

# A SIMPLE TECHNIQUE FOR THE DETECTION OF RUPTURED FOETAL MEMBRANES

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## SUMMARY

Rupture of foetal membranes before the onset of labour is relatively common in obstetrics. It creates a cause of anxiety when the physical findings are inconclusive in respect to integrity of the membranes. A simple test is being presented based on the principle that on heating endocervical mucus, it changes to brown colour in absence of amniotic fluid and in presence of amniotic fluid it turns to white. This simple, risk free, low cost test can be used for routine practical purposes.

### *Introduction*

Status of foetal membranes is of foremost importance for the obstetrician, mother and foetus. Once in a blue moon there are cases in which history is strongly in favour of ruptured membranes, but physical findings vibrate in other tunes enabling a doubt regarding status of foetal membranes. To date a number of tests have been devised viz. litmus pads test, presence of Lanugo hairs, fat globules (Paavola, 1958), Amniotic fluid crystallization test (Smith and Callagan, 1962), Verni test (Averrette *et al*, 1963). A low cost, simple, reliable and risk free technique is being presented based on the color changes on heating the material collected from endocervical canal.

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The present study was carried out on 100 patients in the labour room of PBM Group of Hospitals, Bikaner. The cases selected were those having no history of ruptured membranes, physical findings in favour of presence of membranes, cervical dilatation was atleast 2 cms. and there was no contraindication for artificial rupture of membranes.

After confirming the presence of membranes by physical findings, under full aseptic precautions the endocervical material was collected and was spread on the glass slide. Foetal membranes were ruptured and again the endocervical material was collected and spread over the slide. The contralateral surfaces of both slides were heated for one minute by spirit lamp and colour changes of the material was noted.

Out of 100 cases studied only in 2 cases

the colour in first slide did not change to brown, in rest of cases colour of endocervical material in first slide changed to brown colour on heating. Only in 1 case, on heating the second slide no colour could be obtained. Otherwise in rest of the cases it turned to white, suggesting that in cases with intact fetal membranes on heating endocervical material, the colour of material changes to brown while in cases with ruptured membranes (artificially) the colour changes to white.

The brown colour that appears on heating endocervical material from subjects with intact foetal membranes is because of carbonization of proteins present in mucus (Ferrari, 1978), when membranes are ruptured the mucus gets mixed with amniotic fluid and on heating such a

material the water of amniotic fluid evaporates and electrolyte present in amniotic fluid gives white colour.

It is very well evident that this technique is so simple and without any risk that it can be used routinely in doubtful cases to assess the integrity of foetal membranes.

#### References

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