COLLEGE of AMERICAN PATHOLOGISTS

Educational Discussion: Fetal Fibronectin

2016-A Fetal Fibronectin Survey (FF)

There was an excellent response rate to this voluntary educational exercise by FF-A 2016 participants, with nearly ninety percent of laboratories submitting answers to the case questions.

The fetal fibronectin test is used to assist in the determination of the risk for preterm delivery in pregnant women with signs and symptoms of early preterm labor when sampled between 24 weeks, 0 days and 34 weeks, 6 days gestation. Fetal fibronectin is normally elevated in cervicovaginal secretions during the first half of pregnancy. Therefore, a specimen collected during this time may show a positive result because the specimen was collected too early. A number of other pre-analytical specimen and/or patient factors may cause increased fetal fibronectin in the cervicovaginal fluid unrelated to imminent preterm delivery. The value of a given fetal fibronectin result may be compromised if these factors are not recognized.

Case 1:
A 28-year-old woman with a 26-week pregnancy arrives at the hospital with signs and symptoms of preterm labor. The cervix is dilated to 2 centimeters and there is visual evidence of gross vaginal bleeding.

	Identification	Participants No.	Participants %
Case 1	Fetal fibronectin testing is inappropriate because patient presents too early in her pregnancy.	10	0.7
	Fetal fibronectin testing is contraindicated because the cervix is dilated.	21	1.4
	Fetal fibronectin testing is contraindicated because of gross vaginal bleeding.	1314	89.7
	There are no contraindications to fetal fibronectin testing in this patient.	120	8.2

Ninety percent of respondents chose the correct answer of “Fetal fibronectin testing is contraindicated because of gross vaginal bleeding.”

Moderate to gross vaginal bleeding is an independent risk factor for preterm delivery and may be an indicator of other significant obstetric or medical complications. Assessment of the cause of the bleeding is the clinical priority under these circumstances. Furthermore, it may be difficult to interpret results from specimens with blood contamination. Assay interference by red blood cells has not been assessed for this methodology, therefore it is not known if the presence of blood could cause a false positive result.

Other examples of patient conditions that are contraindications to fetal fibronectin testing are advanced cervical dilatation (greater than 3 cm), cervical cerclage, and rupture of amniotic membranes.

Case 2:
A specimen for fetal fibronectin testing was received at room temperature, 4 hours after collection. A vaginal specimen was also received for microbiological culture from the same patient. The laboratory staff contacted the clinic and determined that the fetal fibronectin specimen was collected 5 minutes **prior** to obtaining the vaginal specimen for microbiological culture.

	Identification	Participants No.	Participants %
Case 2	The specimen should be rejected for fetal fibronectin testing since it remained at room temperature greater than 2 hours prior to receipt in the laboratory.	32	2.2
	In this case, the fetal fibronectin specimen may have been compromised by the collection of the vaginal specimen for microbiological culture.	39	2.7
	If a specimen for fetal fibronectin testing cannot be analyzed within 5 hours of collection, it must be refrigerated at 2 - 8°C and assayed within 8 hours.	51	3.5
	There are no contraindications for fetal fibronectin testing for a specimen collected and received in this manner.	1344	91.6

About ninety-two percent of participants chose the correct answer of “There are no contraindications for fetal fibronectin testing for a specimen collected and received in this manner.”

In this case, the specimen was collected prior to performance of any procedures that disrupt the cervix and was tested within the time and temperature specifications listed in the manufacturer’s instructions for use.
A specimen for fetal fibronectin testing should be collected before actions such as microbiologic sampling, digital cervical examination, and vaginal probe ultrasound, since manipulation of the

cervix may cause a falsely elevated fetal fibronectin result.

References

Fetal fibronectin test information, package inserts, and manuals available at: http://www.hologic.com/products/clinician-diagnostic-solutions/perinatal/ffn-test. Accessed June 24, 2016.

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