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(ii) In shocked patients : Infusion should be give as rapidly as possible and a further infusion(s) repeated until the circulation is restored.

Do not give potassium unless normal renal function is restored (Child passes urine).

Clinical Features

Shock, extreme pallor, cold extremities, mottled cyanosis, BP, unrecordable acidotic breathing.

(c) Rapid Assessment

- Is there any respiratory effort ?
- Color : Pale or cyanosed.
- Shake the child for response.
- Pulse : Brachial artery.
- Pupils : Dilated, brain hypoxia.
  small, opium intake.
- **If foreign body** suspected : Turn the infant upside down and give a sharp blow to back, it may fall out.

Airway

Not Breathing
↓
Clear the mouth of any mucus or vomit (with the finger)
↓
Turn child supine on a firm surface.
↓
Open the airway (head backwards, jaw to fall). Do not overextend the neck. This can kink the soft infant airway.

Expired air resuscitation

If spontaneous breathing is absent (cover mouth and nose of infant with your mouth and breathe out gently until the chest just rises).

First : Two Slow breaths, then 15-30 breaths/min.

Older child : Pinch nostril closed with one hand and breathe through the patient's mouth.

Circulation

Check the pulse again, after two breaths. If not found, start **external cardiac massage** (Table 2.4).

Baby : Encircle the chest with both hands and compress the sternum with thumbs.

Large Infant : One hand behind the chest and compress with two fingers of the other hand.

Older Child : Place on firm surface, palpate lower end of sternum, two fingers above it place the heel of one hand.

Adolescent : Heels of both hands. Keep hands flat and the arms straight.

Table 2.4 : External Cardiac Massage.

Newborn	Infant	Child	Adult
Compression rate/min	100	80	60
Inflation rate/min	20	16	12
Depth (cm)	1-1.5	2-3	4-5
Artery to feel	Brachial	Brachial	Carotid

Continue until equipment support arrives.

Resuscitation using equipment

- Airway
- Intubation
- Circulation.

(d) Asthma and Lower Airway Obstructions

Present with **"Expiratory wheeze".**

Causes

(i) Asthma
(ii) Bronchiolitis
(iii) Foreign body
(iv) Tubercular lymph node partly pressing a bronchial tube

(i) Management of "Acute Severe Asthma"

History

- Previous asthma history (admission in ICU).
- Regular medications.

Treatment

- Oxygen therapy : Give nebuliser treatment with humidified oxygen at 6-8 L/min.
- Drug therapy : β_2 sympathomimetics *e.g.* salbutamol.

Child weight

<10 kg 0.03 mL/kg (in 2 mL saline)
10-30 kg 2.5 mL (= 0.5 mL nebulised solution)
>30 kg 5.0 mL (=1.0 mL nebulised solution)

via nebuliser driven by oxygen (humidified)

Give full dose for every 20 min. till response achieved. If necessary (for unresponsive child), loading I.V. dose 5 μg/kg over 10 min. or infusion, 1-10 μg/kg/min.

Corticosteroids

Oral prednisolone 1 mg/kg, dose twice a day, is used for 3 days. If child is vomiting give, I.V. hydrocortisone 4-5 mg/kg/dose 4-6 hourly or I.V. methyl prednisolone lg daily (six hourly—250 mg I.V.).

Status asthmaticus 1-4 mg/kg daily for 3 days.

- I.V. fluids.
- Antibiotics, if suspect bacterial infection.
- Assisted ventilation be kept ready if bronchodilators fail.

(ii) Bronchiolitis

- Humidified oxygen.
- Maintain hydration.

(iii) Foreign body

- Acute wheeze.
- Child has history of inhalation.
- No previous history of asthma.

X-ray chest (Inspiratory and Expiratory) see film.

family related adult. This may include incest (sexual intercourse), sodomy (anal intercourse), molestation (fondling, masturbation) or sexual exposure. In most cases the victimized child is a girl.

(f) Nutritional deprivation : The intentional deprivation of the calories to the child by under-feeding in presence of adequate resources or absence of poverty is a child abuse. These cases present with failure to thrive.

Role of Pediatrician

The pediatrician or attending physician has got three main responsibilities of (a) recognition (b) reporting and (c) prevention of child abuse and neglect.

A. Recognition of child abuse and neglect

The pediatrician should be able to recognize and confirm the diagnosis of maltreatment of a child.

(i) History : Characteristically, there is discrepancy between historical account of mecha-nism of injury and the physical manifestations. The history could be partial, changing or illogical. The other features to be derived from historical account are given below :

Relevant history indicating child abuse

- Discrepant history.
- Delay in seeking medical care for the child.
- Unrealistic expectation from the child by the caretaker.
- Emotionally labile caretaker.
- Pattern and severity of injury *e.g.*, bruises on first visit followed by hematoma.
- Stopping treatment.
- History of abuse in childhood in one of the parents.

