

A 35-year-old male presented to the radiology department for placement of a gastric feeding tube, with a request for anesthesia support. The patient had HIV/AIDS and active mpox (formerly “monkeypox”) infection, with multiple ulcerative lesions of the oral mucosa that made it painful to eat and drink. The anesthesia team met the patient for the first time in the radiology unit. Concern for airway patency led to a plan for controlled general anesthesia, with intubation via video laryngoscopy. Anesthesia was induced with propofol, and the patient received 30 mg of rocuronium to facilitate intubation, with ongoing mask ventilation.

Placement of the video laryngoscope blade resulted in immediate oral bleeding, with sloughing of mucous membranes in the upper airway. Oral suctioning exacerbated the problem, and further attempts to place the laryngoscope blade resulted in tissue disruption and inability to discern normal anatomy. Placement of a supraglottic airway was unsuccessful, with no chest expansion or end-tidal CO<sub>2</sub>. The airway was removed, a nasal trumpet was placed, and the clinicians continued with difficult, two-handed mask ventilation. Front-of-neck airway access was obtained by the surgical team, with arterial oxygen saturation sustained above 90%. Placement of the gastric feeding tube proceeded under radiographic guidance without further instrumentation of the oropharynx.

### Discussion

Health care practice has advanced rapidly in recent decades. Today's 30-year veteran anesthesiologists were residents in an era when almost every anesthetic was in the main OR suite, on a hospital inpatient (*Saudi J Anaesth* 2022;16:440-3). Few of the anesthetic medications of 1990 are still in common use today. Emergency surgery for bleeding ulcers was common, along with open cholecystectomies and aortic aneurysm resections; hip and knee replacements were complex procedures performed at only a handful of academic hospitals. AIDS was a new phenomenon and uniformly fatal in that era, and AIDS patients seldom presented to the OR.

While medical progress has virtually eradicated some surgical conditions, such as bleeding ulcers, these gains have been reinvested in caring for sicker patients with ever more complex condi-

**Table 1: Clinical manifestations associated with anesthetic concerns in monkeypox and management**

Manifestations	Anesthesia concerns	Suggested management
Facial exanthems (98%)	a) Discomfort to a patient due to the pressure of mask over painful lesions during preoxygenation. Difficulty in mask sealing. b) Generation of aerosols during Bag-Mask ventilation.	a) Pre-oxygenation with 100% Oxygen using NRBM for 3-5 minutes. b) Rapid sequence induction and intubation
Extremities exanthems (97-98%)	a) Difficulty in cannulation, sampling, placement of BP cuffs, SpO <sub>2</sub> probes, and ECG electrodes. b) Exanthems are a potential source of infection for HCW.	a) Careful placement in lesion-free areas b) Personal protective equipment as recommended by WHO (gloves, gown, eye protection, N95 respirators)
Oral exanthems (56%)	a) Risk of trauma, airway edema, and bleeding during airway instrumentation b) Risk of bleeding and aspiration with supraglottic airway devices c) Anticipated challenges related to the difficult airway for general anesthetic. d) Respiratory droplets are a potential source of infection for HCW e) Risk of trauma and bleeding with intraoral temperature probes, oropharyngeal airways, supraglottic airway devices, and ryles tube	a) Airway management by a senior anesthesiologist, gentle laryngoscopy, gentle suction, throat packing. b) Gentle laryngoscopy and endotracheal intubation with throat pack. c) Prefer regional or neuraxial over general anesthetic after assessing pros and cons. d) Personal protective equipment as recommended by WHO (gloves, gown, eye protection, N95 respirators) e) Avoid as much as possible.
Trunk and back exanthems	a) Risk of viral contamination of CSF with a neuraxial anesthetic. b) Trauma to skin and risk of infection at pressure points, specially at sites with lesions and ulcers	a) Needling at lesion-free areas. Use of smaller gauze pencil tip spinal needles. Theoretical recommendation to avoid for the duration of viremia (21 days of onset of symptoms) b) Adequate padding, and aseptic precautions while handling
Painful oral ulcer	a) Decrease in oral intake and dyselectrolytemia	a) Analgesics, lv fluids if indicated. b) Monitoring of electrolytes, and assessment of fluid status during the pre-anesthetic check-up.
Generalized skin rash	a) Skin exanthems are a potential source of infection for HCW b) Infection	a) Personal protective equipment as recommended by WHO (gloves, gown, eye protection, N95 respirators) b) Educate the patient about not touching the lesion and scratching. Cover with light dressing if extensive lesion.
Eye exanthems and conjunctivitis (25%)	a) Infection and vision loss	a) Aseptic precautions, Use of eye ointment, and taping b) Usually, self-limiting; Ophthalmology consults if symptoms persist or visual disturbance

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tions – placement of ventricular assist devices, for example, or complex bariatric surgery. And, of course, nature has provided new challenges along the way; COVID, obviously, which every anesthesiologist had to learn about, and now mpox. As with AIDS patients, those with mpox do not commonly require anesthesia. Yet as the case report illustrates, modern anesthesia practice reaches beyond the traditional OR suite, and a situation like the one presented illustrates the need to remain current with new threats.

Mpox is a close relative of smallpox, and patients who have been vaccinated against smallpox have partial protection against infection (*Anaesth Crit Care Pain Med* 2022;41:101122). Mpox is spread through sex or direct contact with bodily fluids. Despite early concern, mpox is much less infectious than COVID. Mpox infection is characterized by mild viral symptoms, followed by development of a pustular rash, especially on the face and extremities. Oral lesions are found in more than half of cases. Typical disease progression occurs over days to weeks as the skin lesions crust over and eventually heal; patients may be viremic for up to three weeks. Most cases are relatively mild – if uncomfortable – but in an immunocompromised patient such as the one described, the lesions can become

overwhelming. This patient had been unable to eat for several days.

The health care team, including the anesthesiologist, recognized that the oral lesions could pose a difficulty; the patient was in the radiology suite because an endoscopic approach to gastrostomy placement had already been ruled out. The anesthesia team was consulted late in the process but performed an appropriate preoperative assessment (*World J Clin Cases* 2022;10:9348-53). They chose to proceed with a general anesthetic and direct control of the airway rather than attempt sedation.

The scientific literature offers little on the anesthesia risks of mpox, mostly focusing on appropriate precautions against viral contamination of the health care team. One recent review article extrapolates from experience with pemphigus disease in providing guidance for airway management (see Table).

The anesthesia team was surprised by how friable the patient's oral lesions

were and was taken aback by the rapid deterioration of intubating conditions in the face of bleeding, secretions, and shed tissue. The team did well to follow the recently updated ASA Practice Guidelines for Management of the Difficult Airway, although in retrospect they might have preferred to minimize airway manipulations and skip the attempt at a supraglottic airway. It is at least reassuring that front-of-neck airway access was anatomically possible and physiologically successful.

In addition to saving the patient's life, the reporting anesthesiologist is commended for reporting the case to AIRS to encourage broader recognition of this emerging challenge. Most anesthesiologists would not have predicted this kind of difficulty with airway management. We hope this article will provide a warning for others. As a wise attending once told an eager but inexperienced intern: “Never be the only person to know something, especially if it's bad news.” ■

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