CLINICAL APPROACH TO THE FLOPPY CHILD

The floppy infant syndrome is a well-recognised entity for paediatricians and neonatologists and refers to an infant with generalised hypotonia presenting at birth or in early life. An organised approach is essential when evaluating a floppy infant, as the causes are numerous.

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A detailed history combined with a full systemic and neurological examination are critical to allow for accurate and precise diagnosis. Diagnosis at an early stage is without a doubt in the child's best interest.

HISTORY

The pre-, peri- and postnatal history is important. Enquire about the quality and quantity of fetal movements, breech presentation and the presence of either poly- or oligohydramnios. The incidence of breech presentation is higher in fetuses with neuromuscular disorders as turning requires adequate fetal mobility. Documentation of birth trauma, birth anoxia, delivery complications, low cord pH and Apgar scores are crucial as hypoxic-ischaemic encephalopathy remains an important cause of neonatal hypotonia. Neonatal seizures and an encephalopathic state offer further proof that the hypotonia is of central origin. The onset of the hypotonia is also important as it may distinguish between congenital and aquired aetiologies. Enquire about consanguinity and identify other affected family members in order to reach a definitive diagnosis, using a detailed family pedigree to assist future genetic counselling.

CLINICAL CLUES ON NEUROLOGICAL EXAMINATION

There are two approaches to the diagnostic problem. The first is based on identifying the neuro-anatomical site of the lesion or insult. The second is to determine whether or not the hypotonia is accompanied by weakness. Careful neurological examination should, in most cases, localise the site of the lesion to the upper motor neuron (UMN) or lower motor neuron (LMN) unit. Useful clues are listed in Fig. 1.

Next assess whether the hypotonia is accompanied by weakness. Weakness is uncommon in UMN hypotonia except in the acute stages. Hypotonia with profound weakness therefore suggests involvement of the LMN. Assessment of muscle power of infants is generally limited to inspection.

Useful indicators of weakness are:

- Ability to cough and clear airway secretions ('cough test'). Apply pressure to the trachea and wait for a single cough that clears secretions. If more than one cough is needed to clear secretions, this is indicative of weakness.[2]
- Poor swallowing ability as indicated by drooling and oropharyngeal pooling of secretions.
- The character of the cry — infants with consistent respiratory weakness have a weak cry.
- Paradoxical breathing pattern — intercostal muscles paralysed with intact diaphragm.