

TERAPI MONOKLONAL ANTIBODI ANTI INTERLEUKIN 5 PADA ASMA

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Abstrak: Pasien asma yang memiliki riwayat atopi ditandai dengan peningkatan eosinofil akibat proses inflamasi dan alergi. Rekrutmen, aktivasi, pertumbuhan, dan ketahanan hidup eosinofil dari sumsum tulang ke pembuluh darah diaktivasi oleh interleukin (IL)-5. GINA 2016 mendefinisikan asma berat adalah asma yang memerlukan terapi kortikosteroid inhalasi dan LABA dosis tinggi dan kortikosteroid inhalasi disertai *Leucotriene receptor antagonist* (LTRA) atau ditambah teofilin untuk mencegah asma tidak terkontrol atau tetap tidak terkontrol setelah mendapatkan terapi tersebut. Beberapa penelitian invitro oleh menunjukkan inhibisi IL-5 efektif untuk menurunkan kadar eosinofil asma. Salah satu obat dengan mekanisme kerja melalui inhibisi IL-5 adalah golongan antibodi monoklonal. Penelitian klinis penggunaan anti IL-5 pada asma terutama asma berat masih terus berlangsung sampai saat ini. Rekrutmen, aktivasi, pertumbuhan, dan masa hidup eosinofil dipicu oleh IL-5.

Pasien asma berat tidak dapat dikontrol menggunakan terapi standar kombinasi inhalasi kortikosteroid dosis tinggi dan LABA. Terapi target menggunakan monoklonal antibodi memberikan hasil positif untuk tatalaksana asma berat. Inhibisi IL-5 dan IL-5R dapat mencegah kerusakan jaringan saluran napas akibat peningkatan sitokin proinflamasi dan eosinofil pasien asma.

Obat monoklonal antibodi yang dikenal sebagai antibodi anti-IL-5 yaitu mepolizumab, reslizumab dan benralizumab. Monoklonal antibodi anti-IL-5 berguna mencegah eksaserbasi asma berat.

Kata kunci: Asma berat, peningkatan eosinofil, inhibisi IL-5, antibodi anti-IL-5.

MONOCLONAL ANTIBODY INTERLEUKIN 5 THERAPY ON ASTHMA

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Abstract: Asthma patients with the history of atopy characterized by increased eosinophils due to inflammation and allergies. Recruitment, activation, growth and survival of eosinophils from the bone marrow into the blood vessels are activated by the interleukin (IL)-5. GINA 2016 defined severe asthma as asthma requiring inhaled corticosteroids and LABA therapy and high-dose inhaled corticosteroids with Leukotriene receptor antagonist (LTRA) or plus theophylline to prevent uncontrolled asthma or remains uncontrolled after getting the therapy. Some of the therapy studies showed inhibition in vitro by IL -5 effective for lowering levels of eosinophils asthma. One of the drugs with the mechanism of action via inhibition of IL-5 is the class of monoclonal antibodies. Clinical research about the use of anti IL-5 in asthma, especially severe asthma still continues to this day. Recruitment, activation, growth, and the life span of eosinophils induced by IL-5. Severe asthma patients not be controlled using a combination of standard therapy high-dose inhaled corticosteroid and LABA. Monoclonal targeted therapy using antibodies to yield positive results for the treatment of severe asthma. Inhibition of IL-5 and IL-5R can prevent airway tissue damage due to an increase in proinflammatory cytokines and eosinophils of asthma patients. Monoclonal antibody drugs known as antibody anti-IL-5 is mepolizumab, reslizumab, and benralizumab. Monoclonal antibody anti-IL-5 is useful to prevent severe asthma exacerbations.

Keywords: Severe asthma, increased eosinophils, inhibition of IL-5, antibody anti-IL-5.