Safety Alert **April 2025**

Metformin-risks of aggravation of Mitochondrial Encephalopathy with Lactic Acidosis, and Stroke-like episodes (MELAS) syndrome & Maternal inherited diabetes and deafness (MIDD) in patients with mitochondrial diseases

EDA performs label update to include the following:

Special warnings and precautions for use

Lactic acidosis

Patients with known or suspected mitochondrial diseases:
In patients with known mitochondrial diseases such as Mitochondrial Encephalopathy with Lactic Acidosis, and Stroke-like episodes (MELAS) syndrome and Maternal inherited diabetes and deafness (MIDD), metformin is not recommended due to the risk of lactic acidosis exacerbation and neurologic complications which may lead to worsening of the disease. In case of signs and symptoms suggestive of MELAS syndrome or MIDD after the intake of metformin, treatment with metformin should be withdrawn immediately and prompt diagnostic evaluation should be performed.

Background:

Mitochondrial encephalopathy, lactic acidosis, and stroke-like syndrome (MELAS):

is a rare neurodegenerative inherited disorder that is characterized by stroke-like episodes, seizures, endocrine, and multiple system involvement. It is important to consider it as a differential diagnosis in a young patient with stroke-like episodes as it is progressive and has multiple complications.

Maternally inherited diabetes and deafness (MIDD) :

is a syndromic disorder of mitochondria caused by mutations in mtDNA. There is a broad phenotypic expression of the syndrome, even between individuals of the same family, depending on the degree of mutant mtDNA in cells

References:

EMA (Click here)