(ii) Physical signs

1. Cutaneous injuries : Cutaneous lesions are the most frequently described injuries *e.g.*, abrasions, lacerations, petechiae, burns, ecchy-moses, scratches or hematoma. The distribution of cutaneous lesion helps in differentiating accidental from inflicted injuries as given below :

Distribution of cutaneous injuries

Inflicted

— Upper arms
— Trunk
— Upper anterior leg
— Side of face
— Ears and neck
— Genitalia
— Buttocks

Accidental

— Shins
— Hip (iliac crest region)
— Lower arms
— Prominence of spine
— Forehead
— Under the chin

The cutaneous lesions may also reflect the nature of inflicting objects *e.g.*, prints of human teeth, hands, fingers, belt, buckle etc. Cigarette burns leave circular burn areas and the shape of household appliances like iron are easily identified.

2. Injuries due to single severe or multiple trauma : The common single severe or multiple injuries usually present as :

- Patches of alopecia due to hair pulling.
- Cauliflower ear, ruptured eardrum.
- Subconjunctival bleeding.
- Bleeding or cartilaginous injury to nose.
- Contusion of lips, frenulum rupture, dental injuries.
- Subluxation or dislocation of joint.
- Single or multiple fracture of skeletal system in various stages of healing.
- Subdural hematoma.

3. Psychological aberrations : They are usually seen in emotional abuse and include extreme fright, hyperactivity, unusual grinning, agitation or anxiety.

(iii) Radiological findings

- The use of routine skeletal screening in all children suspected of child abuse should be avoided.
- Screening films should be limited to those children in whom physical examination does not give enough information.
- Common radiological findings in child abuse are :

1. Metaphyseal or "bucket handle" fracture of long bones.
2. Spiral fractures of long bones in non-ambu-latory infants.
3. Multiple fracture of ribs in different stages of healing.

CT scan is useful for subdural hemorrhage and ultrasound for abdominal injuries.

B. Reporting of child abuse and neglect

It is mandatory for the attending physician to report suspected cases of child abuse to the local protective agencies. The law protects the physician from liability suit, if his suspicions should prove to be wrong.

Photograph of the child taken on admission are of great value both medically and legally.

If the parents or guardian refuse admission, a court order for custody can be obtained.

C. Prevention of abuse and neglect

Physical abuse is preventable by physician with experience, who can identify high-risk factors in a particular family.

MCH, ARI Programmes (Expanded programme of immunizations, universal immunization programme, oral rehydration therapy, maternal child health, acute respiratory infection control programme, respectively).

Under the VIII Plan all these programmes were integrated under the common umbrella of **CSSM** (Child Survival Safe Motherhood) programme which was implemented in August 1992. The details are discussed above.

Implementation of CSSM programme took a further step in 1994, when the International Conference on Population and Development in Cairo recommended that participant countries should implement unified programmes for reproductive and child health. Government of India has reoriented the Family Welfare Programme since april 1996. This new programme is known as the **Reproductive and Child Health (RCH) Programme**.

RCH Approach : Defined as people have the ability to reproduce and regulate their fertility, women are able to go through pregnancy and child birth safely, the outcome of pregnancies is successful in terms of maternal and infant survival and well being and couples are able to have sexual relations free of fear of pregnancy and of contracting diseases.

Highlights of RCH Programme

- Integrates all interventions of fertility regu-lation, maternal and child health with repro-ductive health of both men and women.
- Services to be provided will be client cen-tred, demand driven, high quality and based in needs of community through decentralised participatory planning and target free approach.
- Envisages upgradation level of facilities for quality care.
- Facilities for MTP at PHCs, counselling and IUD insertion at subcentres.

Newer Services

- Detection and management of RTI and STDs.
- Adolescent health : To prepare them for future by counselling on family life and reproductive health.
- Special programmes will be taken up for urban slums and tribal population.
- Skills of practitioners will be upgraded by training and research.
- NGOs (Nongovernment Organizations) to be involved in a larger way.

RCH Package of services

For mothers

- All pregnancies have to be registered by health workers.
- Pregnant women should receive two tetanus doses.
- Pregnant women must be given Iron Folic Acid tablets.
- Pregnant women must be given three antenatal check ups.
- Deliveries by TBA (Trained birth attendent) in hygienic surroundings.
- Institutional deliveries should be encouraged for women having complications.
- Referrals should be made for management of obstetric emergencies.
- Three postnatal check ups after delivery.
- Spacing of at least three years between children.

For children

- Essential newborn care.
- Exclusive breast feeding.
- Immunization.
- Vitamin A prophylaxis.
- Parents must be informed about ORT and correct management of diarrhea.
- Correct management of ARI.

For eligible couples

- Promoting use of contraceptives among eligible couples. Couples should be infor-med about various services.
- Safe services for MTP.

Life cycle approach

RCH Programme addresses women's health across their life cycle.

Previous Approach

- Sterilization targets.
- Camp oriented approach.
- Cash incentives for sterilization cases.
- Burden on health services.
- Neglect of quality.
- Inflation of target statistics.

New Approach

- Need based participatory planning.
- Community involvement in planning, moni-toring and surveillance.
- Multisectoral participation in health and nutrition services.
- Self estimated goals by health workers.
- Integrated package of services.
- Good quality care.
- Educating community to adopt correct health practices.

Conclusions

- Responsibility of RCH Programme lies in the hands of health workers and people.