forms of mucopolysaccharidoses, and excessive sleepiness of uncertain origin in the Prader-Willi syndrome. Although there are relatively few research findings available, clinical experience indicates that certain *psychiatric disorders* are commonly associated with sleep disturbance, notably anxiety or depressive states, autism, and substance misuse.

Assessment

Clinical assessment of each child's recent sleep wake pattern needs to be comprehensive. A sleep diary kept by parents can be very instructive. Other relevant information may be contained in the medical history, findings on physical examination, and inquiries about the family circumstances and relationships.

A detailed clinical account and awareness of diagnostic possibilities is sufficient in most instances but, in selected cases, objective information from overnight video recordings or studies of sleep physiology will be required. The main conventional parameters for describing sleep structure are the electroencephalographram (EEG), electro-oculogram, and electromyogram. These measures permit NREM and REM sleep to be distinguished from each other and the EEG in particular allows NREM sleep to be graded into its four levels, the deepest levels usually being referred to as slow wave sleep. Overnight sleep consists of a series of NREM-REM cycles displayed diagramatically as a hypnogram.

Special sleep studies do not necessarily involve expensive inpatient sleep laboratory facilities. Home videos taken by parents themselves can be very instructive about children's night time attacks. Recordings of sleep physiology, also carried out in the child's home or other non-specialised setting, are now possible by means of portable cassette systems which provide detailed information on sleep staging and other objective aspects of sleep. Such procedures can be used where necessary to provide an objective check on the accuracy of reported symptoms, to define the sleep disorder precisely by demonstrating abnormal sleep physiology, and also to evaluate treatment objectively.

Treatments for sleep problems

These are many and varied and, of course, need to be chosen according to the nature and origin of the problem or factors maintaining it. In general, medication has been overemphasised in the past; it is often ineffective and can itself give rise to problems, especially disturbed behaviour. Explanation, reassurance, and support can have a major role in management especially in the case of developmental problems where parents may well overstate the significance of their child's symptom or behaviour. For example, showing them norms concerning children's sleep requirements at different ages can be very helpful. More specific practical advice may well be needed such as making the environment safe for sleepwalkers to prevent accidental injury, or not attempting to waken a child in the throes of a night terror as this will confuse and frighten the child, if successful.

In the case of chronic sleeplessness, it is not sufficient merely to reassure parents that the problem will resolve spontaneously because much harm can be caused in the meantime; the behavioural approaches mentioned earlier should be introduced. Several such approaches have been described mainly in the treatment of settling and night waking difficulties in toddlers. Each aims at changing the way parents deal with the problem. Those described by Douglas are: graded stages by which parents become less actively involved in getting the child to sleep; establishing a bedtime routine and teaching the child cues that it is time to go to bed and sleep; reinforcing settling and sleeping by means of rewards and incentives; and ignoring the difficult behaviour (an apparently quickly effective method but very difficult for many parents as the child may become so upset).[15] The choice of approach and the way it is implemented depends on the particular family. Different techniques may be needed in combination.

Other examples of specific measures include adenotonsillectomy in obstructive sleep apnoea, and adjustment of sleep disturbing treatment, wherever possible, for children with a physical illness. If inquiries reveal that the sleep problem is only one aspect of the child's psychiatric disorder, or of a complicated family situation, professional help from child psychiatry or psychology will be required.

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Routine discharge examination of babies: is it necessary?

The neonatal examination is an integral part of child health surveillance.[1] A thorough physical examination can be regarded as a screening procedure to check that the baby is normal, to look for congenital abnormalities, and as a reassurance for parents. The contact also offers an excellent opportunity for parents to ask questions, and for health promotion including especially a discussion on feeding practices, immunisation, and reducing the risks of sudden infant death.

First neonatal examination

The first full neonatal examination has a high yield of abnormalities and is widely accepted as good practice. This

was confirmed by Moss *et al* in an audit of 1795 examinations in which the initial examination succeeded in detecting abnormalities in 8·8% of infants, orthopaedic problems being the most common.[2] This examination is generally recommended to be conducted within 24 hours of birth.[3] This has, however, been questioned by Hughes *et al* who showed that a single late examination, 24 hours before discharge, yielded as many abnormalities as two (early and late) neonatal examinations.[4] They argue that as most major visible abnormalities will be detected by the midwife or parents very soon after birth, the examination can be delayed until 24 hours before discharge, when management problems may have become apparent. This ignores the parental reassurance value of an early examination, but indicates that a less rigid attitude to timing can be adopted. This approach would also ease the problem of routine examinations over a weekend when medical staffing can be difficult.

