



HANDLE WITH CARE THERAPEUTIC APPROACHES FOR MANAGING BABIES EXPOSED TO ALCOHOL AND OTHER DRUGS

LEARNING OBJECTIVES

- Learn common symptoms of drug exposed babies
- Learn appropriate therapeutic handling of drug exposed newborns and babies
- Understand scoring guide for babies with Neonatal Abstinence Syndrome



THE NEED FOR SCREENING

- In 2003, the National Survey on Drug Use and Health estimated 4.3% of pregnant females aged 15-44 used drugs in the US
- Withdrawal symptoms may be overlooked while dealing with other "more important" health concerns of a critically ill neonate
- The NICU nurse is crucial in assessing and diagnosing withdrawal symptoms present in the infant



THE TREATMENT OF NAS INCLUDES:

- ◉ Non-pharmacologic measures
- ◉ Narcotic administration
- ◉ Non-narcotic administration
- ◉ Non best pharmacologic administration has been described *

* Hudak, Mark, Narcotic Abstinence Syndrome, Committee of Fetus and Newborn, American Academy of Pediatrics, 2012



NON-PHARMACOLOGIC MANAGEMENT OF NAS

- ◉ EXTREMELY IMPORTANT
- ◉ Should be instituted soon after birth
- ◉ Started BEFORE pharmacologic treatment
- ◉ Treatment should continue AFTER discharge



COMMON SYMPTOMS

There are characteristics and symptoms that drug exposed babies will have in common. The nature of these – their frequency and timing will depend on factors such as:

- The drug that the baby was exposed to
- How each individual baby metabolizes the drug
- The baby's own tolerance

No two babies will react exactly alike. It is the responsibility of the caregiver to carefully monitor and "read" the infant and the signs.



General Symptoms of NAS

- Tremors
- Irritability (excessive crying)
- Sleep Problems
- High-pitched crying
- Tight muscle tone
- Hyperactive reflexes
- Seizures
- Sweating
- Yawning, stuffy nose and sneezing
- Poor feeding and suck
- Vomiting
- Diarrhea
- Dehydration
- Fever or unstable temperature

Symptoms Common in Premature Infants

- Tremors
- High-pitched crying
- Rapid breathing
- Poor feeding

HYPERSENSITIVITY TO STIMULI

- ◉ One of the most common traits
- ◉ Little tolerance to stimuli
- ◉ Swallowing, closeness, sound, can escalate baby into “frantic” state
- ◉ Babies need protection from overstimulation but should not be stimulus-deprived.

CHANGES TO MUSCLE TONE

- Muscle tone is the degree of stiffness
- Unusually limp or unusually stiff
- Particularly in limbs and neck
- Stiffness may “come and go”
- Tremors, jerking, other signs of distress - sign of baby trying to control uncomfortable sensations.



GASTROINTESTINAL PROBLEMS

- Drugs attack gastric system - 12 mos
- Watery stool, explosive diarrhea, excoriated buttocks, gas, constipation
- Need proper handling to prevent serious health concerns
- Distress and high stimulation can increase
- Diarrhea can irritate fragile lining of the intestines and also lead to dehydration.



OTHER RELATED COMPLICATIONS

- Chronic Ear Infection
- Unexplained fever (opiates and opioids)
- Sleep/wake irregularity
- Extreme appetite (barbiturates)
- Hyperreflexia/Moro



Important Points to Remember

- Symptoms of NAS may vary in regards to substance used and time of last use
- Symptoms of withdrawal may begin as early as 24-48 hours after birth or as late as 5-10 days after birth
- Alcohol withdrawal may begin within a few hours after birth

Finnegan Scale

- Assessment tool
- Assists in determining appropriate time for intervention based on symptoms
- Scoring focused on three body systems
 - CNS
 - Metabolic/Vasomotor/Respiratory
 - GI
- Each system includes signs & symptoms with an assigned score

SYSTEMS	SIGNS AND SYMPTOMS	SCORE	DAILY WY															
			1	2	3	4	5	6	7	8	9	10	11	12				
CENTRAL NERVOUS SYSTEM DISTURBANCES	High Pitched Cry	2																
	Continuous High Intensity Cry	3																
	Sleeps < 1 Hour After Feeding	3																
	Sleeps < 2 Hours After Feeding	2																
	Hyperactive Moro Reflex	2																
	Markedly Hyperactive Moro Reflex	3																
	Mild Tremors Undisturbed	2																
	Moderate Severe Tremors Disturbed	1																
	Mild Tremors Undisturbed	1																
	Moderate Severe Tremors Undisturbed	2																
METABOLIC/VASOMOTOR/ RESPIRATORY DISTURBANCES	Increased Muscle Tone	2																
	Excitation (specify area)	1																
	Myoclonic Jerks	3																
	Generalized Convulsions	3																
	Sweating	1																
	Fever < 101°F (39.3°C)	1																
	Fever > 101°F (39.3°C)	2																
	Frequent Vomiting (> 3-4 times/interval)	1																
	Mottling	1																
	Nasal Stuffiness	1																
GASTROINTESTINAL DISTURBANCES	Emesis (in 2-4 times/interval)	1																
	Nasal Flaring	2																
	Respiratory Rate > 60/min	1																
	Respiratory Rate < 60/min with Retractions	2																
	Excessive Sucking	1																
	Poor Feeding	2																
	Regurgitation	2																
	Projectile Vomiting	3																
	Green Stools	2																
	Watery Stools	3																
	TOTAL SCORE																	
	SCORE'S INITIALS																	
	STATUS OF THERAPY																	

