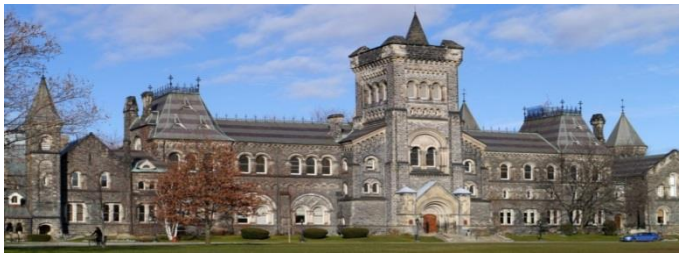
Measurement of fetal scalp lactate for determining fetal well-being in labour

Dr. Sheida Naderi-Azad

University of Toronto Medical School, Canada

Abstract

Statement of the problem: Inadequate oxygen supply may lead to the respiratory acidosis (pH < 7.35) and increased lactate in the blood. Upon membrane rupture during labour, one can measure lactate and pH levels in a sample of blood taken from the baby's scalp. While both fetal scalpe lactate and pH have been previously used in predicting adverse outcomes in labour, there is a paucity of information on which marker is superior in this regard. This study examines the measurement of fetal scalp lactate superior to fetal scalp pH in predicting adverse fetal/newborn outcomes and successful acquisition of a usable sample among women at term in labour. Methodology and theoretical orientation: A systematic review of the literature was conducted using Medline, Embase, Cochrane, and Central databases. A total of 250 articles were included in this review. Articles were further selected based on recency of publication as well as inclusion and exclusion criteria. Participants included women at term in labour. The intervention was fetal assessment using fetal scalp lactate. The primary outcomes were apgar scores at 5 minutes, hypoxic ischemic encephalopathy, and admission to NICU. The secondary outcomes included umbilical cord arterial pH <7, and umbilical cord arterial base deficit >12. Findings: The results indicate that there are no statistically significant differences in Apgar scores at five minutes, admission to a NICU, or hypoxic ischemic encephalopathy. There are also no statistically significant differences in rates of umbilical artery cord pH < 7 or base deficit > 12 mmol/L. There are, however, significantly higher sampling success rates for scalp lactate samples compared to sampling for scalp pH testing. Conclusion and significance: These results indicate that the measurement of fetal scalp lactate is equivalent to fetal scalp pH for clinical decision-making to avoid adverse neonatal outcomes. Fetal scalp lactate sampling requires less time and is associated with fewer failed sampling attempts. Further research is needed to determine optimal values to indicate risk for neonatal morbidity.



Biography:

Sheida Naderi-Azad has completed her Bachelor of Science in Microbial and Environmental Pathophysiology from University of British Columbia and is currently an MD Candidate at the University Of Toronto Faculty Of Medicine. She has an expertise in immunology and oncology, with a deep interest in changing metabolic demands with aging. She has most recently completed a summer studentship at the Dana Farber / Harvard Cancer Centre. She has had numerous published articles and presentations on cancer therapeutics, inflammatory conditions and women's health.

Speaker Publications:

1. "Psoriasis: Treating the skin and the mind"
2. "Lessons from the First Wave of the Pandemic: Skin Features of COVID-19 can be Divided into Inflammatory and Vascular Patterns"
3. "Cutaneous immune-related adverse events in patients with metastatic melanoma on antiprogrammed cell death protein 1 and anticytotoxic T-lymphocyte–associated protein 4 therapy: A retrospective cohort study"
4. "256 Differences in immune-related adverse events between vulvovaginal vs. cutaneous melanoma: a retrospective cohort study"
5. "A Wound Care Specialist's Approach to Pyoderma Gangrenosum"

3rd World Congress on Polycystic Ovarian Syndrome and Fertility, Webinar, November 26-27, 2020

Abstract Citation:

Dr. Sheida Naderi-Azad, Measurement of fetal scalp lactate for determining fetal well-being in labour, PCOS Congress 2020, 3rd World Congress on Polycystic Ovarian Syndrome and Fertility, Webinar, November 26-27, 2020

https://pcos.healthconferences.org/2020