the foot, and round the ankle and the knee. Though ganglia occur at all ages, their maximum incidence is in young, slightly-built women.[1] They are well demarcated and movable within the surrounding tissue, and while often loosely attached to a tendon sheath or the capsule of a joint they do not communicate with the cavity. The dense fibrous capsule encloses cysts containing a viscid, jelly-like fluid rich in hyaluronic acid and other acid mucopolysaccharides.[2] Histologically there are lakes of mucoid material surrounded and intersected by collagen fibres.

The pathogenesis of this common lesion is still debated. The most popular view ascribes it to myxomatous degeneration of connective tissue with the formation of cysts.[1 2] Some workers have suggested that there is first a proliferation of fibroblasts secreting mucopolysaccharide, and that the degeneration and cystic change are secondary.[3 4] An alternative view, that the ganglion originates from an out-pouching of synovial membrane through a defect in a joint capsule or a tendon sheath, can seldom be substantiated by dissection, but it is possible that the original connexion underwent attenuation during the evolution of the lesion. The aetiology of the ganglion is unknown. Occasionally there is a history of recent trauma, and excessive strain on a constitutionally weak connective tissue is possibly a factor.[2]

The occurrence of ganglion cysts in bone was first noted by J. D. Hicks in 1956,[5] and since then there have been a number of other reports.[4 6-9] These intraosseous ganglion cysts are solitary and are usually situated near the adjacent joint. The bones round the ankles, especially the tibia, are most commonly affected, but lesions of the ulna, carpal bones, femur, acetabulum, and tarsal bones have also been reported. The patient feels aching discomfort in the neighbouring joint during activity, and, while physical examination is usually negative, *x*-rays disclose a well-defined cystic lesion extending to the subchrondral bone. A striking zone of sclerotic bone usually surrounds the cyst. Grossly the cyst may be unilocular or less commonly multilocular, and histologically there is the dense fibrous wall and mucoid gelatinous contents typical of the soft-tissue ganglion. F. H. Sim and D. C. Dahlin[10] have recently reported six further cases of intraosseous ganglion cyst, five arising in the bones round the ankle and one in the head of the fibula and causing pain in the lateral aspect of the knee. The patients' ages varied from 32 to 86 years, and four of the six were men. The fibular cyst caused cortical expansion of the bone, an unusual change in this type of lesion.[4 6] The cavities of the cysts were curetted and then packed with bone chips. In two cases there were later recurrences, but all were finally cured.

The pathogenesis of these cysts is as obscure as that of the soft-tissue ganglion. They are to be distinguished from other bone cysts, especially the juxta-articular cysts found in degenerative disease of the joints. The absence of the other stigmata of joint disease, the solitary nature and larger size of the cyst, and the zone of condensed bone round it are useful diagnostic features of the ganglion lesion. Simple, or single-chambered, bone cysts may also cause confusion, but their contents are serious or serosanguineous and there are giant cells in the wall. Cysts of this type are usually situated in the metaphysis of a bone rather than in the ends, and the patients are usually younger than those with intraosseous ganglion cysts. The ganglion cysts are noteworthy because they can produce symptoms suggesting primary joint disease. Once they are adequately treated the discomfort ceases.

[1] Carp, L., and Stout, A. P., *Surgery, Gynecology and Obstetrics*, 1928, 47, 460.
[2] Soren, A., *Clinical Orthopaedics*, 1966, 48, 173.
[3] King, E. S. J., *Australian and New Zealand Journal of Surgery*, 1932, 1, 367.
[4] Goldman, R. L., and Friedman, N. B., *Clinical Orthopaedics*, 1969, 63, 184.
[5] Hicks, J. D., *Australian and New Zealand Journal of Surgery*, 1956, 26, 138.
[6] Woods, C. G., *Journal of Bone and Joint Surgery (British)*, 1961, 43, 758.
[7] Crabbe, W. A., *British Journal of Surgery*, 1966, 53, 15.
[8] Crane, A. R., and Scarano, J. J., *Journal of Bone and Joint Surgery (American)*, 1967, 49, 355.
[9] Seymour, N., *Journal of Bone and Joint Surgery (British)*, 1968, 50, 134.
[10] Sim, F. H., and Dahlin, D. C., *Mayo Clinic Proceedings*, 1971, 46, 484.

