visual analogue scale score in the first 24 h was 2. There was no evidence of local anaesthetic toxicity.

The MAC fixation system is a new concept of external fixator developed for correction of lower limb deformities, which allows a monolateral approach to elongation and displacement correction in multiple planes. The presence of proximal and distal webbing associated with the osteotomy required good intra- and postoperative analgesia, which was achieved with femoral and sciatic nerve blocks and continuous infusion through a femoral nerve catheter.

We consider general anaesthesia combined with loco-regional anaesthesia as an effective alternative in the anaesthetic management and postoperative pain in patients undergoing highly invasive surgery for the lower limb.

D. Fuentes-García*
J. Hernández-Palazón
Murcia, Spain
**E-mail: smart10015@hotmail.com*

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McGrath® videolaryngoscope for awake tracheal intubation in a patient with severe ankylosing spondylitis

Editor—The previous work suggests that the various new videolaryngoscopes may be superior to direct laryngoscopy, particularly in management of the difficult airway.[1] We present a case in which the McGrath® videolaryngoscope was used for awake intubation in a patient with severe ankylosing spondylitis.

A 70-yr-old man with a history of severe ankylosing spondylitis was admitted to the hospital after a fall. A computerized tomography of the spine revealed a fracture at L2 and the patient was undergoing acute surgery. After assessment of the airway (Table 1), awake intubation using the McGrath® videolaryngoscope was planned. Local anaesthetic (lidocaine 10 mg) was sprayed twice on the tongue and in the hypopharynx. The tracheal intubation was performed 6 min after the first application of lidocaine at the first attempt using the McGrath® videolaryngoscope without any complications. The glottic view was scored as Cormack–Lehane grade 2.

In patients with ankylosing spondylitis, there is often complete cervical rigidity and accompanying trismus. They are known to present difficulties for tracheal intubation by direct laryngoscopy and, therefore, awake fibreoptic intubation is often used.

Previous studies have suggested that the use of videolaryngoscopes may be superior to direct laryngoscopy for intubation in a difficult airway.[2 3] The McGrath® videolaryngoscope[3] and the Airway Scope® [4] have been used for successful intubation in patients with cervical spine pathology and failed conventional laryngoscopy. In a randomized study comparing the GlideScope® (GS) and Airtraq (AT) in 60 patients with tumours of the upper airway, intubation with the GS was successful in 100% of cases compared with 93% in the AT group,[5] and GS improved the laryngeal view in 83% of cases whereas AT improved it in 77% cases compared with the Macintosh laryngoscope.

In 20 patients with ankylosing spondylitis, nasotracheal intubation using the GS was successful in 17 out of 20 cases.[3] In 30 cases in whom traditional laryngoscopy had failed or was unsatisfactory, the McGrath® videolaryngoscope was successful in 25 patients, and there were three failed intubations and two failed laryngoscopies.[6] A case series of 150 patients found the McGrath® videolaryngoscope was successful in 98%.[7]

Injuries associated with intubation are thought to be less frequent with the use of videolaryngoscopes compared with conventional laryngoscopes. Copper[8] reported two cases of injuries of the palatopharyngeal arch related to laryngoscopy with the GL and O'Leary and colleagues[6] reported four cases of minor bleeding during intubation with the McGrath® videolaryngoscope.

In conclusion, we have used the McGrath® videolaryngoscope for awake tracheal intubation in a patient with severe ankylosing spondylitis. In our experience, the use of the McGrath videolaryngoscope is easy to learn.

