169 Late preterm birth: an iatrogenic epidemic?

Erin A. S. Clark[1], Jeff M. Denney[1], Corette Parker[2], Norma Pugh[2], Michael Varner[1], Robert M. Silver[1]
[1]University of Utah, Salt Lake City, Utah, [2]Research Triangle International, Research Triangle Park, North Carolina

OBJECTIVE: Late preterm birth (LPTB), defined as delivery between 34 and 36 6/7 weeks gestation, is a significant and increasingly common cause of neonatal morbidity and mortality. The rate of LPTB increased 25% from 1990-2006 and now constitutes more than 70% of all preterm births. We hypothesize that a proportion of LPTB occurs without generally accepted medical indication. Our purpose was to determine whether the recorded indication for delivery was well supported by accepted medical indications in a cohort of LPTB.

STUDY DESIGN: Retrospective cohort study of LPTB from 2007-2009 in two tertiary care centers and two community hospitals in Salt Lake City, UT. Subjects were included if they delivered a live born infant between 34 and 36 6/7 weeks gestation. Data were abstracted from maternal and neonatal medical records. An instrument created prior to data collection was used to explicitly define criteria for generally accepted medical indications for LPTB. Criteria were based on current ACOG Committee Opinions, Guidelines, and Technical Educational Bulletins, as well as consensus expert opinion. The quality of evidence supporting the recorded indication for LPTB was assessed using this instrument.

RESULTS: 250 LPTB were analyzed. 19.6% of LPTB cases (49/250) did not meet criteria for a generally accepted medical indication. The diagnoses placenta previa, preeclampsia, oligohydramnios, abruption, maternal disease and SGA had the highest percentage of cases without a generally accepted indication. (Table 1)

CONCLUSION: Almost one fifth of LPTB, and its neonatal sequelae, is potentially avoidable. Research is needed to determine the optimal balance between prematurity and the consequences of continuing at-risk pregnancies.

Indication	n/N	%
Previa	3/5	60.0
Preeclampsia	19/37	51.4
Oligo- hydramnios	7/14	50.0
Abruption	3/6	50.0
Maternal disease	5/10	50.0
SGA	6/13	46.2
Fetal abnormality	6/16	37.5
Abnl fetal surveillance	3/14	21.4
Preterm labor	13/110	11.8

0002-9378/$ – see front matter • doi:10.1016/j.ajog.2009.10.184

170 Management of obstetric hemorrhage: does the emergency hemorrhage protocol decrease complications associated with cesarean hysterectomy?

Shelly-Ann James[1], Todd Griffin[1], Paul Ogburn[1], Rishimani Adsumelli[2], Jerasimos Ballas[1], Adriann Combs[1], Antonietta Lynch[1], Susan Little[1], Cecilia Avila[1], Reinaldo Figueroa[1], J. Gerald Quirk[1]
[1]Stony Brook-Winthrop University Hospitals, Long Island, New York, [2]Stony Brook University, Anesthesiology, Stony Brook, New York

OBJECTIVE: The purpose of this study is to evaluate the effectiveness of an internally developed obstetrical hemorrhage protocol (OHP) to decrease complications associated with Cesarean Hysterectomy.

STUDY DESIGN: In 2005, an emergency OHP was developed at our institution by an interdisciplinary task force. This OHP (complete with training drills, prewritten orders, and communication systems) mobilized resources such as blood products and personnel, in order to facilitate rapid and appropriate response to emergency obstetric hemorrhage (EOBH). Each episode of clinical activation of the OHP was evaluated and data was collected for continuous improvement activities. In order to evaluate the effectiveness of the OHP, outcomes associated with cesarean hysterectomies (CH) performed before and after the implementation were compared. Inclusion criteria were all the admissions to Labor & Delivery unit during 2004-2008 that included CH (defined as the complete removal of the uterus at the time of delivery whether emergently or planned). Endpoints were blood transfusions, length of stay in hospital, ICU admission, time to transfusion, quantity of transfusion, postoperative complications, and evidence of DIC.

RESULTS: 58 patients had CH were evaluated (30 pre-OHP and 28 post-OHP) Patients undergoing peripartum hysterectomy post initiation of the OHP had decreased estimated blood loss [pre-OHP 3619+212 ml vs. post-OHP 3071+240 ml, p=0.04], decreased intensive care unit length of stay [pre-OHP 1.03+0.23 d vs. post-OHP 0.50+0.11 d, p=0.001] and decreased time to transfusion [pre-OHP 43.9+8.5 minutes vs. post-OHP 25.0+5.6 minutes, p=0.03]. There was no difference in the two groups in length of stay in the hospital, quantity of transfusion, postoperative complications or evidence of DIC.

CONCLUSION: Our results suggest that the implementation of our OHP has been effective in improving outcomes for patients undergoing peripartum hysterectomy for life-threatening hemorrhage.

0002-9378/$ – see front matter • doi:10.1016/j.ajog.2009.10.185

171 The frequency and clinical significance of intra-amniotic infection in women with placenta previa and vaginal bleeding: an unexpected observation

Ichchha Madan[1], Roberto Romero[2], Juan Pedro Kusanovic[1], Pooja Mittal[1], Tinnakorn Chaiworapongsa[1], Zhong Dong[2], Shali Mazaki-Tovi[1], Edi Vaisbuch[1], Zeynep Alpay Savasan[1], Lami Yeo[1], Sonia S. Hassan[1]
[1]Wayne State University School of Medicine, Detroit, Michigan, [2]Perinatology Research Branch, NICHD/NIH/DHHS, Bethesda, Maryland, and Detroit, Michigan

OBJECTIVE: Idiopathic vaginal bleeding is a common complication of pregnancy and increases the risk of SGA, preterm delivery and preeclampsia. Placenta previa has been thought to be protective against ascending intrauterine infection, yet histologic studies have found an excess of histologic chorioamnionitis in this condition. Therefore, we undertook a study to determine if intra-amniotic infection/inflammation (IAI) is present in women with placenta previa and vaginal bleeding, its frequency and clinical significance.

STUDY DESIGN: A retrospective cohort study of women with placenta previa and vaginal bleeding <37 weeks of gestation who underwent amniocentesis was undertaken. Patients with multiple gestations were excluded. Intra-amniotic infection was defined as a positive culture for microorganisms, and intra-amniotic inflammation as an elevated amniotic fluid IL-6 concentration. IL-6 concentrations were determined by ELISA in 28 amniotic fluid samples available. Non-parametric statistics were used for analysis.

RESULTS: 1) The prevalence of intra-amniotic infection was 5.7% (2/35), and that of IAI was 17.9% (5/28); 2) the gestational age at delivery was lower in patients with IAI than in those without IAI (29.4 weeks, IQR: 23.1-34.7 vs. 35.4 weeks, IQR: 33.9-36.9; p=0.028); and 3) patients with placenta previa and IAI had a higher rate of delivery within 48 hours (80% (4/5) vs. 19% (4/21); p=0.008) than those without IAI.

CONCLUSION: Patients with placenta previa presenting with vaginal bleeding have intra-amniotic infection in 5.7% of the cases, and intra-amniotic infection/inflammation in 17.9%. IAI, in patients with placenta previa and vaginal bleeding, is a risk factor for preterm delivery within 48 hours.

0002-9378/$ – see front matter • doi:10.1016/j.ajog.2009.10.186