Screening for Spastics

"A baby, before it is seven days old, should be given a screening test to try to discover whether it is or may become spastic."[1] This recommendation, widely publicized last week by the national press and radio, was based on a report published by the Spastics Society;[2] but it must have surprised many paediatricians, obstetricians, and general practitioners.

About 2 per thousand liveborn children will subsequently prove to have cerebral palsy, so there are about 2,000 new cases per year in the United Kingdom. No organization has done more than the Spastics Society to finance research and—with unusual vision—medical education on this subject, and to provide practical services for spastic children and their families. The report therefore deserves to be taken seriously. The recommendation on neonatal screening should be seen in context as a short paragraph in a 10-page document. The main message of the report is that if existing knowledge were universally applied one-quarter of these patients need never be affected and the degree of handicap could be greatly reduced in many of the others.

In the prevention of cerebral palsy the importance of perinatal care is rightly emphasized. Fetal monitoring during labour, and facilities for immediate resuscitation of the asphyxiated newborn baby and for intensive care of the low-birthweight or sick newborn, can reduce not only neonatal mortality but also the later incidence of neurological handicap.[3] The report is right, too, in pointing out that the provision of services for the care and education of children with cerebral palsy is patchy and often grossly inadequate. These children frequently have multiple handicaps, and to achieve their full potential they may require the help of physiotherapists, orthopaedic surgeons, ophthalmologists, speech therapists, psychologists, occupational therapists, and psychiatrists, together with special educational services, all of which must be co-ordinated by, say, a paediatrician.[4] Services for handicapped children have not always competed successfully with more glamorous branches of medicine for available resources, and the tone of urgency and impatience in the Spastics Society's report is not only wholly justified but will be welcomed by doctors working in this field.

The report's demand for universal neurological screening examinations in newborn babies is much more controversial. Screening examinations are worthwhile only if, firstly, a reliable screening examination is available which will not give many false negative or positive results; if, secondly, early detection is valuable because early treatment has proved advantages; and if, finally, the use of medical and other resources for screening is a reasonable priority in terms of the total supply of these resources and the demands made on them. None of these requirements has so far

been fulfilled for neonatal neurological screening procedures.

Some brain abnormalities which will lead to chronic neurological disorder certainly produce detectable clinical signs in the neonatal period.[5-7] But this association is a statistical rather than an invariable one. After an acute perinatal insult some babies will show transient neurological abnormalities and subsequently recover completely. Others, especially those with cerebral malformations dating from early intrauterine life, may appear neurologically normal in the neonatal period but have severe neurological handicap later—a fact which is explicable from what is known of the development of central nervous system functions in early infancy. There is no 15-minute screening test yet developed which would not give a substantial proportion of false negative or positive results. H. F. R. Prechtl,[8] who has been a pioneer in this field, now doubts the value of such a screening examination.

The evidence about the results of very early treatment of cerebral palsy is not altogether clear[9 10] because of the absence of controlled trials and because some children who in the early months appear to show signs of cerebral palsy will subsequently have no disorder[11]—whether or not they are given physiotherapy. Notwithstanding these doubts, most experts strongly recommend that physiotherapy should be started in the first year of life for children showing signs of cerebral palsy to facilitate the development of postural control and movement and to prevent secondary deformities.

It is now widely accepted that all children should have periodic developmental screening tests beginning at, say, 6 weeks, 6 months, and 10 months. Clear and practicable schemes have been devised for doing these tests,[12 13] and general practitioners and medical officers in infant welfare clinics are becoming increasingly skilled and enthusiastic in carrying them out. Most cases of cerebral palsy can be detected by 6 months because of developmental delay. This seems a reasonable age at which to start physical management and making plans for the future. The report suggests that the neonatal period may be a more sensitive time for detecting neurological abnormalities than certain later times, and this is sometimes true; but it is hard to believe that anyone would "treat" a baby who was neurologically suspect in the first week but was developmentally normal at 6 weeks and 6 months.

