Child Activities
### Physical Development

<table>
<thead>
<tr>
<th>Age (months)</th>
<th>Motor Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Can roll over</td>
</tr>
<tr>
<td>18</td>
<td>Can sit up</td>
</tr>
<tr>
<td>24</td>
<td>Can crawl</td>
</tr>
<tr>
<td>24</td>
<td>Can pull to stand</td>
</tr>
<tr>
<td>24</td>
<td>Can stand</td>
</tr>
<tr>
<td>24</td>
<td>Can walk</td>
</tr>
</tbody>
</table>

### Personal-Social Behavior

<table>
<thead>
<tr>
<th>Age (months)</th>
<th>Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Eats food with a spoon</td>
</tr>
<tr>
<td>18</td>
<td>Drinks from a cup</td>
</tr>
<tr>
<td>24</td>
<td>Drinks from a cup</td>
</tr>
<tr>
<td>24</td>
<td>Uses a toothbrush</td>
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### Language

<table>
<thead>
<tr>
<th>Age (months)</th>
<th>Milestones</th>
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<tbody>
<tr>
<td>12</td>
<td>No words</td>
</tr>
<tr>
<td>18</td>
<td>Single words</td>
</tr>
<tr>
<td>24</td>
<td>Simple sentences</td>
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### Emotional Development

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Typical Classes and Objects
PHASE I

HISTORY TAKING

Identification
  - Name
  - Mother's name
  - Age of the mother
  - Address

Social History
  - Socio-economic status

Obstetrics History
  - Mother's parity
  - LMP
  - DOD
  - Type of delivery
  - APGAR score
  - Resuscitation

Maternal History
  - Mother's blood group
  - Diabetes
  - Heart diseases
  - Drug during pregnancy
  - Syphilis
  - Jaundice
  - Toxaemia
  - Tuberculosis
  - Any other disease(s)

Neonatal Parameters
  - Weight at birth
  - Head circumference
  - Length
  ...
PHASE II

ROUTINE EXAMINATION OF NEW BORN

Inspection

Palpation

Percussion

Auscultation

Weight

Gestational Age

General Condition

Physical Anomaly

Neonatal Reflex

CVS

Abdomen

- Lethargic
- Active
- Cyanosis
- Jaundice
- Oedema
- Pallor

- Cleft Lip / Palate
- Talipes
- Equinovarus
- Umbilical Hernia

- Moro's reflex
- Rooting reflex
- Placing reflex

- Pulse
  a) 100-140/M
  (Normal)
  b) <100 or >180
  / M (Abnormal)
  c) Murmure
  (Present/absent)

- Soft
- Distended
- Tender
- Muscle Guard
- Ascites
- Liver
  a) within 2 cms
  (Normal)
  b) more than 2 cms
  (Abnormal)
- Spleen
  a) Tip palpable
  (Normal)
  b) Enlarged
- Kidney
  a) Not palpable
  b) Normally palpable
  c) Lump
PHASE III
SYMPTOM / COMPLAINT
Yellow Colouration of Skin and / Sclera
Symptom related Queries by the Physician
1. Date of Appearance
2. Gradually progressing
3. Blood Group of mother
4. Gravida
5. History of Jaundice / Hydros-fetalis in previous child
6. History of Jaundice of the mother
7. History of Maculopapular rash or any infection of mother

Symptom Related Examination

Provisional Diagnosis of Neonatal Jaundice
PHASE IV

Differential Diagnosis

1. Physiological Haemolytic Disease
2. Septicemia
3. Intra-uterine infection
4. Cytomegalovirus inclusion bodies
5. Toxoplasmosis
6. Familial non-haemolytic Jaundice
7. Biliary Atresia
8. Neonatal Hepatitis
9. Hereditary Spherocytosis
10. Drug induced Haemolytic Anaemia
11. Galactosemia
12. Ingested bile syndrome bile
13. Cretinism

