The importance of cervical length measurement in the diagnosis and management of the threat of premature labo

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Introduction
Preterm birth is is associated with a 15-20% mortality rate and remains a major public health problem. It responsible for 75% of perinatal deaths in fetuses without anomalies.

Our study
We conducted this prospective, longitudinal study involving 117 asymptomatic women with singleton pregnancies between January and December 2015. The aim of this study was to evaluate the importance of cervical length measured in the first trimester (11-14 WA) and the second trimester (20-24WA) in an asymptomatic population of singleton pregnancies to assess the risk of spontaneous preterm birth compared to the digital assessment.

Results
In the first trimester, a cervical length inferior to 35 mm was significantly correlated to the preterm delivery (p < 0.001) (TABLE 1) with an OR equal to 3.915.

The mean cervical length of women having a threat preterm delivery between 12 and 14 weeks of amenorrhea (WA) was equal to 32.3 mm while it was equal to 40.7 mm for those delivering at term.

<table>
<thead>
<tr>
<th>Preterm birth</th>
<th>CL &lt; 35 mm</th>
<th>CL ≥ 35 mm</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>26</td>
<td>16</td>
<td>42</td>
</tr>
<tr>
<td>No</td>
<td>22</td>
<td>53</td>
<td>75</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>69</td>
<td>117</td>
</tr>
</tbody>
</table>

VPP =54, 2 %
VPN =76, 8 %

Se =61, 9 %
Sp =70, 7 %

Figure 1. Fetal MRI. Corpus callosum agenesis.

An opening of the internal os of the cervix superior to 4 mm is significantly correlated with the occurrence of preterm labour with an OR equal to 4.196 , (ROC Curve 2), (Fig 1).

As in the first trimester, and from the analysis of a ROC curve (ROC curve 3), a threshold of cervical length (CL) to 30 mm was chosen for the best rates of sensitivity and specificity.

Figure 2. Distribution of the term of the threat premature labour according to the diametre of the internal os of cervix between 12-14 SA.

Conclusion
Our study in a maternity center in Tunisia allowed us to show the interest in the systematic measurement of the length of the cervix in the first trimester (11-14 WA) and in the second trimester (20-24WA) in an asymptomatic pregnancy population to assess the risk of Spontaneous preterm delivery.