CLINICALAUDIT - TO ASSESS THE PHOTOTHERAPY PROTOCOL AT ASIAN INSITITUTE OF MEDICAL SCIENCES, FARIDABAD ACCORDING TO GUIDELINES DIRECTED BY AMERICAN ACADEMY OF PEDIATRICS

INTRODUCTION

Jaundice occurs in most newborn infants. Most jaundice is benign, but because of the potential toxicity of bilirubin, newborn infants must be monitored to identify those who might develop severe hyperbilirubinemia.

The focus is to reduce the incidence of severe hyperbilirubinemia and bilirubin encephalopathy while minimizing the risks of unintended harm such as maternal anxiety, decreased breastfeeding, and unnecessary costs or treatment. Intensive phototherapy implies irradiance in the blue-green spectrum (wavelengths of approximately 430–490 nm)

OBJECTIVE

- To ensure phototherapy is started at appropriate time and level of bilirubin.
- To ensure patient risk factors are considered for phototherapy.

METHODOLOGY

- **PERIOD OF STUDY:** September'2016 –April 2017 (08 months)
- **TYPE OF STUDY:** Retrospective study
- **SAMPLING TECHNIQUE:** Convenient Sampling

SAMPLE SIZ 50

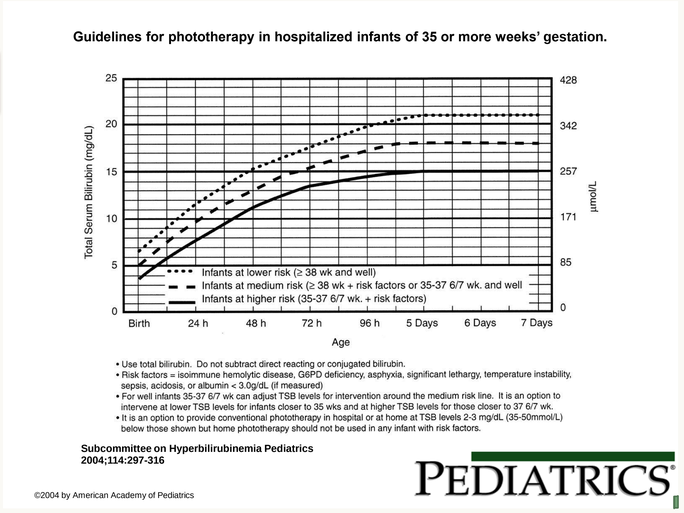
- **INCLUSION CRITERIA:** Patients who have completed or at gestational age 35 weeks and above.
- **EXCLUSION CRITERIA:** Patients of Gestational age less than 35 weeks.

GUIDELINES

The guidelines refer to the use of intensive phototherapy which should be used when the TSB (Total Serum Bilirubin) exceeds the line indicated for each category.

STANDARDS

- 100% of the pre-term babies at higher risk i.e. 35-37 6/7 weeks of gestational age with risk factors {isoimmune haemolytic disease, G6PD deficiency, asphyxia, significant therapy, temperature instability, sepsis, acidosis or albumin< 3.0 g/dl (if measured)} receive phototherapy as per American Academy of Paediatrics (AAP) guidelines.
- 100% of the pre-term babies at medium risk i.e. 35- 37 6/7 weeks of gestational age and well receive phototherapy as per AAP guidelines.
- 100% of the pre-term babies at medium risk i.e. equal to or above 38 weeks of gestational age with risk factors {isoimmune haemolytic disease, G6PD deficiency, asphyxia, significant therapy, temperature instability, sepsis, acidosis or albumin< 3.0 g/dl (if measured)} receive phototherapy as per AAP guidelines.
- 100% of the pre-term babies at lower risk i.e. equal to or above 35-37 weeks of gestational age and well receive phototherapy as per AAP guidelines.



FINDINGS

% CASES AT HIGH RISK (35-37 6/7 WEEKS + RISK FACTORS)

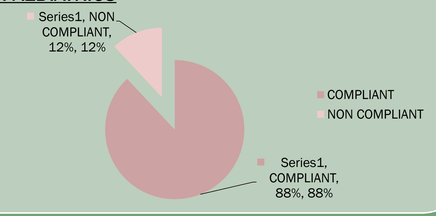
CRITERIA	TOTAL CASES	PERCENTAGE
COMPLIANCE	17	94.4%
NON COMPLIANCE	1	5.6%
TOTAL	18	

% CASES AT MEDIUM RISK (38 WEEKS AND ABOVE + RISK FACTORS)

CRITERIA	TOTAL CASES	PERCENTAGE
COMPLIANCE	12	92.3%
NON COMPLIANCE	1	7.7%
TOTAL	13	

OUT OF THE TOTAL 50 IN- PATIENT FILES AUDITED OVER A PERIOD OF 08 MONTHS I.E. FROM SEPTEMBER 2016 TO APRIL 2017, 6 FILES WERE FOUND TO BE NON- COMPLIANT TO THE GUIDELINES AS SUGGESTED BY AMERICAN ACADEMY OF PAEDIATRICS

Total Files	Compliant Files	Non-Compliant Files	% of Non Compliance
50	44	6	12%



% CASES AT MEDIUM RISK (35-37 6/7 WEEKS + WELL)

CRITERIA	TOTAL CASES	PERCENTAGE
COMPLIANCE	15	93.8%
NON COMPLIANCE	1	6.2%
TOTAL	16	

% CASES AT LOW RISK (38 WEEKS AND ABOVE + WELL)

CRITERIA	TOTAL CASES	PERCENTAGE
COMPLIANCE	4	57.1%
NON COMPLIANCE	3	42.9%
TOTAL	7	

RECOMMENDATIONS

•Proper training on phototherapy of DNB students and doctors should be done I
•nterpretation of the TSB and TCB should be done according to the graph before starting phototherapy.
•Periodicity of the audits should be incresed to 6 months rather than a year.
•Provide appropriate follow-up based on the time of discharge and the risk assessment.

CONCLUSION

According to the standards, phototherapy should be given to 100% of preterm babies at all levels of risk but the lowest rate of compliance has been noted in the low risk category (38 weeks and above + well) as compared to above 90% compliances at other levels of risks, the reason being, negligance of the doctors to the standards, wrong interpretation of the graph and Parental pressure.

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