Discharge examination

The Maternity Services Advisory Committee recommended a routine neonatal discharge examination in 1985.[3] However, this has not been generally accepted and the 1989 report of the joint Working Party on Child Health Surveillance recommended only a repeat examination of hip stability on discharge or within 10 days after birth.[1] This altered recommendation was partly a response to the welcome trend towards early discharge which makes it increasingly difficult to ensure that a second examination is carried out. Moss *et al* addressed this problem with an audit assessing the value of the second neonatal examination.[2] The examination, performed on 97·3% of 1795 newborn infants, was done on the day of discharge on 1428 infants (79·6%). Because of early discharge, 38·5% of babies were examined on or before day 2, the median time of the discharge examination being 4 days of age. The second examination uncovered previously undetected problems in 63 infants (3·6%). However, 49 abnormalities were minor, such as superficial infection and jaundice not requiring phototherapy; in seven babies the abnormality was not new and should have been detected by the first examination. Only seven infants had a new or potentially important abnormality: jaundice, a transient heart murmur, a distended abdomen which resolved spontaneously, and—most significantly—dislocatable hips in four infants. An important finding was therefore detected in only 0·5% of second examinations. The study concluded that a full second examination cannot be justified, but a test for hip stability should be performed.

The Hall report discusses the key role of parents in the detection of defects but stresses that some defects are unlikely to be recognised even by the most astute parents and require a special search by health professionals.[1] In this category congenital dislocation of the hip and congenital heart disease require special consideration.

CONGENITAL DISLOCATION OF THE HIPS

The current screening programme for congenital dislocation of the hip was set out in 1986[5] and endorsed in the Hall report. But it has been criticised because of poor specificity and sensitivity.[6–8] The screening programme been thoroughly evaluated by Dunn *et al*.[9] In a cohort of 23 002 infants, 445 (1·9%) were diagnosed as having dislocated hips. In 83% the abnormality was detected at the initial examination on the first day, but in 17% the instability was not found until the discharge examination that was performed at a mean of 5 days. Thus 0·3% of discharge examinations detected an unstable hip, a rate similar to that found by Moss *et al*. It is not clear why these were not detected at the first examination; perhaps signs of instability can be temporarily lost shortly after birth[5] or, as seems more likely, the signs were missed.

CONGENITAL HEART DISEASE

The Hall report makes no recommendation for a second neonatal examination to detect congenital heart disease. Moss *et al* found no congenital heart abnormality at the second examination, although it has been pointed out that this audit was not large enough to encounter many important abnormalities, such as coarctation of the aorta, which are potentially detectable.[10] Further information is from an unpublished audit from the database of the cardiology unit at Bristol Children's Hospital (R Martin, personal communication). The neonatal notes of 50 children with congenital heart disease were scrutinised. In only 20 was the abnormality detected in the newborn period. In one this was prompted by an abnormal antenatal scan, in seven symptoms and in a further five during surveillance on the neonatal unit for other reasons. In only seven infants was the abnormality picked up by routine examination—the first examination in six and the second in one. Both cases of coarctation of the aorta were missed. The discharge examination as it is currently performed is therefore seriously deficient as a good screening test for congenital heart disease.

Conclusion

The routine discharge examination as currently performed is at best a test of hip stability and an opportunity to talk to the mother about her baby. The detection rate for other abnormalities is disappointingly low, and probably due to the examination being performed too soon after the first full examination. There is also the recommendation that the test of hip stability shortly after birth should not be duplicated for fear of damaging the joint.[5] The move toward earlier discharge means that in 38·5% of infants the test is duplicated within two days of delivery.

I consider that a second neonatal examination could be made useful if its timing is changed and aims more clearly defined. Rather than at discharge, with its very variable timing, the examination should be performed at 7 to 10 days of life with the clearly defined aims of detecting unstable hips, congenital heart disease, and late onset or progressive jaundice. This would be performed in most instances by the general practitioner as part of the child health surveillance programme; for infants remaining in hospital, paediatric staff would be responsible. As with all aspects of child health surveillance, this policy must be regularly reviewed.

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