ДЕМОНСТРАЦИОННЫЙ ВАРИАНТ

ЭКЗАМЕНАЦИОННОГО БИЛЕТА ПО ИНОСТРАННОМУ ЯЗЫКУ

ВСТУПИТЕЛЬНОГО ИСПЫТАНИЯ В ФГБОУ ВО УГМУ МИНЗДРАВА РОССИИ

Пояснения к демонстрационному варианту экзаменационного билета по иностранному языку

Назначение демонстрационного варианта экзаменационного билета по иностранному языку заключается в том, чтобы дать возможность поступающему в Уральский государственный медицинский университет, составить представление о структуре экзаменационных заданий, их количестве, форме, уровне сложности. Эти сведения позволят поступающим выработать стратегию подготовки к вступительным испытаниям в ФГБОУ ВО УГМУ Минздрава России.

Демонстрационный вариант экзаменационного билета по иностранному языку

1. Чтение и письменный перевод текста по специальности

Interaction between drugs and the gut microbiome.

Proton pump inhibitors PPIs are among the most commonly used drugs worldwide and are used to treat acid-related disorders such as peptic ulcers, gastro-oesophageal reflux and dyspepsia and for prevention of non-steroidalanti-inflammatory drug-induced gastroduodenopathy and bleeding. Since PPIs are very effective and have a very favourable safety profile, their use has increased very rapidly over the past few decades. In the Netherlands, two million individuals (~12% of the population) now use either pantoprazole or omeprazole by prescription, and similar usage percentages have been reported for other countries such as the UK. The total cost of PPIs in the UK is estimated to be more than £100 million per year. Moreover, as PPIs are available over-the-counter in the Netherlands, and in many other countries, the total number of PPI users will be much higher than the estimate based on prescriptions alone. In recent years, considerable attention has been paid to the safety profile and potential side effects of chronic use of PPIs. Although the relative risk of adverse drug response (ADR) is low, the high worldwide number of PPI users means that absolute numbers of patients with an ADR can still be high. While there are clear evidence-based indications for the use of PPIs, it has been suggested that up to 70% of PPI prescriptions may be unnecessary, with use of PPIs as prophylaxis for stress ulcers in patients who do not meet evidence-based prescription criteria a major contributor to this. Another important factor here is that once PPIs are started

there is little re-assessment of the original indication for which the PPI was prescribed, and subsequent attempts to stop them lead to unnecessary chronic use.

The large population-based study from the Netherlands showed that PPIs were the drugs most associated to a decreased diversity and taxonomical changes in the gut microbiome. Extending this analysis to include 16 s data from a cohort with inflammatory bowel disease and a cohort with irritable bowel syndrome reproduced these changes across all three cohorts and showed that the relative abundance of up to 20% of bacterial taxa were altered (either decreased or increased) in PPI users compared with non-users. Similar results showing a lower microbial diversity and lower abundance of gut commensals were observed in a study analysing 16 s data from faecal samples from 1827 twins. In addition, a small cross-over trial in 12 healthy volunteers showed considerable changes in taxonomy after starting PPIs.

Overall, the taxonomic changes in faecal samples of PPI users show a decrease in abundance of commensal bacteria of the intestine and an increase of bacteria from the oral cavity. These changes include an increase in the families Enterobacteriaceae, Enterococcaceae and Lactobacillaceae and a decrease in Ruminococcaceae and Bifidobacteriaceae, while the shift toward typical oral bacteria is reflected by increases in the species Rothia dentocariosa and Rothia mucilaginosa, the genus Actinomyces and the family Micrococcaceae. Moreover, it appears that the observed changes are a class-effect of PPIs, since omeprazole, esomeprazole and pantoprazole all showed similar changes. A higher dosage also seems to be associated with larger microbial changes.

2. Чтение и пересказ на русском языке текста по специальности

Cannabidiol Reduces Intestinal Inflammation through the Control of Neuroimmune Axis

Despite the ancient assumption that enteric glial cells (EGC) may serve as a mere mechanical support for enteric neurons, nowadays the knowledge on these cells is consistently expanded. EGC play a fundamental role in the maintenance of gut homeostasis since they assure the correct trophism of vicinal neurons in the myenteric plexus and actively participate in the course of intestinal inflammation where they appear as first defensive line against pathogens.

Enteroglial cells share analogue features with glial cells in the brain. EGC play important functions in the maintenance of the enteric nervous system (ENS) homeostasis, but they may also proliferate and be activated in response to injury and inflammation undergoing reactive gliosis (entero-gliosis), a dynamic process. Enteric astroglial and microglial cells release neurotrophins, growth factors and cytokines cross-talking with other infiltrating immune cells such as macrophages, neutrophils and mast cells.

Abnormalities in the enteroglial network were described in the intestinal mucosa of patients with inflammatory bowel diseases (IBD), measures as the reactive enteric gliosis, i.e. the massive over-expression and secretion of S100B protein, a cell-specific astroglial derived signalling molecule. The activation of EGC is therefore regarded as a general alteration of the whole enteric nervous system homeostasis. S100B protein, which is released by enteric glial cells, emerges as a pivotal signal molecule that extensively participates in the onset and in the progression of the inflammatory status as it orchestrates a wide range of signal activation pathways, directly correlated with the severity of gut degenerative processes.

Molecules which may counteract intestinal inflammation targeting EGC could represent putative novel approaches to amplify the current pharmacological tools to treat gut inflammatory diseases. In this sense, a huge amount of data produced in the recent years demonstrated that cannabidiol (CBD) the non-psychotropic cannabinoid deriving from Cannabis Sativa, appears as a very promising compound because of its antinflammatory, antioxidant and anti-apoptotic effects in different models of CNS inflammation. It was shown that CBD exerts its pharmacological activity targeting reactive astroglia and this results in a very efficient reduction of the neuroinflammatory/neurodegenerative status both in vitro and in vivo models of neuropathologies.

3. Беседа с экзаменатором.