Traumatic Brain Injury during Pregnancy: Caring through Collaboration

HCA MIDWEST HEALTH
OVERLAND PARK REGIONAL MEDICAL CENTER

Christine McAtee, LSCSW and Susan Thrasher, APRN, RNC-OB, C-EFM

LEARNING OBJECTIVES

After viewing this presentation, participants will be able to navigate the following new horizons:

1. Identify useful approaches to collaborative, interdisciplinary care.
2. Learn about alternate screening methods for gestational diabetes mellitus (GDM).
3. Recognize when to offer and what to discuss regarding counseling for Neonatal Abstinence Syndrome (NAS).

CASE STUDY: R.P.

History of Present Illness: 22 y/o, G1, SWF, scheduled for planned admission to tertiary care Antepartum unit at 35 6/7 weeks gestational age (GA) secondary to traumatic brain injury (TBI).

- R.P. was aphasic, wheelchair bound, and had minimal weight bearing ability.
- She had intact bowel and bladder function and required a two-person transfer.
- Primary form of communication was minimal hand signals and shrugging.
- At the time of admission, R.P. was not up to date on immunizations, was not taking a daily prenatal vitamin, and had not been screened for GDM between 24—28 weeks GA.

Background: Ejected from a car during a motor vehicle collision (MVC) at 11 weeks GA. Suffered a closed head injury and underwent a right sided decompressive craniotomy, resulting in a 10 cm cranial flap. Resided in two separate rehabilitation facilities prior to admission at 35 weeks.

- Past Medical History: epilepsy, last seizure one month before MVC; *Clostridium difficile* colitis; vancomycin-resistant enterococci (VRE) urinary tract infection; malnutrition during pregnancy.
- Social History: social use of marijuana and methamphetamines; previously employed at a fast food establishment; father of baby unknown; temporary guardianship established through hospital attorney prior to admission; primary support person was R.P.'s mother.
- Medications: cyclobenzaprine, diphenhydramine, enoxaparin sodium, famotidine, folic acid, gabapentin, lamotrigine, lorazepam, oxycodone/acetaminophen, and topiramate.

INTERPROFESSIONAL CARE TEAM

Anesthesiology	Neonatal intensive care unit nursing staff
Antepartum nursing staff	Neonatology
County court system	Nephrology
Dietary	Neurology
Infection control	Occupational therapy
Insurance case management	Pharmacy
Intensive care unit nursing staff	Physical therapy
Kansas Department of Children and Families	Rehabilitation staff
Labor & Delivery unit nursing staff	Risk management
Maternal-fetal medicine	Social workers
Mother-Baby unit nursing staff	Speech therapy

INTERPROFESSIONAL CARE TEAM MEETINGS

- An interdisciplinary, collaborative approach is required to meet the needs of all pregnant women and their families (Schmied et al., 2010; Raab et al., 2014).
- Communication was facilitated during team meetings which eased transition of care from one service to another.
- Interprofessional meetings fostered collegial respect and trust.
- Weekly meetings began as soon as R.P. was accepted into OB practice (three weeks before admission).
- Discussions about healthcare decisions (consent for immunizations and cesarean section delivery) were ongoing with court appointed guardian.
- Planning for R.P.'s discharge started at admission to plan for a smooth transition of care.

GESTATIONAL DIABETES MELLITUS SCREENING

R.P. was unable to consume glucola within five minutes due to silent aspiration as evidenced by poor labial seal when drinking. Ordered to have nectar-thickened liquids.

Alternatives to recommended glucola screening for GDM:

50-gram glucose food (ex. jelly beans) (Farrar, Duley, Medley, & Lawlor, 2015).	R.P. was unable to chew required amount of food in short time span. This method was not utilized.
HgA1c (Juarez et al., 2014; Su et al., 2014).	***This method was selected.*** R.P.'s HgA1c result was 4.4%, indicating her average blood sugar readings over the past three months were approximately 80 mg/dL.
Fructosamine blood values (Feitosa & Andrade, 2014).	This method was not utilized as it is not a common method for screening for GDM in the United States and an HgA1c was easily obtained.

NEONATAL ABSTINENCE SYNDROME

R.P.'s newborn was at high risk of experiencing Neonatal Abstinence Syndrome (NAS) due to high dose, chronic oxycodone exposure following MVC at 11 weeks.

Anticipatory counseling for families at risk for NAS at OPRMC:

1. No data exists to definitively stratify risk for NAS based on specific maternal opiate use. Individual differences must be considered.
2. Prenatal consultation with neonatologist to discuss potential for NAS in newborn.
3. Discuss plan of care following delivery, including admission to Neonatal Intensive Care Unit (NICU) for a minimum of five to seven days. Discharge dependent on close follow-up.
4. Educate families on behaviors displayed by newborns that indicate NAS and how evaluated by nurses.

CONCLUSION

- R.P. was delivered by primary, low-transverse cesarean section at 39 weeks due to frank breech presentation of fetus.
- A viable male infant was born weighing 2495 gm with Apgar scores of 8, 9, and 9.
- "Baby R.P." was admitted to the NICU for close surveillance. No evidence of NAS was noted.
- R.P. was discharged home following delivery after an uneventful postpartum course. She was readmitted six days later for repair of the open cranial flap.
- R.P. was discharged home with Baby R.P. two weeks after delivery.