Adapted from Finnegan L. Neonatal abstinence syndrome: assessment and pharmacotherapy. Neonatal Therapy: An update, F.F. Rubalshi and B. Grant, editors. Elsevier Science Publishers B.V. (Biomedical Division), 1986: 122-146

Figure. Modified Finnegan's Neonatal Abstinence Scoring Tool (98)

NAS SCORING TOOL

- ◉ Set of observed signs and symptoms in the infant
- ◉ Observed at regular intervals - every 3 hours
- ◉ Should reflect all symptoms observed since the last scoring
- ◉ High scores that are not lowered by therapeutic handling should be assessed for medical intervention
- ◉ Use score to dictate appropriate nursing interventions/comfort measures



NAS Nursing Protocols

Reduce environmental stimuli:

- ◉ Place infant in a quiet room with dim lighting and low activity
- ◉ Move infant away from telephone, sink, high traffic areas; slamming doors
- ◉ Use slow movements and avoid talking at the bedside
- ◉ Prepare everything prior to disturbing the infant to minimize handling
- ◉ Present one stimulus at a time (rocking, voice, soft music, etc)

Supportive therapy

- ◉ Wrap or swaddle infant
- ◉ Hold newborn infant firmly and close to the body
- ◉ Promote skin to skin contact
- ◉ Massage infant or try relaxation baths
- ◉ Play heart beat sounds
- ◉ Decrease stimulation at first signs of distress
- ◉ Consult with mother re use of pacifier for excessive sucking
- ◉ use mittens to prevent trauma to fingers & wrists
- ◉ Feed on demand – give frequent small feeds with rests between sucking
- ◉ Assess coordination of suck/swallow reflex – support cheeks and jaw if necessary
- ◉ Change diaper frequently, use barrier cream to protect skin/prevent damage; do not use commercial wipes (saline and 4x4's should be used)
- ◉ Use gentle suction if nasal secretions cause obstruction to ensure adequate respiratory function

THERAPEUTIC HANDLING

- ◉ Caregivers need appropriate training
- ◉ Comforting techniques are critical to management of withdrawing infants
- ◉ Each type of drug exposure presents unique challenges
- ◉ Basic principles of handling apply to all



EIGHT PRINCIPLES

- Swaddling
- C-Position
- Head to Toe Movement
- Vertical Rock
- Clapping
- Feeding
- Controlling the Environment
- Introducing Stimuli



PRINCIPLE #1 SWADDLING

- Drug exposed infants cannot do three things simultaneously - body, breathe, suck
- Swaddling provides comfort in helping them to control their bodies
- Allows them to focus on breathing - then feeding with greater comfort.



PRINCIPLE #2 - C-POSITION

- Increases sense of control and ability to relax
- Hold baby firmly and curl head and legs into a C (Chin near the chest, arms midline, back slightly rounded, legs bent in upright position)
- When laying down - place on side, wrap blanket into a role around body.
- Then introduce back position for sleeping as recommended by Academy of Pediatrics.



PRINCIPLE #3 "HEAD TO TOE"

- Back and forth motions not recommended
- Slow, rhythmic swaying following line from head to toe while swaddled and held in C position is comforting.
- Keeping movement slow and rhythmic will help relax and settle the infant.



PRINCIPLE #4 VERTICAL ROCK

- Best when baby is frantic and hard to calm
- Maintain C position and hold directly in front of you and turned away.
- Slowly and rhythmically rock baby up and down - soothes neurological system.
- Be aware of personal energy level - keep baby at a distance while rocking if necessary.



PRINCIPLE #5 - "CLAPPING"

- Cup hand
- Clap/pat baby's blanketed bottom
- Clap slow and rhythmically
- Baby's muscles may start to relax
- This technique does not work with all babies - if baby does not respond, discontinue.



PRINCIPLE #6 - FEEDING

- Withdrawal may adversely affect sucking - babies may suck frantically or have disorganized suck
- Makes it difficult for them to take in enough formula or to breastfeed
- The key is to get baby relaxed enough to suck steadily in a low-stimulus environment.
- Baby should be swaddled and in C-position



PRINCIPLE #7 - CONTROLLING THE ENVIRONMENT

- Limit number of caregivers
- Offer calm surroundings
- Minimize any loud noise - music and voices should be low volume
- Keep lights low
- Caregiver should have calm presence
- Routine is beneficial



MANAGING INITIAL STAGES OF WITHDRAWAL

- Swaddle with cotton thermal receiving blanket.
- Curl infant body into C-position
- Do not speak loudly into face
- Sway rhythmically (do not jiggle)
- Feed more frequently (due to calorie burning)
- Cotton products are a 'must' throughout withdrawal period
 - Do not remove clothes for increased temperature due to withdrawal



MANAGING INFANTS DURING WITHDRAWAL - 7 STEPS

- ◉ #1 - Control Environment
- ◉ #2 - Learn baby's cues
- ◉ #3 - Attempt to calm crying EARLY
- ◉ #4 - If difficulty regaining control - swaddle & vertical rock,
- ◉ #5 - Gradually introduce stimuli
- ◉ #6 - Gradually introduce AMOUNT of stimuli
- ◉ #7 As infant's ability to remain calm increases, unwrap for short periods of time



POINTS TO REMEMBER

- ◉ SEN babies are at elevated risk for SUIDS - ensure family has safe sleeping environment.
- ◉ Mothers at elevated risk for PPD or relapse - identify support system.
- ◉ Caregivers need to know how to handle SEN babies - ensure special instruction is provided and ongoing.



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