MANAGEMENT

Investigation

Preliminary Treatment

FINAL DIAGNOSIS

TREATMENT
**FINAL DIAGNOSIS & TREATMENT**

### An Example

#### Specific Signs and Symptoms

1. Day - 3rd - Onwards
2. Lethargy
3. Refused to Suck
4. Poor Cry
5. Poor Reflex
6. Circumoral Cyanosis
7. Vomiting
8. Irretability
9. Apneic-spell
10. Loose Motion
11. Abdominal Distention
12. Hyperthermia & Hypothermia
13. Failure to gain weight
14. Ecchymosis / Perpiric rash
15. Staphylococcal Skin Infection
16. Umbilical Sepsis
17. Pallor
18. Convulsion
19. Sclerema
20. Dic & Shock
21. Necrotizing Enterocolitis

#### Jaundice due to Septicemia

#### Specific Investigations

- a. Blood Culture
- b. Swab Culture
- c. TC, DC, Hb% Toxic granules & Band cells
- d. 'C' Reactive Protein

#### Treatment According to drug Sensitivity and other Investigations

#### Preliminary Treatment

- of Jaundice with Broad Spectrum Antibiotics,
- Feeding Advice, &
- Temperature Maintenance
CASE A

- Child
  - Neonate
    - New Case
      - Jaundice
        - ABO Incompatibility
          - Advice
KID: A Paediatric Adviser

Welcome to 'KID':
A Paediatric Adviser

This has been developed at the Expert Systems Laboratory of the Department of Computer Applications of North Bengal University with the financial assistance from CSIR, Govt. of India by M.G. Goswami, Dr. A. K. Saha, Dr. (Mrs) Mridula Chatterjee, and Dr. R. K. Samanta.
KID: A Paediatric Adviser

Symptoms Set 1
- Refused to Suck
- Hypothermia/Hyperthermia
- Diarrhoea with Dehydration
- Vomiting
- Convulsion
- Respiratory Distress
- Apneic Spell
- Bleeding
- Pallor
- Diarrhoea
- Bulged Anterior Frontalale
- DIC
- Sclerema
- Failure to Gain Weight
- Baby Appears Sick
- Kernicterus
- Plethora
- Hepatosplenomegaly
- None

Management Of LBW at Birth
1. Clear Airway;
2. Initiate Breathing;
3. Cord & Eye Care;
4. Injection Vit. K 0.5 mg;
5. Avoid Aspiration;
6. Maintain Temperature With either Incubator Or Radiant Heater Or Hot Water Bag;
7. Prevent Infection;
8. Maintain Humidity 40%-60%
9. Maintain Body Core Temp: 36.5-37Deg. Cent;
10. Give Oxygen by Head Hood Or Endotracheal Tube (if needed);
12. Initiate Feeding
Neonate's Information

- Male
- Female

Mother's Name: Sefali Sarkar

LMP: 26/11/98

Address: WJO Pintu Sarkar

Blood Group of Mother:
- A
- B
- AB
- Not Known

Rh Factor:
- Positive
- Negative
- Not Known

Type of Delivery:
- Normal
- Low Forceps
- High Forceps
- LUCS
- Ventouse

After Birth Cry:
- Cried
- Not Cried

APGAR Score:
- Gest Age

KID Alert: Term Baby

Present Weight is Proper

OK

About Mother
- Diabetes
- Hypertension
- Syphilis
- Jaundice
- Drugs Taken
- Toxemia Of Preg
- Rash
- Fever
- Adenopathy
- Arthritis
- Viral Illness
- Fetal Loss
- None
**Abdomen**
- Soft
- Distended
- Tender
- Muscle Guard
- Ascites
- Diastasis Recti
- Umbilical Hernia

**Genitalia**
- Normal Genitilia
- Imperforate Hymen
- Crypto Orchism
- Retractile Testicle
- Ambiguous Genitilia
- Colour and Rugae and L
- Bleeding PV on 2nd or 3
- Nonpurulant Discharge
- Transitory Hydrocele
- Hypospadias
- Epispadias

**Breathing**
- Normal 30 to 40 Per Minute
- Greater Than 60 Per Minute
- Gasping
- Diaphragmatic or paradoxical Breathing
- Apnea
- Respiratory Distress
- Moderate and Severe Asphyxia

**Feeding**
- Gavage
- IV
- Normal

**Breast**
- Breast Hypertrophy
- Supernumerary Nipple

**Physical Examination**
- APGAR Rating
  - 0 to 4
  - 5 to 9
  - Greater Than 9
- Gasping
- Dlaphargmatic or paradoxical Breathing
- Apnea
- Respiratory Distress
- Moderate and Severe Asphyxia