B. Uslu*
R. Damgaard Nielsen
B. B. Kristensen
Hvidovre, Denmark
**E-mail: buslu@dadlnet.dk*

Table 1 Assessment of the patient's airway

Mallampati score	Thyromental distance (cm)	Sternomental distance (cm)	Neck mobility (deg)	Neck extension (cm)	Unstable cervical spine	Receding chin	Cormack–Lehane score	Ability to subluxate jaw	Protruding teeth	Intericisor gab (cm)	False teeth	Short neck
1	>6	>12	<90	42	No	No	Unknown	Yes	Yes	>3	Yes	No

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Lung isolation with a new Y-shaped endobronchial blocking device, the EZ-Blocker®

Editor—We would like to report the first clinical use of a new Y-shaped endobronchial blocking device for lung isolation. Lung isolation is used to achieve one-lung ventilation to facilitate thoracic surgery. Two methods are commonly used, a double-lumen endobronchial tube (DLT) and a bronchial blocking (BB) device introduced through a single tracheal tube (TT). Both techniques have advantages and disadvantages. Briefly, the DLT can be positioned faster and remains firmly in place, but is sometimes difficult or even impossible to introduce.[1] Choosing the right size of the DLT can be a problem. BB devices are more difficult to position and more frequently need intraoperative repositioning.[2] The DLT is larger and the incidence of postoperative hoarseness and airway injuries is higher.[3 4]

These disadvantages have prompted further development of the BB concept. The design of this new Y-shaped endobronchial blocking device, the EZ-Blocker® (AnaesthetIQ BV, Rotterdam, The Netherlands), combines the advantages of both techniques. The EZ-Blocker® (Fig. 1) consists of a 7 Fr polyurethane catheter containing four lumina. Two of these lumina are for inflation of the cuffs; the other two can be used for additional O_2 supply to the non-inflated lung, or suctioning. The distal part of the BB ends in a Y shape, consisting of two 4 cm long distal extensions, each with a polyurethane spherically shaped cuff. The extensions are fully symmetrical and coloured differently (blue and yellow) for identification purposes. The EZ-Blocker® is supplied with an adaptor, the EZ-Multiport Adaptor® (AnaesthetIQ BV), which is designed for connection to ventilation devices, introduction of the EZ-Blocker® and a fibreoptic- or video bronchoscope, or a suction catheter. The blocker is introduced and positioned under direct vision using a bronchoscope.

The symmetrical design facilitates introduction and positioning of the device with the extensions in both main stem bronchi. When the proper position is reached, the cuff in the main stem bronchus of the non-ventilated lung can be inflated and lung isolation is achieved. Owing to its Y shape, the blocker remains in position.

We have previously tested the feasibility of this new design in animal experiments and in a manikin study.[5] The data from both studies showed that lung isolation could easily be accomplished. The subsequent manikin study demonstrated that the EZ-Blocker® had a significantly higher success rate for achieving the correct position compared with the DLT. On the basis of these findings, CE approval of the EZ-Blocker was obtained.

After informed consent, we have used the EZ-Blocker® in 11 consecutive patients undergoing elective thoracic surgery. The patients [mean age: 53 (41–65) (range) yr; height: 172 (12) (SD) cm; weight: 76 (15) kg; male/female: 7/4] underwent thoracic surgical procedures, including wedge resection (n=4), lobectomy (n=4), chest wall resection (n=1), and pericardial fenestration (n=2). Surgery was performed on both the left and the right sides, and the procedures consisted of either a thoracotomy (n=5) or video-assisted thoracoscopic surgery (VATS) (n=6). There was no conversion from VATS to thoracotomy.

After placement of an epidural catheter, general anaesthesia was induced with propofol and sufentanil, and muscle relaxation was provided with mivacurium. The

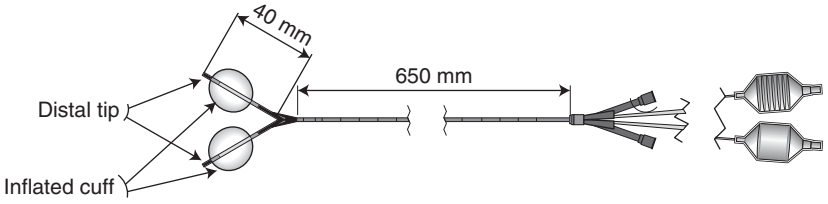

Fig 1 Schematic drawing of the EZ-blocker®.