

Survey of Diagnostic Criteria for Fetal Distress in Latin American and African Countries: Over Diagnosis or Under Diagnosis?

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To the editor,

Ajah LO et al., paper titled "Evaluation of Clinical Diagnosis of Fetal Distress and Perinatal Outcome in a Low Resource Nigerian Setting", recently published in the journal, was carefully read by us [1]. This retrospective study (2008-2014) aimed to assess the diagnostic criteria for Fetal Distress (FD) by examining 3761 medical records of women who underwent cesarean section. Out of these, a subset of 326 (8.9%) were indicated due to FD, however only 29.1% (99/326) of newborns exhibited a first minute Apgar score of <7. Those results highlight the potentially high number of over diagnosis of FD resulting in unnecessary and risky medical procedures [1]. Since FD is a topic not widely and deeply investigated worldwide, its epidemiological data are limited and great potential for misclassification (over diagnosis or under diagnosis) exists. In our country (Peru), the prevalence of FD among pregnant teenagers has been estimated to be as high as 22% [2], which contrasts with the overall 8.3% reported in this article [1]. Because of this, we aimed to review the different diagnostic criteria reported in studies from Latin America and Africa in order to compare them.

A scoping search in PubMed/Medline and Google-Scholar, restricted to articles published within the last ten years from countries within Latin America and Africa, was performed. It resulted in an extensive number of articles reporting a wide range of standards for diagnosing FD. We also distinguished between standards used for research (published papers) and those used for clinical practice (clinical guidelines). [Table/Fig-1] summarizes the different diagnostic criteria reportedly used in published studies from four countries

[3-7]. Moreover, in regards to clinical practice, differences do exist. In Peru, as in other Latin-American countries, FD diagnosis is based in the CLAP, a standardized OMS/OPS guideline to approach perinatal and mother's health. This involves the interpretation of the Fetal Heartbeat (FHB) which is also known as DIPS (a drop in FHB due to transient umbilical vein obstruction, with length variations, uterine contractions for a minimal 40 second duration) [6]. On the other hand, according to the "Guidelines of Maternity Care in South Africa," FD is considered to be an acceleration or deceleration on FHB diagnosed via auscultation or cardiotocography [8]. In summary, there are differences in the diagnostic criteria between these two settings which are largely reflected in papers and guidelines.

Having multiple non-uniform diagnostic criteria for a given condition around the world, could be the result of many factors (availability of human resources in health, diagnostic technologies and guidelines). This potential misclassification, whose magnitude still needs to be quantified, might cause problems at several levels in the health care system such as surveillance, planning, resources allocation, medical procedures, treatments, and even prognosis. As a general recommendation, we advocate to improve diagnostic standards, which may lead to a decrease in misclassification of FD as well as improving its control and research for the good of the public health.

REFERENCES

- [1] Ajah LO, Ibekwe PC, Onu FA, Onwe OE, Ezeonu TC, Omeje I. Evaluation of clinical diagnosis of fetal distress and perinatal outcome in a low resource Nigerian setting. *J Clin Diagn Res.* 2016;10(4):8-11.
- [2] Tomaylla E. Main indications of cesarean section in primigravide adolescents, San Juan de Lurigancho Hospital (Translated from Spanish). *Rev Per Obst Enf.* 2011;7(2):128-34 [Access date November 24, 2016].
- [3] Ogbona L, Chudi P, Agwu F, Emeke O, Chinonylen, Omeje I. Evaluation of clinical diagnosis of fetal distress and perinatal outcome in a low resource Nigerian setting. *J Clin Diagn Res.* 2016;10(4):08-11.
- [4] Idowu A, Olumuyiwa J. Clinical suspicion, management and outcome of intrapartum fetal distress in a public hospital with limited advanced fetal surveillance. *J Matern Fetal Neonatal Med.* 2016.
- [5] Mgaya A, Litorp H, Lidanto H, Nyström L, Essén B. Criteria-based audit to improve quality of care of foetal distress: standardising obstetric care at a national referral hospital in a low resource setting, Tanzania. *BMC Pregnancy and Childbirth.* 2016;16(343):1-10.
- [6] Fescina R, De Mucio B, Díaz J, Martínez G, Serruya S, Durán P. Guidelines for the continuous care of women and the newborn focused on PHC (Translated from Spanish). 3rd ed. Montevideo: CLAP/SMR;2011.
- [7] Saquicela T, Ormaza A. Cord blood gasometry in newborns with diagnosis of acute Fetal Suffering (Translated from Spanish). *Rev Med HJCA.* 2014;6(1):55-57.
- [8] Maternity Guidelines Committee. Guidelines for Maternity Care in South Africa. 4th ed. South Africa: National Department of Health; 2015.

	References	Country	Study period	Heart Rate (Heart beat/min (HB))	Mec-onial Amniotic Fluid	Ph	AP-GAR	Decrease in fetal movement
Africa	Ogbona L et al., [3]	Nigeria, Abakaliki	2008-2014	<120 ;<160	Yes	No	No	No
	Idowu A and Olumuyiwa J [4]	Nigeria, Adoekiti	2012-2014	<120;>160	Yes	No	No	No
	Mgaya A et al., [5]	Dar es Salaam, Tanzania	2013-2015	<100 ;>180, irregular HB post hydration.	Yes	No	No	Yes
Latin-America	Fescina R et al., [6]	Lima, Perú	2011	Dips . FC 100-119, or >160.	No	No	No	No
	Saquicela T and Ormaza A [7]	Cuenca, Ecuador	2009	Vatiation on FHB	Yes	Acid-osis	<7	No

[Table/Fig-1]: Summary of diagnostic criteria for fetal distress reported in selected published papers from Latin America and Africa (n=5).

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