EMERGENCY MANAGEMENT OF LUDWIG'S ANGINA WITH SEPSIS COMPLICATION

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INTRODUCTION

Ludwig's angina is a form of severe odontogenic infection characterized with bilateral cellulitis at submandibular, submental and sublingual spaces. Due to the involvement of bilateral submandibular, submental, and sublingual spaces, the condition of tongue elevation and retroposition can occur, creating dysphagia, dyspnea and dyslalia; evolving to airway compromised and death. Moreover, the dysregulation of the host response to infection, may lead to sepsis complication that progress into septic shock and death. In this kind of situation, it's necessary to treat the airway compromised and sepsis complication simultaneously. We present a recent case of Ludwig's Angina accompanied with sepsis complication that successfully managed at our hospital.

CASE REPORT

A 58-years old male patient sought the Emergency Department of Oral and Maxillofacial Surgery in Hasan Sadikin Hospital, Bandung, Indonesia, reporting pain, inability to open mouth, and difficulty in swallowing with a swelling in relation to lower jaw. During anamnesis, patient reported a toothache at left lower jaw a month ago, patient revealed that he didn't take any medication, thereafter the swelling started at left lower jaw on the pass two-weeks. Swelling began to progress to opposite side and floor of mouth on the day two prior to admission. Clinically, he was toxic in appearance and vital signs was monitored immediately, temperature was 36.70 C with pulse rate of 80 beats per minutes (BPM), blood pressure (BP) of 130/80 mmHg, and a respiratory rate of 27 breaths per minute with SpO_2 was 93%. On physical examination, he had trismus with diffuse, indurated and non-fluctuant swelling at bilateral submandibular, submentale and sublingual region with size 8x3x3 cm (Fig 1). Intraoral findings showed necrotic pulp of teeth 36, 37, 38, 46 and 48. Supporting clinical and laboratory examination were performed for sequential organ failure assessment (SOFA), complete blood count, chest X-ray, and neck soft tissue AP/Lateral X-ray (Fig 2). The blood report was normal excepts for rise in creatinine and white blood cell count. A diagnosis of Ludwig's Angina and sepsis was made accordingly.

Figure 1. Pre-operative (a)(c) lateral view, (b) frontal view, (d) mouth opening

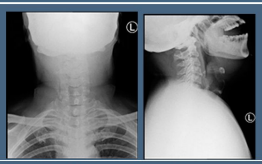

Figure 2. Neck and soft tissue X-ray demonstrated density opaque at bilateral submandible and submentale region

OBJECTIVE

The aim of this case report is intended to demonstrate the importance of knowing the correct treatment for infection cases and to designate a hospital service in more serious and complex cases, in order to reduce patient mortality.

RESULT

Patient was prepared for tracheostomy, intraoral and extraoral incision and drainage with application of penrose drainage and multiple extraction of necrotic teeth in operating theater under general anesthesia (Fig 3). Aside from that, a sepsis protocol therapy in hour-1 bundle was carried out immediately. Maintenance of medication, drainage removal and partial regression of pus production on postoperative day seven, with the absence of pus production on postoperative day tenth. Patient was discharged on postoperative day-10 following the clinical improvement (Fig 4).

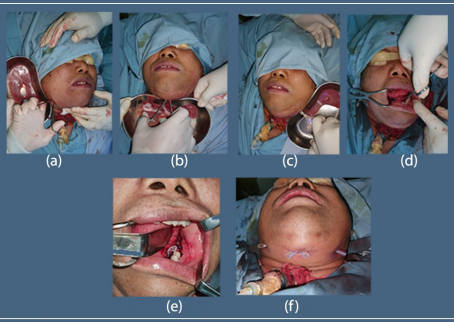

Figure 3. Incision and drainage at (a) right submandibular, (b) submentale, (c) left submandibular, (d) sublingual region; Application of penrose drainaige at (e) sublingual, (f) bilateral submandibular, and submentale region

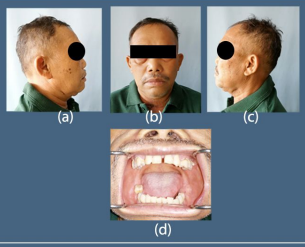

Figure 4. Postoperative day- 10 (a)(c) lateral view, (b) frontal view, (d) mouth opening

CONCLUSION

Accurate clinical assessment followed by effective and immediate treatment are the key factors of the successful treatment for Ludwig's Angina, especially when another complication such as sepsis is present.

CONFLICT OF INTEREST

There is no conflict of interest

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