# Ultrasonographic flagrant: dynamic real-time cervical shortening on routine exam

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## Objective

To present a case of an asymptomatic pregnant woman with dynamic changes in the cervix and an image suggestive of a sludge in a routine evaluation of the cervix, in the morphological ultrasound examination of the second trimester, to highlight the importance of the exam in the prediction and prevention of premature birth and to review the literature on the dynamic changes of the uterine cervix.

#### Methods

This is an observational study, with a descriptive design, without a control group and with a narrative character, such as a case report and descriptive literature review. It was carried out at Maternidade Escola da Universidade Federal do Rio de Janeiro (ME-UFRJ). The first objective, which consists of the case report, clinical and obstetric history was verified in directed anamnesis and the follow-up and outcome data of the case were verified in the medical record. For the second objective, descriptive literature review, a research was carried out in the databases: Clinicaltrials. gov, Pubmed, Scielo, UptoDate, Medscape of journals published from 1995 to 2019, in English, Spanish and Portuguese, with the following descriptors: premature birth, sludge, short cervix and dynamic alteration of the cervix.

#### Results

A 40-year-old pregnant woman, G3P0020, with two previous losses at 8 and 17 weeks, attended the second-trimester scan at 22 weeks of gestation. Routine cervical length(CL) measurement by transvaginal ultrasound demonstrated a dynamic cervical change and an heterogeneous area in amniotic fluid close to the internal os, compatible with sludge, registered within 5 minutes, in which CL ranged from 3,8mm to 35mm. She was referred for hospitalization with intravenous antibiotics and cerclage. Vaginal progesterone was prescribed up to 37 weeks. At 24 3/7 weeks of gestation, a new ultrasound evaluation showed funneling of internal os, CL of 11mm and visualization of the cerclage suture. Cerclage was removed at 37 weeks and a healthy newborn was delivered at 40 weeks by an elective cesarean on maternal request. The management based on the observed smallest CL plus maternal and obstetrics characteristics resulted in successful outcome.

### Conclusion

Reported a case of a pregnant woman monitored at the institution that presented a dynamic change of cervix with a short cervix and sludge in a routine examination, which after the conduct assumed at the institution evolved with a favorable outcome. Descriptive literature review was carried out, which does not present conclusive evidence regarding the conduct for prophylaxis of premature birth in cases where dynamic changes in the cervix are evident.

