Ultrasound Illustration of the Connectedness of the Upper and Lower Reproductive Tracts

Introduction
Bacterial infections are increasingly recognized as a cause of human stillbirth and severe or fatal perinatal infections. They may arise from bloodbourne infections (hematogenous), ascending infections, vaginal infections, iatrogenic infections, or zoonosis.

Objective
To better understand the pathobiology of intrauterine infections before, during, and after pregnancy and to develop preventative strategies.

Methods
We performed timed vaginal ultrasound observations using Albuminex™ ultrasound contrast media shaken to form microbe-sized bubbles which were then placed in the vaginas of both a pregnant and a nonpregnant woman.

Results
Baseline
24 year old woman at day 14 of her ovulatory cycle

Two Hours
28 year old woman at 38 weeks gestation with intact mucus plug and membranes

Conclusion
These studies suggest mechanisms by which cervical vaginal microbes such as group B strep, sexually transmitted infections, or HIV may be transported to upper genital tract sites of potential infection.

Significance
Membrane stripping can massively transport infectious microorganisms into the lower uterine segment potentially causing intrauterine infection and even death in unborn babies.

Relevance for Patient Management
Care providers should avoid membrane stripping and other iatrogenic procedures which can aid in causing intrauterine infection and fetal demise.

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