continued. Bleeding was then stopped surgically. Emergence, extubation, post-operative course and discharge were uneventful.

Tear of an endotracheal tube is a rare event. Neither PubMed literature search, nor review of the German incident reporting database (www.pasos-ains.de) revealed reports of prior incidents of tube rupture. However, intra-luminal tube obstruction due to nitrous oxide diffusion into pre-existing air bubbles of the tube wall has been reported (1). In that case, material dysfunction following repeated sterilization was thought to be the cause. Repeated tube sterilization may also have contributed to material dysfunction in our case. The anaesthesiologist, who had inserted the tube confirmed that repeated sterilization of reinforced silicon tubes is usual practice in that institution. The manufacturer states, that this kind of tube may be sterilised several times for repeated use but does not specify the number of save applications after repeated sterilization. The responsibility for correct function remains with the user and it is mandatory to check re-sterilised tubes for small tears or dysfunction before application. However, minimal damage to the silicon material may not be detectable, even by thorough inspection. This might lead to tube damage with potentially life-threatening complications. We would therefore question the practice of repeated sterilisation and repeated use of these endotracheal tubes.

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Reference


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Respiratory status that facilitates subclavian venous catheterization


Sir,

Although infrequent, complications of subclavian venous cannulation may occasionally take place with pneumothorax developing in approximately 1.5% and with arterial puncture...