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Case Report

Brachiocephalic Arterial Breach Post-Tracheostomy Innominate Artery Breach after Tracheotomy

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Abstract

Post-tracheostomy brachiocephalic arterial injury (TABC) is a rare complication. We report the case of a 62-year-old patient ho required invasive ventilation through an orotracheal tube for asthma. He had suddenly showed a cataclysmic hemorrhage externalizing around the tracheal cannula with bright red blood. The exploration had revealed a breach of two centimeters at the level of the TABC. Ulceration of TABC after tracheostomy despite its rarity is a fatal complication that must be known by the resuscitators.

Keywords: breach, innominate artery, tracheotomy.

INTRODUCTION

Post-tracheostomy brachiocephalic arterial injury (TABC) is a rare complication and potentially a life-threatening with up to 75% deaths1], its can begin after several days later [1].

CASE REPORT

We report the case of a 62-year-old patient, known to have asthma, admitted to resuscitation for severe acute asthma, for she was noticed with severe respiratory problems. The patient required invasive ventilation through an orotracheal tube (n ° 8, sterifil). The evolution was marked by the persistence of bronchospasm and the onset recurrent pneumothorax that prompted prolonged ventilation. On the tenth day a tracheostomy cannula (number 8, tracheostomytube®) was placed in the operating room by an experienced ENT surgeon, under isthmic opposite the fourth tracheal ring. No intraoperative incident was mentioned. On the fourth day of the tracheostomy, the patient had suddenly showed a cataclysmic hemorrhage externalizing around the tracheal cannula with bright red blood, causing cardiovascular collapse without respiratory distress, tracheal suction had not returned blood. Our Immediate Medical intervention reduces bleeding and was achieved by compressing the cannula. The administration of macromolecular solutions, seven globular base and vase- active ingredients had made it possible to restore the hemodynamic situation. The patient had benefited immediately after trans-clavicular surgery. The exploration had revealed a breach of two centimeters at the level of the TABC. The curative gesture has consisted of a suture of the breach. A tracheostomy cannula (n ° 8, tracheostomytube®) had been put back in place. The rest was simple. Three days later, a recurrence lightning hemorrhagic had occurred causing cardiovascular collapse and respiratory distress with death of the patient in the operating room.

DISCUSSION

The incidence of erosion of the brachiocephalic arterial trunk following a tracheotomy is in the range of 0.6 to 0.7% [1]. Among the vascular complications of tracheostomy, the only TABC accounts for 70% of attacks [2]. Erosion occurs either through direct contact with cannula bent or through the trachea through the balloon or tip of the cannula [1], this is due to the anatomical position of the arterial trunk close to the trachea, thus explaining the frequency of its attack.

The risk factors for the occurrence of this complication are multiple

A Low located tracheostomy, post-tracheostomy care (mobilization, hyper extension, hyper flexion), balloon hyperinflation necrosis, mucosal trauma by malposition of the cannula, the use of

corticosteroids, local infection and malnutrition [1.3]. Prolonged tracheal intubation may also be involved [3].

In tracheostomies patients, the diagnosis of TABC erosion is based on massive bleeding from the opening of the tracheostomy with hemodynamic and respiratory distress. Between 35% to 50% of cases experienced minimal bleeding between 2 hours and 4 days before the massive bleeding [4]. Heartbeats in the cannula punctuated by the pulse or bloody tracheal aspirations are warning signs [2]. The initial support consists of inflation or hyperinflation of the balloon to secure the airways and prevent inhalation. The digital compression can limit blood loss. Orotracheal intubation with Balloon hyperinflation may be recommended in patients with continuous bleeding [1, 3] Management of hemorrhagic shock is concomitant. Secondly, the final control of the bleeding occurs in the operating room immediately [2, 3]. Surveillance should be continues because the risk of recurrence exists [5]. Ulceration of TABC after tracheostomy despite its rarity is a fatal complication that must be known by the resuscitators. The low tracheostomy below the third ring tracheal should be avoided [5] and special attention should be paid to warning signs especially with patients who have the previous risk factors.

CONCLUSION

Post-tracheostomy brachiocephalic arterial injury (TABC) is a rare complication that can be life-threatening with up to 75% mortality, 1 with an onset that can be several days late.

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