Objectives
To determine whether change in cervical elastographic parameters following progesterone treatment in pregnant women short cervix is associated a higher prevalence of adverse pregnancy outcome.

Method
• Multicenter prospective cohort
• 1033 consecutive pregnant woman
• 80 progesterone for short CL(≤25mm)
• Pre- and 1, 2, and 4 weeks post progesterone administration
• Cervical elastography using E-cervix
  (WS80A, Samsung Medison)
• Adverse pregnancy outcome
  - Delivery < 37weeks of gestation
  - Treatment for threatened labor
  - Cervical cerclage
• Parameters: contrast index(ECI), Hardness ratio(HR), internal os(IOS), external os(EOS)
• ROC curve analysis

Results
• Of 80 patients, 60 were eligible for analysis
  - 35 delivery term
  - 25 adverse pregnancy outcome
• Normal group vs adverse outcome group
  HR and IOS were significantly difference at 1week
  (73% vs 61%, 0.2 vs 0.3, p=0.04, 0.05) (Fig.1)

• HR % change at 1 week from the base line in normal group showed a positive trend whereas it was negative in adverse outcome group (Fig.2)

Area under curve(AUC) of CL, ECI, HR, IOC% change at 1 week in prediction of adverse outcome: 0.84 (0.71, 0.97)

Conclusion
Performing cervical elastography before and after 1week of progesterone administration may help to predict progesterone treatment efficacy.

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