Taking a Pediatric History

Dr. E. Roche & Dr. S. Khalaldeh

The School of Medicine at the University of Dublin, Trinity College in Dublin, Republic of Ireland

Differences

Birth, growth and development history

Often distracted by presence of the child

Need to be flexible

Maintain a sense of humor
Taking a Paediatric History

**Previous History** - Medical & Surgical

- Neonatal History
- Nutrition History
- Developmental History
- Vaccination History
- Family History
- Social History
- Medications & Allergies
Natal / Neonatal History

- pregnancy/antenatal complications
- gestation, mode of delivery – Why?
- birth weight, (AGA, SGA, LGA)

Apgar scores

Neonatal problems,
- jaundice, transfusions, sepsis

Feeding

Respiratory problems,
- ventilated – why & how long for?

Congenital defects

Did the baby go home with you?
Nutritional History

- breast /bottle,
  - weaning (when?, amount & type of feeds)

Major food groups
- likes, dislikes
  - idiosyncrasies

Special diets - why?
  - Adherence/compliance, e.g diabetes-diabetic exchanges, PKU, Celiac disease
Development & Growth

Developmental History
- major milestones achieved i.e. age smiled, sat, crawled, walked, first words
- vision, hearing speech, motor skills, social skills
- comparison with sibs
- school performance

Growth
- does mother think child is growing
- ask about puberty if appropriate to child’s age
Vaccinations

Vaccination History

- BCG,
- 5 in 1 (dip, pertussis, tetanus, Hib, ipv)
  and Meningococcus C (2, 4 and 6 months)
- MMR (12 – 15 months)
- Boosters
- special cases e.g pneumococcal vaccine,
  varicella vaccine, Hepatitis A & B

* if no vaccinations always ask why
Family History (I)

Useful to draw family tree (pedigree)

Siblings – age and health

Any deaths (incl SIDS, recurrent miscarriages)

Specific enquiries related to presenting complaint (parental heights, head size etc.)

- Level of education achieved by parents
  (useful in developmental histories)
- Consanguinity
ASTHMA TRIGGERS
Taking a Paediatric History

Social History

marital status, supports, occupation
siblings age & health
any pets, smoking
caregivers - who cares for the child by day
Social History, continued

School
Type of school, class, progress
interaction with peers, bullying
amount of school missed (chronic disease)

chronic disease - disease impact on family & sibs. Cares, who, when, how, duration

Travel - when & where
Disease contact
Medications

- Dose, frequency, mode of administration
- Compliance or adherence – **How often do you forget?**
- Who administers or supervises?

Allergies
Introduction to the Clinical Examination of Children
Physical Examination

Must be able to examine the ‘four ages of childhood’

- newborn
- infant
- toddler
- older child/ adolescent
INTRODUCTION

Specific techniques similar to adult
- inspection
- palpation
- percussion
- Auscultation

Approach and order different
TIPS FOR A SUCCESSFUL (AND TEARLESS) PEDIATRIC PHYSICAL EXAM

Be friendly

Have equipment ready but not prominent

Size up the child’s likely reaction - Family helps

Use games, let child handle instruments

Keep up a conversation - **distract child** Sometimes helpful to show what you plan to do e.g. finger-nose testing

**WARM HANDS**

**BE GENTLE**

Key to success is patience

Tell the child what you are going to do - offer choices
TIPS FOR A SUCCESSFUL (AND TEARLESS) PEDIATRIC PHYSICAL EXAM

- Be observant and make the best of unexpected opportunities

- Position

  Birth-6m: On familiar blanket on exam table or cot

  6m-2y: Mother’s lap when possible

  3y and up: Sitting or lying on bed
THE PHYSICAL EXAMINATION

“Don’t touch the patient – state first what you see; cultivate your powers of observation”

Sir William Osler
## SEQUENCE OF THE EXAM
(6 months - upwards)

<table>
<thead>
<tr>
<th>Observation/general impression</th>
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<tbody>
<tr>
<td>“3 metre” examination</td>
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<tr>
<td>Skin</td>
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<tr>
<td>HEENT</td>
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<td>Neck</td>
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<td>Cardiac</td>
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<td>Lungs</td>
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<td>Abdomen</td>
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<tr>
<td>Musculoskeletal</td>
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<tr>
<td>Neurological</td>
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VITAL SIGNS

• PULSE

Varies with age; Affected by temperature, fear, illness.

• RESPIRATORY RATE

Varies with age; Affected by temperature, fear, illness, state (sleeping, quiet awake, excited)
PHYSICAL EXAMINATION

The four cardinal principles of physical examination are:

1. Inspection
2. Palpation
3. Percussion
4. Auscultation
INSPECTION

General appearance
State of nutrition
Body habitus
Colour
Symmetry
Posture and gait
Speech
For each system specific aspects considered
FACE

Cranial perimeter at birth: 34 cm ± 2 cm (0 - 1 cm)
- below: microcephaly
- above: macrocephaly

- glabella
- external canthi
- internal canthus and caruncle
- philtrum pillars
- Cupid's arch

In a normal subject, the distance between the 2 eyes equals the length of an eye.
- hypertelorism: distance between canthi > length of an eye
- hypotelorism: distance between canthi < length of an eye.

