

SINDROMA ASMA KRITIS

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Abstrak

Sindrom asma kritis menggambarkan eksaserbasi asma subset sangat berat dan merupakan istilah yang membawahi *life threatening asma*, status asmatikus, dan *near fatal asthma*. Sindrom asma kritis merupakan kondisi respirasi yang mendadak dan berat yang membutuhkan terapi cepat dan agresif, serta belum terjadi hipoksia ireversibel dan *kardiopulmoner arrest*. Sindrom asma kritis terjadi sebagian besar karena asma kronis yang tidak terkontrol. Reaksi inflamasi dan imunologi pada asma menyebabkan bronkokonstriksi, udem mukosa dan hipersekresi mukus sehingga terjadi penyempitan jalan napas. Penyempitan jalan napas menyebabkan terjadi hiperinflasi dinamis yang akan menyebabkan gangguan pertukaran gas, peningkatan *work of breathing*, gangguan hemodinamik dan barotrauma. Faktor pemicu sindrom asma kritis antaralain virus, bakteri, sepsis, aspirasi paru, gastroesofageal refluks, inhalasi benda asing, penyakit jantung iskemik dan reaksi anafilaksis terhadap obat ataupun makanan. Tanda dan gejala sindrom asma kritis antaralain onset mendadak, dispnea, pernapasan paradoksal, kelelahan *work of breathing*, gagal napas dan kematian. Komplikasi sindrom asma kritis dapat terjadi pneumotoraks, pneumomediastinum dan atelektasis. Penatalaksanaan sindrom asma kritis meliputi oksigenasi, β_2 agonis short acting, antikolinergik, kortikosteroid sistemik, magnesium sulfat, ventilasi non mekanis atau mekanis. Ventilasi mekanis pada pasien sindrom asma kritis direkomendasikan memakai strategi hipoventilasi terkontrol dengan *permissive hypercapnea*. Sindrom asma kritis yang gagal dengan terapi standar dapat ditatalaksana dengan terapi heliox, agen anestesi, *Extra Corporeal CO2 reuptake* (ECCO2R), dan bronkoskopi.

CRITICAL ASTHMA SYNDROME

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Abstract

Critical asthma syndrome (CAS) describes as the subset of asthma exacerbations is severe and is a term which oversees life-threatening asthma, status asthmaticus, and near fatal asthma. Critical asthma syndrome is a respiratory condition that is sudden and severe requiring fast and aggressive therapy, and the irreversible hypoxia and cardiopulmonary arrest have not occurred yet. Critical asthma syndrome occurs mostly because of chronic asthma that is uncontrolled. Inflammatory and immunological reaction in asthma causing bronchoconstriction, mucosal edema, and mucus hypersecretion, causing narrowing of the airway. Narrowing of the airway causing dynamic hyperinflation which will cause disruption of gas exchange, increased work of breathing, hemodynamic disturbances, and barotrauma. The triggering factors of CAS are viruses, bacteria, sepsis, pulmonary aspiration, gastroesophageal reflux, inhaled foreign body, ischemic heart disease and anaphylactic reactions to drugs or food. Signs and symptoms of CAS are sudden onsets, dyspnea, paradoxical breathing, fatigue work of breathing, respiratory failure, and death. Complications of CAS that can occur are pneumothorax, pneumomediastinum, and atelectasis. Management of CAS includes oxygenation, short-acting β_2 -agonists, anticholinergics, systemic corticosteroids, magnesium sulfate, non-mechanical or mechanical ventilation. Mechanical ventilation in patients with CAS is recommended to use a controlled hypoventilation with permissive hypercapnia strategy. Critical asthma syndrome which failed standard therapy can be treated by heliox therapy, anesthetic agents, Extra Corporeal CO₂ reuptake (ECCO₂R), and bronchoscopy.