



Michael Fasher

The 6 week check

An opportunity for continuity of care

Background

The opportunity for continuity of care may be won or lost when new parents present to their general practitioner for their new baby's first health assessment. The GP's duty of care to the infant includes, but is not limited to, detection of biological vulnerability.

Objective

The article describes the elements of the physical examination of infants at 6 weeks and its context in a system of healthcare.

Discussion

Confident and competent physical examination of an infant is valued by parents and supported by expert consensus. In a time-poor environment it is possible to both examine the baby and to establish a relationship with the family that over time may enhance the child's health and lifelong wellbeing.

Keywords

physical examination; infant; delivery of health care



The physical examination of an infant at 6 weeks is the focus of this article. However, the 6 week examination can, and should be, part of a lifelong health and wellbeing partnership.

Australian health jurisdictions produce their own version of the parent-held health record. These records outline a system of health protection and promotion that commences at the birth of an infant and continues throughout childhood. The 6 week check is one component of this system. Each consultation in the child's early years is an opportunity to build a partnership with the child's parents¹ – a partnership that monitors and promotes the child's physical, developmental and emotional wellbeing. While there is a clinical responsibility to detect established or emerging deficits in each of these areas, this partnership is best served when clinicians look for parental strengths and seek to build on them. An effective partnership ensures that the parents leave the consultation with increased competence and confidence in their parenting.

The quality of nurture in the early years has an impact on the developing brain with lifelong consequences for an individual's trajectory of health and wellbeing.^{2,3} This makes a universal system of healthcare in early childhood a priority. At present, this system is largely based on expert opinion and parental values and therefore the need for research to test the efficacy of both the intervention and its components is required.

Parental concerns

For many new parents, the absence of effective intergenerational support means they often turn to their general practitioner or child and family health nurse with concerns about their baby.

As with any consultation, the importance of ascertaining specific concerns that parents want addressed is vital – a comment by a health professional, friend or family member or the experience of an acquaintance, may have led to a concern about their baby. The topic of immunisations may also be on the minds of parents. Understanding individual concerns allows the GP to address these in the consultation and provides an opportunity to direct parents to reliable sources of information (eg. the Raising Children Network, see *Resources*).

The consultation at 6 weeks

The GP's skill in understanding the social context in which their patients live their lives is crucial to realising the potential of this



consultation. The ‘feeling in the room’ may provide clues to the quality of family functioning and the quality of the attachment of ‘this baby’ to ‘these parents’. This feeling in the room is created by the manner in which all present at the consultation relate to one another. Is the behaviour mutually supportive? Do the parents hold their baby and talk to their baby in a way that demonstrates they are attuned to the baby’s needs? For example, if the answer to the question, ‘what is your baby like to live with?’ is, ‘she’s a joy’, then all that is needed is praise for the parents specific strengths.

If the answer is along the lines of, ‘she’s difficult’, then, although a search is necessary for any possible contributions by the baby to this answer, it is most important to specifically explore the social context. Possible issues include failure to read and respond to the baby’s social cues, parental exhaustion, parental depression or domestic violence, or substance abuse or other family dysfunction. For clinicians and parents who wish to better understand the skills involved in responding to a baby’s social cues the resource, *Getting to Know You: Recognising Infant Communication and Social Interaction*, is instructive and valuable (see *Resources*).

The physical examination at 6 weeks

The tools

It is important to have easy access to paper tape-measures, self zeroing electronic baby scales and a stadiometer that enables the baby’s length to be determined. A paediatric size stethoscope is not essential but an ophthalmoscope and a light to illuminate the mouth are required.

Top to toes or vice-versa

One way of starting the examination is to measure the baby’s head circumference, length and weight and plot the velocities. These activities may allow the GP to engage the baby socially. It is also an opportunity to explore how the family is coping by asking, for example, ‘Is Luca easy to live with?’, while getting on with the examination.

There are several ways of progressing the examination and the baby’s state of calm demands some flexibility. If there is a risk of the baby crying – listening for a murmur might come first. If the baby is already crying, hip examination may need to be delayed for a subsequent and more peaceful opportunity.

Initial observations

Questions in the clinician’s mind should include: Does this baby have a syndrome (eg. Trisomy 21)? Does this baby engage with the examiner’s gaze and face in a socially responsive way? Are all limbs moving appropriately? Is the baby pink, is the baby jaundiced? Is there evidence of respiratory distress? Do the baby’s eyes follow the examiner’s face as it moves from side to side? Do the reflections of the ceiling light remain symmetrical in each eye as direction of gaze changes? Is nystagmus present?

When these questions have been answered, feel for femoral pulses (which are absent in co-arcuation of the aorta), check for descended testes and genital abnormality and then determine if the hips are stable.

The hip examination

While enquiring about the risk factors for developmental hip dysplasia, proceed with the Ortolani and Barlow tests for hip dysplasia. This process is carried out on both sides and then both hips are gently abducted simultaneously (it is reassuring to find symmetrical abduction). Examination of the hips should not cause the baby any distress. It is important to describe to the parents what you are doing and why. If after the examination there is still doubt about dysplasia, an ultrasound of the hips is the investigation of choice (before 6 months of age, the head of the femur is not calcified and so an X-ray is inappropriate).

For further details on hip dysplasia see *Table 1*. An excellent tutorial on hip dysplasia, which demonstrates the Ortolani and Barlow tests and discusses their importance, is available online (see *Resources*).

