SUPPLEMENTARY MATERIAL

Administration of biological drugs

Every patient with a biologic drug prescribed for asthma, has a basal sputum and blood analysis were eosinophils and immunoglobulin E (IgE) are measured. The administration of the biologic is then performed. Blood and induced sputum analysis were repeated at 8 weeks, 6 months and a year after benralizumab injection. This protocol was implemented to monitor the response to the biologic drug. Since COVID-19 pandemic, the sputum analysis has been suspended.

Blood and serum collection

Peripheral blood was collected from patient and distributed in different collection tubes. For hematological clinical parameters, 5 mL of peripheral blood was collected in EDTA tubes. Furthermore, 10 ml of blood was recovered in tubes without anti-coagulant and serum was obtained by blood clotting and centrifugation at 3000 rpm for 10 minutes at 4ºC and stored at -80ºC until use.

Determination of cytokines and eosinophil-granule proteins in serum by ELISA

IL-10, IL-33, TGF-β1, TSLP and periostin serum levels were determined using human IL-10, IL-33, TGF beta 1, TSLP and Periostin/OSF-2DuoSet ELISA kits (R&D Systems, Bio-Techne, Minneapolis, MN, USA), respectively, following manufacturer's protocol.

Human eosinophil-granule proteins (eosinophil cationic protein [ECP] andmajor basic protein [MBP]) present in serum wereevaluated by human eosinophil granule major basic protein (EMBP/MBP) ELISA and human eosinophil cationic protein (ECP) ELISAkitsacquired from CUSABIO TECHNOLOGY LLC (Houston, TX, USA), following the manufacturer's procedure.

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