STANDARD TREATMENT WORKFLOW (STW)

Neonatal Jaundice in Infants ≥ 35 weeks

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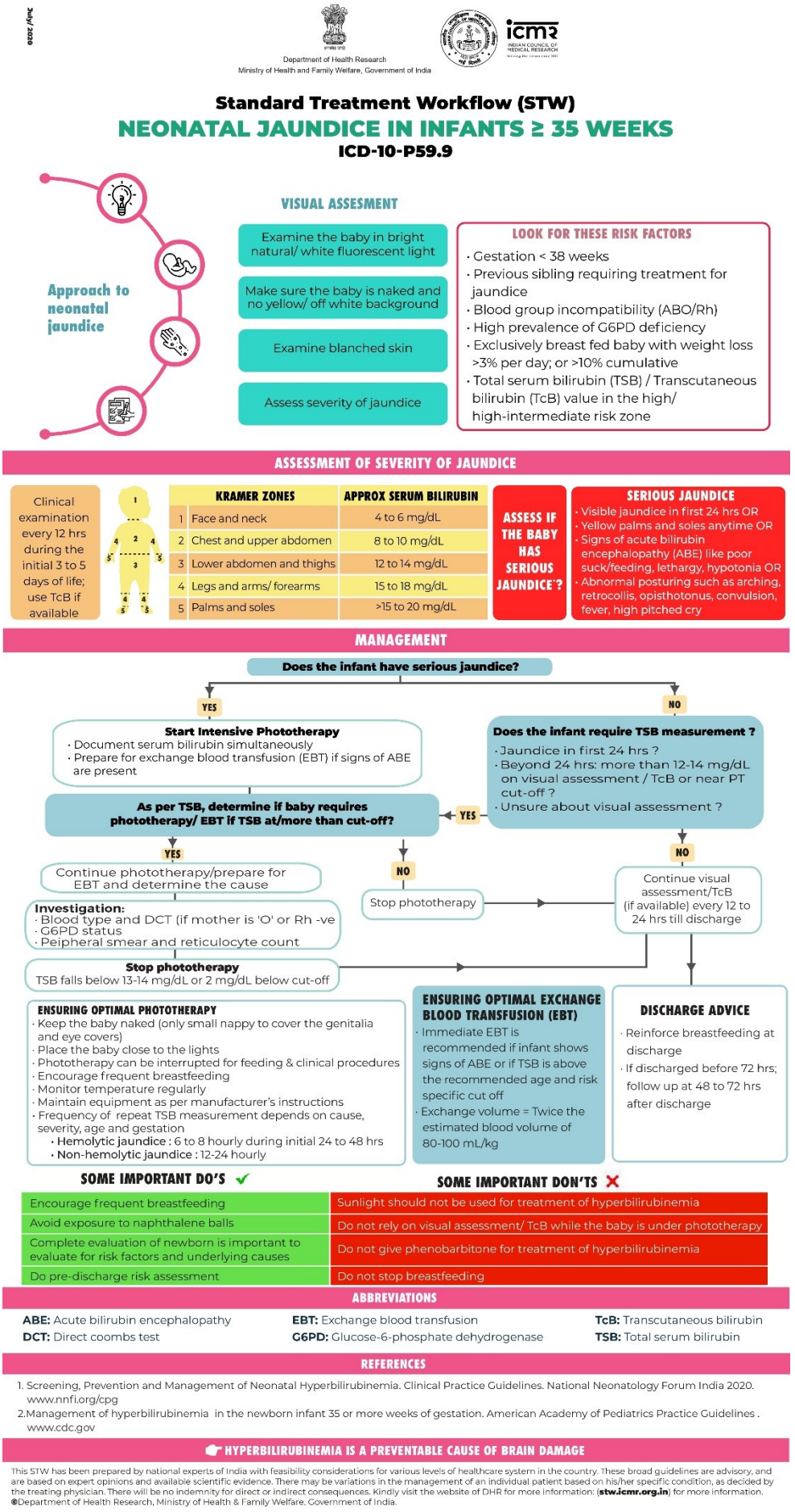
CITATION

Deorari AK, Kumar P, Adhisivam B, Sachdeva A, Jain A, Mehta A, Mallick AK, Yadaiah D, Chawla D, Gathwala G, Agrawal G, Kumutha J, Venkatnarayan K, Sankar MJ, Bharathi MS, Kabra V, Kler N, Gupta N, Plakkal N, Gohiya P, Agarwal R, Thakre R, Nanavati RN, Giridhar S, Kadam S, Verma S, Saini SS, Ramji S, Sivanandan S, Santhanam S, Murki S, Mariam SG, Jain S, Rao SPN, Nangia S, Som T, Sundaram V. Neonatal Jaundice in Infants ≥ 35 weeks. Journal of the Epidemiology Foundation of India. 2024;2(1Suppl):S29-S30. DOI: https://doi.org/10.56450/JEFI.2024.v2i1Suppl.015