The abdomen

The next step in the 6 week check is to exclude organomegaly, looking for congestive cardiac failure, congenital metabolic or storage disease. It is normal to occasionally feel the tip of the spleen. A sharp liver edge

Table 1. Developmental hip dysplasia

Risk factors

- Female gender
- Family history of hip dysplasia in a first degree relative
- Breech position at birth
- Intrauterine problems
 - packaging (eg. plagiocephaly, torticollis, hyperextended knees, foot deformities)
 - reduction in uterine volume (eg. first pregnancy, oligohydramnios, multiple pregnancy)
- Wrapping the baby while the legs are straight

Examination

- Barlow test: Detects if a normally positioned head of femur can be dislocated out of a shallow acetabulum. With one hand, fix the pelvis while the other holds the infant’s leg of the side being examined with the hip in 90 degrees flexion. With the knee in full flexion, place your fourth and fifth fingers over the head of the greater trochanter. Apply gentle pressure down toward the couch while feeling if the femoral head drops out over a shallow acetabular edge
- Ortolani test: Designed to see if an already dislocated head of femur can be relocated. Having completed the Ortolani test, and using your fourth and fifth fingers, gently lift toward the roof while abducting the infant’s leg – feeling for a clunk as a dislocated head of femur is slipped over the acetabular edge and into the acetabulum



can be felt in most babies about three or four finger widths below the right costal margin.

Heart and lungs

Provided the baby is pink in colour (central cyanosis is always an emergency), not in respiratory distress (ie. no chest recession) and with a normal liver edge, congestive cardiac failure is excluded. A large ventriculoseptal defect or patent ductus arteriosus may present with congestive cardiac failure at this age.

Feeding can be a useful symptom when considering shortness of breath in relationship to congenital cardiac issues. The presence of femoral pulses has excluded co-arcuation so the only remaining cardiac question to be answered is the presence or absence of a systolic murmur. Provided the baby is thriving and well there is no urgency to clarify the diagnosis immediately if a murmur is found. A wise clinician will refrain from calling a murmur 'innocent' in the first 12 months of life.

Respiratory causes of increased work of breathing may be congenital (eg. an emphysematous lobe) or acquired (eg. chest infection).

The neurological examination at 6 weeks

The neurological component of the examination has been partly completed in the search for social responsiveness and by checking that the baby is spontaneously moving all limbs in an age appropriate way. The development of one side predominant 'handedness' before 18 months of age is a red flag for neuromuscular compromise on the less active side. Complete the examination by holding the baby in ventral suspension – this permits inspection of the spine and an assessment of tone (the head should be held in line with the torso at 6 weeks). If the tone is increased or decreased, cerebral palsy and its differential diagnoses should be considered. Eliciting the primitive reflexes complicates the issue and adds little to the information already gained.

The eyes

Abnormal morphology, nystagmus and strabismus have already been sought. It remains to check the red reflexes (ie. retinoblastoma, congenital cataracts).

The mouth

Check for cleft palate – a bifid uvula might herald a submucous cleft.

Conclusion

A confident and competent physical examination of an infant is valued by parents. In a time-poor environment it is possible to both examine the baby at the 6 week check and establish a relationship with the family. Happily most of the time it is possible to pronounce to parents that their baby is absolutely perfect. The relief that this elicits is a fine reward.

Practice tips

- If oral thrush is present, white material will be found stuck to the cheek mucosa. If only the tongue is white, thrush can be discounted.
- Early closure of the anterior fontanelle often causes concerns. This is mostly the failure to appreciate that the fontanelle can close anytime between 4 and 26 months.
- An open anterior fontanelle permits ultrasound of the brain to exclude hydrocephalus when an increased head circumference velocity is detected.
- Flat occiputs are common as is plagiocephaly. Most resolve as the brain expands in the first 3 years. A head shape that is becoming more distorted as the brain expands suggests craniosynostosis. Once relatively common this condition is now rarely encountered.
- Blue-eyed babies may evolve darker eye colour as melanin is laid down and darkened by exposure to light. This process is usually evident by 6 months and complete by 3 years.
- Some babies are born larger and some smaller than their genetic potential. Thus interpretation of growth velocities that cross centiles upward or downward needs to be made with these possibilities in mind. The situation is unlikely to be clinically sinister if all three growth velocities are moving in unison.

Resources

For GPs

- Getting to Know You: Recognising Infant Communication and Social Interaction. Available at www.nswiop.nsw.edu.au/images/stories/specialprojects/dvds/orderform_gtky_2011.pdf
- Developmental dysplasia of the hip. Victorian Department of Education and Early Childhood Development. Available at <http://surgicalmultimedia.com/DDH/player.html>

For parents

Raising Children Network: raisingchildren.net.au.

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References

1. Jackiewicz S. Evaluation of Family Partnerships Training in Western Australia 2001–2003. Telethon Institute for Child Health Research. Available at www.fpta.org.au/?page=news&id=5 [Accessed 6 April 2012].
2. Shonkoff JP, Richter L, van der Gaag J, Bhutta ZA. An integrated scientific framework for child survival and early childhood development. *Pediatrics* 2012;129:e460–72.
3. Felitti VJ, Anda RF, Nordenberg D, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experience (ACE) Study. *Am J Prev Med* 1998;14:245–58.

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