

Gut Microbiota Composition in First and Third Trimester of Pregnancy among Malay Women: A Pilot Study

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ABSTRACT

Introduction: A significant changes between gut microbiota composition in the first and third trimester has been demonstrated but different ethnicity and dietary culture potentially lead to different microbiota composition. Till date, there is still lack of study in various ethnicity including Malay women. **Objective:** To determine the taxonomic distribution of gut microbiota in first and third trimester among Malay women. **Method:** This was a prospective observational study done in two tertiary level hospitals involving 12 pregnant Malay women without any endocrine disorders and not on antibiotic or probiotics within four weeks prior to recruitment. Participants' basic demographic details and anthropometric measurement were obtained. Stool samples in the first and third trimester were collected and prepared for 16S ribosomal ribonucleic acid metagenome analysis. All statistical analyses were carried out using SPSS version 22. Comparative metagenomics analysis was performed using METAGENassist. **Results:** The most abundant phylum during the first and third trimester were Bacteroidetes, Firmicutes, Proteobacteria and Actinobacteria. There were compositional differences at genus level between first and third trimester. Fifteen genera were identified as important contributors to the clustering of microbiota composition. Abundances of Eubacterium and Brevundimonas in the first trimester were 2.95 and 2.44 folds higher than in the third trimester, respectively. There was compositional differences of gut microbiota at the Genus level between women with different body mass index (BMI) group. Women with higher BMI had lower Bacteroidetes and higher Proteobacteria. **Conclusion:** There were different gut microbiota composition at genus level between first and third trimester, and between women with different BMI groups.

Thoracopagus: A Rare form of Conjoined Twins

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ABSTRACT

Introduction: Thoracopagus is a rare type of conjoined twins, which is a rare monozygotic twinning resulting in imperfect fusion of the chest and upper abdomen. These twins have separate limbs and pelvis. The incidence of conjoined twins is 1 per 50,000 to 1 per 200,000 births. The thoracopagus is 1 in 3 million births. Survival of conjoined twins are precarious, most dying during the very early perinatal period or as the result of surgical separation. **Case Report:** 27-year-old, Gravida 2 Para 1 at 15 weeks four days of amenorrhoea presented with per vaginal bleeding for two days. She did not complain of any abdominal pain. Her previous pregnancy was a twin pregnancy and had an uneventful full-term vaginal delivery. She has no family history of twins but her husband's family has history of twins. Transabdominal scan performed revealed two fetuses with ventral fusion from the thorax, upper abdomen till the umbilical cord. They shared a common thoracic and upper abdominal cavity with two hearts, a common liver and two vertebral columns (in opposite directions). There were four pairs of well-developed limbs. A single umbilical cord was noted. However, no heart activity of both foetal heart was noted. The twins were corresponding to 13-15 weeks of gestation. Patient was counselled regarding the scan findings and opted for medical termination of the pregnancy. Gross examination of the foetuses after the termination revealed the findings of thoracopagus conjoined twins. **Conclusion:** Thoracopagus is an extremely rare variant of conjoined twins with ventral fusion from upper abdomen and variable visceral sharing. A timely antenatal diagnosis helps in counselling the parents about poor neonatal outcome and planning medical termination of the pregnancy.