

Baseline investigations for a child with suspected HIV and newly diagnosed HIV

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If history and examination lead to a differential diagnosis, which includes HIV, pay special attention to:

History

Birth: Mode of delivery; duration of rupture of membranes; other infections eg choriomanionitis; birth weight; infant feeding; maternal health including other STI's; and antenatal HIV test result.

Past medical history: Previous infections (including oral candida); swollen lymph nodes; chronic diarrhoea; failure to thrive and nutritional history; recurrent URTIs; childhood exanthems (e.g. chickenpox, rubella); skin infections (eg warts, molluscum; severe infections; hospitalisations; transfusions and IM injections; TB risk factors; immunisations; developmental history; and sexual history (if appropriate).

Social history: Name and relationship of adult accompanying child; who has parental responsibility; deaths of parents or siblings; significant previous caregivers; travel history; housing; and social circumstances; school attendance and performance.

Drug history: Previous antiretroviral exposure: in-utero / peripartum / as treatment in another country. Other current drugs. Children newly arrived from abroad may be on combination antiretroviral tablets not available in this country e.g. "Triomune" (a fixed dose combination tablet which contains stavudine + lamivudine + nevirapine), check with a specialist HIV pharmacist.

Examination Full examination including: mouth; lymph nodes; parotids; chest; liver; spleen; skin; neurology; growth (ht, wt, OFC); pubertal stage (if indicated from screening in history); and BCG scar.

First line HIV diagnostic tests

See CHIVA testing guidelines for detailed information

<http://www.chiva.org.uk/guidelines/testing/>

Infant < 18 months of age – HIV antibody test & HIV DNA PCR or HIV RNA PCR.

NB in the first weeks after delivery an infant at risk of HIV may have a negative RNA PCR. Refer to PENTA guidelines: <http://penta-id.org/hiv/penta-trials-treatment-guidelines.html>

Child > 18 months of age – HIV antibody test

Second line confirmatory HIV tests (HIV RNA PCR viral load) and assessment of severity of HIV disease (If HIV known or clinically very likely then consider doing both first and second line tests together)

Test type	Infant < 18mths of age & Child > 18mths of age
HIV parameters	CD4 count and percentage HIV RNA PCR (viral load) Base line HIV resistance (+ maternal resistance if an infant) HLA B5701
Haematology	FBC + film Sickle screen (if appropriate racial group) Ferritin Consider malaria film if recently arrived from endemic area
Biochemistry	U+E, Creat Glucose TSH Vitamin D Ca, PO ₄ Amylase Albumin LFT's Lipids Total protein (globulin) Urine dip (mid-stream) – if 1+ or more protein send urine protein/Cr and albumin/Cr ratio (ideally early morning sample)
Serology	Hepatitis A IgG, HBsAg, anti-HBsAb, anti-HBcAb, HCV IgG, Syphilis serology, IgG for EBV, CMV, HSV, VZV, Toxoplasmosis In children over 1 year consider vaccine serology as per CHVIA vaccination guideline: Measles, Mumps, Rubella, Hib, MenC, Tetanus, serotype specific pneumococcal serology
Viral PCRs	Plasma CMV PCR should be undertaken in infants & children with advanced disease HCV PCR – should be undertaken in infants at risk of exposure and those with advanced disease (this can be positive even if the child is HCV antibody negative)
Cultures	<i>According to symptoms / travel history:</i> Stools (including ova, cysts and parasites) / urine / throat swabs / blood cultures / malaria films / sexual health screen if appropriate
TB screening	CXR, mantoux, IGRA If active TB suspected – consider gastric aspirate, induced sputum
Clinical Investigations	Formal ophthalmological examination for infants and children with advanced disease BP, urinalysis, height / weight / head circumference
Radiology	Baseline CXR Consider bone age if small for ag with advice of endocrine specialist Infants / children with neurological signs, evidence of congenital infections or severe co-infection: MRI of brain
Development Assessment	Full formal baseline neurodevelopment/neuropsychology assessment if available or clinically indicated

PCP Prophylaxis

Infants < 12 months of age	Children > 1 year of age
If > 6 weeks and under 12 months of age, start Co-trimoxazole irrespective of CD4 count	Start Co-trimoxazole 1-4 yrs – CD4 count <15% or <500 x 10 ⁶ /L 5 yrs or older – CD4 count <15% or < 200 x 10 ⁶ /L

Assess the child's clinical stage according to WHO and/or CDC criteria. See PENTA 2015 guidelines:

<http://www.chiva.org.uk/guidelines/treatment-prophylaxis/>

Calculate the risk of progression to AIDS or death using the PENTA calculator:

<http://www.hppmcs.org/>