Slant of palpebral fissures:
- normal: horizontal or upward slanting with an angle < 10°
- upward slanting: angle > 10°
- downward slanting: external canthus lower than the internal canthus.

epicanthus palpebralis unilateral or bilateral (Fig B): vertical cutaneous bridge from the upper eyelid to the lower eyelid, hiding the caruncle. Can be isolated (autosomal dominant trait), or be part of a dysmorphic syndrome. Not to be confused with the epicanthus larvalis of Asian people (Fig C), where the bridge is in continuation with the upper eyelid.

nasal bridge and nasal root
midface

mandible:
- small: micrognathism
- receding: retrognathism
- prominent: prognathism

EAR (derives from the 1st and 2nd branchial arches)

- fossa triangularis
- creast cymbae location
- tragus
- antitragus
- external auditory canal
- helix root
- helix groove
- antihelix
- antitragus
- vertical branch
- branching
- helix
- antihelix
- antitragus
GROWTH PARAMETERS

WEIGHT - kilograms
HEIGHT - centimeters
HEAD CIRCUMFERENCE - centimeters
Measure and plot on growth chart

Measure < 2 yrs
Plot > 2 years
SKIN

RASHES - Individual lesions, colour, arrangement, distribution

COLOUR - mottling, cyanosis, jaundice

BIRTH MARKS - haemangiomata, pigmented lesions, skin tags

TURGOR/HYDRATION
HEAD

Sutures, fontanelles

General shape

- normal
- dolichocephaly
- brachycephaly
- plagiocephaly

Plotted Head Circumference percentile
EYES

Symmetry
Swelling, lesions, discoloration
Lids
Epicanthic folds
Sclera
Pupils
Visual acuity
Direct and consensual reflexes
Visual fields and diplopia
EARS

Position of pinna

EAC exam (otitis externa)

TM exam (Clin Skills Lab)
- Landmarks (malleus handle)
- Light reflex
- Colour (grey, opalescent, red, dull)
- Contour
- Middle ear contents (pus, clear fluid)
OROPHARYNX

Dentition - alignment, caries, eruption
Mucous membranes and enanthems
Tongue - frenulum
Palate/Uvula - clefts, high arched
Tonsils - size, exudate
Posterior pharynx
## NECK

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Location</th>
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<tbody>
<tr>
<td>Short in infancy</td>
<td>Trachea</td>
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<tr>
<td>Rashes/candidiasis</td>
<td>Thyroid</td>
</tr>
<tr>
<td>Lymph nodes</td>
<td>Masses</td>
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<tr>
<td>Nuchal rigidity in meningitis</td>
<td>Lymphadenopathy</td>
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<tr>
<td>ROM - torticollis</td>
<td>Carotid pulsations</td>
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<tr>
<td><strong>Clavicles - fracture</strong></td>
<td><strong>Carotid bruits</strong></td>
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LYMPH NODES

Enlargement > 2cm
Tenderness
Erythematous
Fluctuant
Cervical, pre/post-auricular, axillary, inguinal, femoral
LUNGS

Inspiration and Expiration
Chest size and symmetry
Bell or diaphragm (warm first)
Breath sounds harsher in infants and young children
  - tracheal, bronchial and adventitial

Distinguish lower from transmitted upper airway sounds
Abnormalities - decreased BS, crackles, wheeze, stridor, rate, retractions (distinguish IC from SC)
Pulses
Apical pulse - varies with age
Rate and rhythm
Sinus arrhythmia common
S3 common
Premature ventricular contractions common
Functional murmur in 1/2 to 2/3
FUNCTIONAL MURMURS

No cardiac symptoms
Low intensity
Usually midsystolic

Change with position
  ◦ Still’s murmur louder supine
  ◦ Venous hum disappears supine

Do not radiate
Systolic - never diastolic
ABDOMEN

Warm hands, palpate gently
Look at Face not hands
Kneel down
Spleen tip and liver edge commonly palpable in infancy

If abdomen tense, try flexing legs at hip

Look For:
Masses, lesions, discolorations  Distention, fluid
Liver, spleen, kidneys  Abdominal aorta
Large bowel  Bladder
SPINE

Lumbar lordosis in toddler

Screen at all ages for scoliosis, especially just before onset puberty at which time may dramatically increase

Look for shoulder/scapular height, spine, arm/torso triangle, pelvis tilt, height of posterior ribs (spine flexed)
MUSCULOSKELETAL

Gait
Symmetry
Bulk and tone
Strength
Range of motion
Dyskinetic movements
Joint mechanics
Joint swellings and noise
NEUROLOGIC

Similar to adult

Extent of neurologic exam dictated by **history and index of suspicion**

Much of the usual neurologic examination is done by observation wrt age

Level of consciousness

Mental status – cognitive appropriate

**Cranial nerve examination**

Sensory examination

Motor examination

Deep tendon reflexes
DEVELOPMENTAL

Majority done by observation

4 domains (Gross motor, vision & fine motor, hearing/speech, social)

maternal history

Use of a tool (e.g. Denver) allows better quantitation but not really necessary at student stage

Express in developmental age
Visually fixing on and following close objects is one milestone for a 2-month infant.
Summarise History and Examination

Summarise after presentation the findings of clinical examination
Include relevant positive and negative findings of history and examination
Formulate a problem list
Include a diagnosis (if reached)
OR a differential diagnosis
Outline proposed investigation and a management plan

Example: An eight month old boy, previously well and fully immunised, admitted with a two day history of fever unresponsive to erythromycin and paracetamol and progressive drowsiness. Examination reveals irritability, neck stiffness, a full fontanelle and a purpuric rash.

Meningitis, probably E. coli or viral is the likely diagnosis