A 15-minute neurological examination on each of approximately 900,000 liveborn babies each year in the United Kingdom would require 225,000 doctor-hours per year. Details of the examination proposed were not given in the report, but it would presumably need to be done by a doctor with considerable experience of the newborn and not by relatively junior staff. There are about 400 consultant paediatricians and about 80 senior paediatric registrars in Britain; they would each have to devote on average about 470 hours per year to this task, or about one-fifth of their routine working time. (Of course, this calculation is only the roughest approximation, but it gives some idea of the magnitude of the task.) Only the most unequivocal evidence of the reliability and value of the neonatal screening procedure could justify such an expenditure of time; many paediatricians genuinely committed to the care of handicapped children will feel they would use their time better in improving the local standard of developmental screening and in providing services for children with actual handicaps.

The prognostic significance of neonatal neurological signs deserves further study, and a reliable and useful screening examination may be found. But for the present this is more suitably the subject for a research project among the babies of a particular community than of a nationwide programme of action. Moreover, it would be a pity if one controversial recommendation diverted attention from the many valuable points made by this report and from the value of universal periodic developmental assessment.

1 *The Times*, 1 November 1971.
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3 *Report of the Expert Group on Special Care for Babies*. Reports on Public Health and Medical Subjects, No. 127. London, H.M.S.O., 1971.
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5 Donovan, D. E., Coues, P., and Paine, R. S., *Neurology*, 1962, 12, 910.
6 Prechtl, H. F. R., *Proceedings of the Royal Society of Medicine*, 1965, 58, 3.
7 Saint-Anne Dargassies, S., *Proceedings of the Royal Society of Medicine*, 1965, 58, 5.
8 Prechtl, H. F. R., *Developmental Medicine and Child Neurology*, 1970, 12, 522.
9 Kong, E., *Developmental Medicine and Child Neurology*, 1966, 8, 198.
10 Brandt, S., *Developmental Medicine and Child Neurology*, 1966, 8, 353.
11 Illingworth, R. S., *Developmental Medicine and Child Neurology*, 1966, 8, 178.
12 Sheridan, M. D., *The Developmental Progress of Infants and Young Children*. Reports on Public Health and Medical Subjects, No. 102. London, H.M.S.O., 1968.
13 Egan, D., Illingworth, R. S., and Mac Keith, R. C., *Developmental Screening 0-5 years*. London, Spastics/Heinemann, 1969.

Clinical Direction?

A circular[1] was sent last month to the proprietors of private nursing homes approved under the Abortion Act 1967, setting out assurances which the Secretary of State for Health and Social Services required if approval of the home was to be continued. No doubt the Secretary's intention was to curb some of the abuses that have become apparent in the running of some of these homes, and his insistence that there should be adequate arrangements for obtaining blood and that "touting" for patients will lead to withdrawal of approval is welcome.

The circular also states that "The Secretary of State is advised that it is highly desirable that a woman should not be discharged on the same day as that on which her pregnancy has been terminated. It should be explained to each patient that the overnight stay is in the interests of her health and she should be given every encouragement to stay." This advice seems to ignore reports[2 3] of the safety of vacuum aspiration as an outpatient technique for abortion. Surely it is the responsibility of the gynaecologist carrying out the termination to decide which procedure to use and whether or not overnight admission is necessary in any particular case. The circular also requires that the number of terminations carried out in a 24-hour-period is not to exceed the number of beds specified in the application for approval of the home, and the Department's intention seems to be to avert a situation in which women who need retaining in the home are sent away because there is no bed available.

But it is no solution to fetter professional judgement by laying down guidelines of clinical practice, and a decision on when a patient is fit to be discharged is clearly a clinical judgement. Direction of this kind would not be accepted within the N.H.S.—and it is no more acceptable in an admittedly sometimes shabby section of the private sector.

1 Department of Health and Social Security, E/A223/8, 18 October 1971.
2 Buckle, A. E. R., Anderson, M. M., and Loung, K. C., *British Medical Journal*, 1970, 2, 456.
3 Beric, B. M., and Kupresanin, M., *Lancet*, 1971, 2, 619.