July 2020
Department of Health Research
Ministry of Health and Family Welfare, Government of India
icmr
INDIAN COUNCIL OF MEDICAL RESEARCH
Standard Treatment Workflow (STW)
NEONATAL JAUNDICE IN INFANTS ≥ 35 WEEKS
ICD-10-P59.9
Approach to neonatal jaundice
VISUAL ASSESMENT
Examine the baby in bright natural/ white fluorescent light
Make sure the baby is naked and no yellow/ off white background
Examine blanched skin
Assess severity of jaundice
LOOK FOR THESE RISK FACTORS
· Gestation < 38 weeks
· Previous sibling requiring treatment for jaundice
· Blood group incompatibility (ABO/Rh)
· High prevalence of G6PD deficiency
· Exclusively breast fed baby with weight loss >3% per day; or >10% cumulative
· Total serum bilirubin (TSB) / Transcutaneous bilirubin (TcB) value in the high/ high-intermediate risk zone
ASSESSMENT OF SEVERITY OF JAUNDICE
Clinical examination every 12 hrs during the initial 3 to 5 days of life; use TcB if available
KRAMER ZONES
APPROX SERUM BILIRUBIN
1 Face and neck 4 to 6 mg/dL
2 Chest and upper abdomen 8 to 10 mg/dL
3 Lower abdomen and thighs 12 to 14 mg/dL
4 Legs and arms/ forearms 15 to 18 mg/dL
5 Palms and soles >15 to 20 mg/dL
ASSESS IF THE BABY HAS SERIOUS JAUNDICE*?
SERIOUS JAUNDICE
· Visible jaundice in first 24 hrs OR
· Yellow palms and soles anytime OR
· Signs of acute bilirubin encephalopathy (ABE) like poor suck/feeding, lethargy, hypotonia OR
· Abnormal posturing such as arching, retrocollis, opisthotonus, convulsion, fever, high pitched cry
MANAGEMENT
Does the infant have serious jaundice?
YES
NO
Start Intensive Phototherapy
· Document serum bilirubin simultaneously
· Prepare for exchange blood transfusion (EBT) if signs of ABE are present
Does the infant require TSB measurement ?
· Jaundice in first 24 hrs ?
· Beyond 24 hrs: more than 12-14 mg/dL on visual assessment / TcB or near PT cut-off ?
· Unsure about visual assessment ?
YES
As per TSB, determine if baby requires phototherapy/ EBT if TSB at/more than cut-off?
YES
NO
NO
Continue phototherapy/prepare for EBT and determine the cause
Stop phototherapy
Continue visual assessment/TcB (if available) every 12 to 24 hrs till discharge
Investigation:
· Blood type and DCT (if mother is 'O' or Rh -ve
· G6PD status
· Peipheral smear and reticulocyte count
Stop phototherapy
TSB falls below 13-14 mg/dL or 2 mg/dL below cut-off
ENSURING OPTIMAL PHOTOTHERAPY
· Keep the baby naked (only small nappy to cover the genitalia and eye covers)
· Place the baby close to the lights
· Phototherapy can be interrupted for feeding & clinical procedures
· Encourage frequent breastfeeding
· Monitor temperature regularly
· Maintain equipment as per manufacturer's instructions
· Frequency of repeat TSB measurement depends on cause, severity, age and gestation
· Hemolytic jaundice : 6 to 8 hourly during initial 24 to 48 hrs
· Non-hemolytic jaundice : 12-24 hourly
ENSURING OPTIMAL EXCHANGE BLOOD TRANSFUSION (EBT)
· Immediate EBT is recommended if infant shows signs of ABE or if TSB is above the recommended age and risk specific cut off
· Exchange volume = Twice the estimated blood volume of 80-100 mL/kg
DISCHARGE ADVICE
· Reinforce breastfeeding at discharge
· If discharged before 72 hrs; follow up at 48 to 72 hrs after discharge
SOME IMPORTANT DO'S
SOME IMPORTANT DON'TS
Encourage frequent breastfeeding
Avoid exposure to naphthalene balls
Complete evaluation of newborn is important to evaluate for risk factors and underlying causes
Do pre-discharge risk assessment
Sunlight should not be used for treatment of hyperbilirubinemia
Do not rely on visual assessment/ TcB while the baby is under phototherapy
Do not give phenobarbitone for treatment of hyperbilirubinemia
Do not stop breastfeeding
ABBREVIATIONS
ABE: Acute bilirubin encephalopathy
DCT: Direct coombs test
EBT: Exchange blood transfusion
G6PD: Glucose-6-phosphate dehydrogenase
TcB: Transcutaneous bilirubin
TSB: Total serum bilirubin
REFERENCES
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HYPERBILIRUBINEMIA IS A PREVENTABLE CAUSE OF BRAIN DAMAGE
This STW has been prepared by national experts of India with feasibility considerations for various levels of healthcare system in the country. These broad guidelines are advisory, and are based on expert opinions and available scientific evidence. There may be variations in the management of an individual patient based on his/her specific condition, as decided by the treating physician. There will be no indemnity for direct or indirect consequences. Kindly visit the website of DHR for more information: (stw.icmr.org.in) for more information.
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