Emergence of inflammatory bowel disease during treatment with sitagliptin

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SUMMARY
We present one clinical case of diagnosed inflammatory bowel disease, as a probable adverse reaction to sitagliptin. Sitagliptin is a dipeptidylpeptidase (DPP)-4 inhibitor authorised for the type II diabetes mellitus treatment in adult patients who do not achieve good blood glucose control and if other therapeutic alternatives are not correctly tolerated. In addition to the DPP-4 role in the gastric hormones release and glucose homeostasis, the DPP-4 involvement in the inflammatory response is known. However, the relationship between inflammatory bowel disease (IBD) and inhibition of PPD-4 is controversial. On the one hand, the T lymphocytes of patients with this pathology seem to express high levels of the enzyme DPP-4, so their inhibition could be associated with a decrease in the activity of IBD. On the other hand, in a cohort study of patients treated with oral antidiabetics an increased risk of IBD was observed and there are different published cases of IBD occurrence during the use of sitagliptin.

Key Words: Sitagliptin, Crohn’s disease, adverse effect.

INTRODUCTION
Sitagliptin is a dipeptidylpeptidase-4 (DPP-4) inhibitor authorised for the type II diabetes mellitus treatment in adult patients who do not achieve good blood glucose control or if other therapeutic alternatives are not correctly tolerated. DPP-4 is an enzyme responsible for degrading incretines, such as glucagon-like peptide-1 (GLP-1) and glucose-dependent insulinotropic polypeptide (GIP). In addition to this role, the DPP-4 involvement in inflammatory response and immune activity is known. However, regarding to the relationship between inflammatory bowel disease (IBD) and DPP-4 inhibition, there is controversy. On the one hand, some studies claim that an improvement in activity of the disease occur in subjects treated with those drugs. On the other hand, the appearance of cases of IBD during the treatment with DPP-4 inhibitors has been published too.

We present a debut of Crohn’s disease (CD) in a patient treated with sitagliptin.

CASE REPORT
Female, 75-year-old, with a personal history of type II diabetes mellitus and autoimmune thyroiditis, both newly diagnosed. She underwent treatment with metformin and sulfonylureas. Both were removed due to poor tolerance and sitagliptin 50 mg per day was initiated. Two months after the onset, the patient was admitted to hospital for fever and abdominal pain, diagnosed with myelodysplastic syndrome with multiline dysplasia. During admission, computerized axial tomography (CT) images of terminal ileum with significant diffuse thickening were described. One month later, she was admitted again with abdominal pain, besides diarrhea and loss of 10 kg of weight were noted. Coprocultures and Clostridium Difficile toxin detection resulted negative. Thereupon, a new CT is performed resulting in ileitis-compatible images. In the Entero-Magnetic resonance imaging (Entero-MRI) a collection of predominately aerial content was noted (it was not observed in the DPP-4 es controvertida. Por un lado, los linfocitos T de los pacientes con esta patología parecen expresar altos niveles de la enzima DPP-4, por lo que su inhibición se podría asociar a un descenso en la actividad de la EII. Por otro lado, en un estudio de cohortes de pacientes tratados con antidiabéticos se observó un aumento del riesgo de EII y existen diferentes casos publicados de aparición de IBD durante el uso de sitagliptina.

Palabras clave: Sitagliptina, enfermedad de Crohn, reacción adversa.
the enzyme in intestinal tissue was found in diseased indivi-
duals. Similarly, a reduction in the expression of the enzyme was observed in serum from patients with active CD compared to healthy controls. On the other hand, a sitagliptin compared to placebo randomized placebo-controlled study. J Clin Exp Immunol. 2013;174: 120-128. doi: 10.1136/annrheumdis-2014-205216.

BIBLIOGRAPHY