New insights on fetal ductal constriction: role of maternal ingestion of polyphenol-rich foods.

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Abstract

Fetal ductus arteriosus constriction is a clinical disorder that occurs as a result of inhibition of the prostaglandin synthesis pathway, and has long been associated to maternal intake of nonsteroidal antiinflammatory drugs in late pregnancy. As a consequence of an increased right ventricular pressure, with tricuspid regurgitation and heart failure, there is a risk for the development of neonatal pulmonary artery hypertension. This article reviews the basic knowledge of the mechanisms involved in this important disorder. Clinical and experimental evidence that maternal consumption of polyphenol-rich substances, such as herbal teas, orange and grape juice, chocolate, and others, may interfere with fetal ductus arteriosus dynamics are discussed. Preventive measures to avoid fetal ductal constriction in the third trimester of pregnancy are discussed, including the possible need to change maternal dietary orientation, aiming to limit ingestion of foods with high concentrations of polyphenol-rich substances.

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