Sir,

A great number of microorganisms termed as microbiota have been shown to reside in the human body. Maintenance of the microbiota is essential to human health; whereas, any changes in the bacterial community, dysbiosis, are related to diseases such as diabetes and autoimmune disorders. Pregnancy, the time during which a number of changes occur in order to support the growth of the fetoplacental unit, is also closely linked to dysbiosis. At the same time, maternal and child health are heavily dependent on microbiomes. It was only after a study published by Kovalovszki et al. in 1982, that the foetus was thought to be at risk of bacterial infection in utero via the oral, gastrointestinal and genitourinary tracts. Antibiotic drugs which are used to treat and prevent bacterial infections, account for 80% of the prescribed medications during pregnancies. Antibiotic therapy has proven to show a great number of positive outcomes, including the treatment of infectious diseases. However, only a handful of studies have been conducted on the negative effects of antibiotics during pregnancy. It has been identified that antibiotic therapy during pregnancy has helped minimize the risk of lung complications and cerebral deformities, while the risk of developing neonatal necrotizing enterocolitis and cerebral palsy has severely increased. The use of antibiotics during second and third trimester can produce harmful effects on the pregnancy outcomes and fetal morbidity. Indeed, it has been proven that an antibiotic course can irreversibly alter the microbiota, such that it does not return to baseline levels after receiving treatment. Hence, changes are observed in maternal as well as foetal microbiomes, which can affect the metabolic and immune functions as well as an increased risk of childhood asthma, epilepsy, and obesity. Therefore, the use of antibiotics during pregnancy should be monitored diligently, while minimizing the range and confining their use to specific symptoms.

Although the use of antibiotics to overcome and inhibit various infections has been significant in improving the health of pregnant women, their overuse upsets the maternal and foetal microbiota, leading to a number of negative effects. Therefore, further research into the outcomes of antibiotic use during pregnancy should be carried out in detail and on a larger scale, thereby ensuring the welfare of both the mother and child during pregnancy.

REFERENCES