Growth of the fetus in the abdominal cavity.

Abitbol MM.

Abstract

The ratio pelvic/abdominal cavity is 6.9% in samples of nonhuman mammals and nonhuman primates, and rises to approximately 30% in humans. This relative reduction of the abdomen and increase of the pelvis is associated with a partial or total shift of some organs from the abdomen to the pelvis: rectosigmoid colon, bladder, and genital organs, which are mostly abdominal in quadrupeds and are mostly pelvic in humans. Pregnancy, always abdominal in nonhumans, is pelvic during the first trimester and becomes abdominal later on in humans. Near term the pregnancy expands easily in nonhumans in view of relatively small fetus and relatively large abdominal cavity. But, for the opposite reasons (large fetus, small abdomen), the human pregnancy is limited space-wise during its abdominal expansion. Unlike that of nonhumans, human pregnancy is faced with multiple problems. These include: 1) "squeezing" between the anterior abdominal wall and the lordosis of the lumbar spine; 2) compression of the aortocaval vessels; and 3) forward expansion of the abdomen resulting in reorientation of the trunk during erect posture as the pregnant woman approaches term. All these conditions are responsible for numerous pathological entities that occur during human pregnancy and are almost unknown in nonhuman mammals.

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