IMAGING IN INTENSIVE CARE MEDICINE

Dynamic airway obstruction from a circumferential mass with a free-floating projection: a subacute complication of percutaneous tracheostomy

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An 81-year-old woman underwent a bedside percutaneous dilatational tracheostomy (Ciaglia Blue Rhino® (Cook® Medical), size 7 Portex® cuffed tracheostomy) under bronchoscopic guidance in ICU with no immediate complications. She was admitted 2 weeks earlier with multi organ failure with staphylococcal septicaemia from right gluteal abscess which required surgical drainage. Tracheostomy was done to facilitate her weaning from mechanical ventilation. Day 2 post-tracheostomy she developed clinical and ventilatory features of airway obstruction and dynamic hyperinflation. A bronchoscopic examination via the tracheostomy revealed a circumferential floating mass with a figure-like projection (blood clot) partially obstructing the tracheostomy (Fig. 1) causing a ball-valve effect during expiration (see Video A—direct examination, Video B—with partial withdrawal of tracheostomy in the electronic supplementary material). The delayed presentation was possibly due to slow ooze from the tracheostomy site and a gradual clot build-up around tracheostomy distal end over the following 36 h. Tracheostomy was de-cannulated with the wall suction attached to its proximal end which delivered a large clot. Subsequently she was intubated with an oro-tracheal tube and after further bronchial toileting she had the tracheostomy placed back. She did not develop any further bleeding complications and was slowly weaned from the ventilator and de-cannulated 10 days later.

Fig. 1 Bronchoscopic examination via the tracheostomy revealed a circumferential floating mass partially obstructing the tracheostomy causing a ball-valve effect during expiration

Electronic supplementary material

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Compliance with ethical standards

Conflicts of interest

The authors declare that they have no conflict of interest.

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