**Jaundice**
- Appearance Day
  - First
  - After Second
  - Second to Fifth
  - Four to Seven
  - Fifth to Seven
  - After Seven
  - After Tenth
  - Not Known
  - Within Three Days
  - Within Seven Days
  - Second to Seventh
  - Second to Six Weeks

- Disappearance Day
  - Within Seven Days
  - Within Fifteen Days
  - Within One Month
  - Persists After One Month
  - Not Known

- Urine
  - Dark Yellow
  - Yellow
  - Normal
  - Persists After One Month
  - Not Known

- Mother's issue
  - First
  - Second
  - Third

- Jaundice Type
  - Mild
  - Moderate
  - Severe
  - Persistent
  - Progressing
About Mother:
- Diabetes
- Hypertension
- Syphilis
- Jaundice
- Drugs Taken
- Toxemia Of Pregnancy
- Rash
- Fever
- Adenopathy
- Arthritis
- Viral Illness
- Fetal Loss
- None

Coombs Test:
- Positive
- Negative
- Not Known

### Differential Diagnosis

1. Rh Incompatibility: CF = 0
2. ABO Incompatibility: CF = 70
3. Septicaemia: CF = 0
4. Intra-Uterine Infection: CF = 0
5. Cytomegalo: CF = 0
6. Toxoplasmosis: CF = 40
7. Familial Non-Haemo: CF = 0
8. Dublin Johnson: CF = 0
9. Biliary Atresia: CF = 0
10. Neonatal Hepatitis: CF = 0
11. Hereditary Spherocysis: CF = 0
12. Drug Indu Haemo: CF = 0
13. Galactocaemia: CF = 0
14. Inspissated Bile Syndrome: CF = 0
15. Cretinism: CF = 0

Advice:
Phototherapy and/or Exchange Transfusion may be required depending on the following factors:

1. Age of the baby in hours:
2. Cord Bilirubin level:
3. Rise of Serum Bilirubin:
4. Presence of Kernicterus:
5. Serum Bilirubin 20 mg% in full term:
6. Blood Haemoglobin < 10 gms:
7. Reticulocyte Count; and
CASE B

Child

↓

Neonate

↓

New Case

↓

Dubowitz Examination

↓

Gestational Age
### Skin Opacity Over Trunk:
- S0 Numerous Veins Venules Over Abdomen
- S1 Veins And Tributaries Seen
- S2 Few Large Vessels Seen Over Abdomen
- S3 Few Large Vessels Indistinctly Over Abdomen
- S4 No Blood Vessels Seen

### Nipple Formation:
- S0 Nipple Barely Visible No Areola
- S1 Nipple Well Defined Areola less 7mm
- S2 Areola Stippled Diameter Less 7mm
- S3 Areola Stippled Dia More 7mm

### Breast Size:
- S0 No Breast Tissue Palpable
- S1 Breast Tissue Less 5mm
- S2 Breast Tissue More 5mm Less 10mm
- S3 Breast Tissue More 10mm Both Sides

### Ear Firmness:
- S0 Pinna Soft No Recoil
- S1 Pinna Soft Slow Recoil
- S2 Ready Recoil Crustilage Illform
- S3 Instant Recoil With Firm Pinna

### Genitalia Male:
- S0 Neither Testis In Scrotum
- S1 One Testis High In Scrotum
- S2 One Testis Down In Scrotum

### Genitalia Female:
- S0 Labia Majora widely Separated
- S1 Labia Minora Partially Covered
- S2 Labia Minora Completely Covered

### Posture:
- S0 Posture 0
- S1 Posture 1
- S2 Posture 2
- S3 Posture 3
- S4 Posture 4

### Leg Recoil:
- S0 Recoil 180
- S1 Recoil 90 To 180
- S2 Recoil Less 90

### Popliteal Angle:
- S0 Pop Angl
- S1 Pop Angl
- S2 Pop Angl
- S3 Pop Angl
- S4 Pop Angl
- S5 Pop Angl

### Ankle Dorsiflexion:
- S0 Dorsiflexion 90
- S1 Dorsiflexion 75
- S2 Dorsiflexion 45
- S3 Dorsiflexion 20
- S4 Dorsiflexion 0