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VAN DIE REDAKSIE

DIE SPIERE IN POLIO

Die bepaling van die skade aan die spiere in vóór-poliomiëlitis is van groot prognostiese betekenis. In 'n onlangse en uitstekende WHO-monograaf oor die siekte bespreek Debré en Thieffry[1] ,die kliniese aspekte en verklaar hulle dat 'n ervare klinikus, met 'n groot mate van sekerheid' 'n prognose kan maak. Hul siteer Lassen se stelselmatige 3-jarige studies van die aangetaste spiere op grond waarvan hy in staat was om betreklik dogmatiese gevolgtrekkings te maak wat hulle bewering steun.

Klinies kom dit voor asof in die akute paralitiese stadium die klem op die individuele spiere eerder as op die hele ruggraatbaan of die senuweeverspreiding rus en hierdie asimmetrie is 'n uitstaande kenmerk van die kondisie. 'n Ander punt wat deur die Franse klinikusse gestel word, is dat die verlamming—wat net so dikwels in vlae voorkom as meteens—gewoonlik by die derde dag die hoogtepunt bereik. Daarna is daar teruggang; selfs in die ergste getrefde gevalle is dit uitsonderlik as daar nie ten minste 'n mate van herstel is nie. Ander simptome soos bv. hewige spierpyne en koors het geen betrekking op die aanvang van die verlamming nie en dit kan aanhou lank nadat die verlamming geopenbaar is; harsing- en rugmurgvliestekens en sfinktersteurings verflou gewoonlik kort daarna. Dit is meer gewoonlik die spiere van die onderste eerder as die boonste ledemaat wat betrokke is, maar die individuele spiere wat die meeste aangetas word is die voorskeenspier en die skouerlapspier. Die stelling dat die boonste motoriese neuron nooit betrokke is nie, moet gewysig word, want verhoogde seningreflekse, 'n positiewe Babinski-teken en ander tekens van beskadiging van die piramidebaan is al aangeteken. Gevoel is altyd normaal en dit is die mees belangrike negatiewe punt in die diagnose.

Teen die einde van die 4de-6de week, met die verdwyning van die ontstekingsedeem in die senuweestelsel, gaan die akute stadium oor in die kroniese stadium en dit is dan moontlik om die hele posisie in oënskou te neem. Die werking van elke aangetaste spier moet afsonderlik bepaal word eerder as dié van die gesamentlike bewegings. Dit kan geskied deur hedendaagse elektriese toetsmetodes of nog beter deur spiertoets-

EDITORIAL

THE MUSCLES IN POLIO

Assessment of the muscular damage in anterior poliomyelitis is of great prognostic importance. Debré and Thieffry [1] in discussing the clinical aspects in the recent excellent WHO monograph on the disease, state that a prognosis can be reached 'with a very large degree of certainty' by an experienced clinician. They quote Lassen's systematic 3-year studies of affected muscles, from which he was able to draw fairly dogmatic conclusions in support of their contention.

Clinically, in the acute paralytic phase the emphasis seems to be on individual muscles rather than on the whole spinal root or nerve distribution, and this patchiness or asymmetry is a marked feature of the condition. Another point that the French clinicians make is that the paralysis—which may as often occur in waves as all at once—'is usually maximal by the third day. Thereafter regression takes place; it is exceptional not to find limited recovery at least, even in the most severe forms'. Other symptoms such as the severe muscular pains and the fever are quite unrelated to the outset of the paralysis and may persist long after it is manifest; meningeal signs and sphincteric disturbances usually fade soon after it has commenced. The muscles of the lower limb are more commonly involved than those of the upper, but the commonest individual muscles affected are the tibialis anterior and deltoid. The statement that the upper motor neuron is never involved needs qualification, for increased tendon reflexes, a positive Babinski's sign and other evidences of damage of the pyramidal tract have been recorded. However, sensation is always normal, and this is the most important negative point in the diagnosis.

By the end of the 4th-6th week, with the disappearance of inflammatory oedema in the nervous system, the acute phase passes into the chronic, and it is then possible to take stock of the situation. The function of each affected muscle should be separately assessed rather than joint movements. This can be done by modern electrical methods of testing or, better still,

tegnieke wat Debré en Thieffry verwelkom as 'n groot vooruitgang in die kliniese studie van polio; 'n konvensionele ,telling' word aan die verlamde spier toegeken en 'n skaal van 0-4 word gebruik. Dit is 'n eenvoudige, standaard- en effektiewe metode wat alreeds die toets van die tyd weerstaan het. Die skaal is as volg:

0=geen teken van saamtrekking nie; 1=geen bespeurbare beweging nie maar 'n merkbare saamtrekking van die sening of van die hoofdeel van die spier; 2=flou beweging, die swaartekraglas is uitgeskakel; 3=beweging wat teen swaartekrag uitgevoer is; 4=normale beweging teen weerstand.

Baie navorsers meen dat hierdie kliniese metode beter is as òf elektriese stimulasie òf die nuwer elektromiografie wat ten doel het die bestudering van die verskil in elektriese spanning tussen punte in die spiermassa.

Met hierdie metode van bepaling aan die einde van die akute stadium word aanspraak vir die volgende gevolgtrekkings gemaak: (1) 'n Spier wat geheel en al verlam is (telling 0) kan waarskynlik nooit geheel en al herstel nie. (2) Spiere met 'n telling van 1 of 2 kan met 1 graad herstel en ongeveer 50% van die spiere word funksioneel bruikbaar. (3) Spiere met 'n telling van 3 het 'n herstelsyfer van ongeveer 90%. (4) Ongeveer $\frac{1}{8}$ste van alle verlamde spiere herstel geheel en al. (5) As herstel gaan plaasvind is dit mees waarskynlik dat dit in die eerste jaar van die siekte sal geskied.

Die kroniese stadium sal dus waarskynlik met 'n sekere graad van ongeskiktheid begin wat in graad van pasiënt tot pasiënt verskil. Komplikasies in hierdie stadium, wat die kalme gang van die kroniese pasiënt se bestaan verstoor, is geneig om sy funksionele moeilikhede te verskerp. Atrofie is 'n direkte gevolg van spieronaktiwiteit en dit kan somtyds deur fisiese terapie oorkom of verlig word; gebreklikhede bly steeds 'n dreigende gevaar aangesien immobiliteit, swaartekrag en stadige saamtrekkings kragte is wat gedurig in speling bly; trofiese steurings is van belang veral in groeiende liggame, en plaaslike vaskulêre veranderings kan ook in die vel bespeur word. Debré en Thieffry kom tot hierdie gevolgtrekking ,morbidity due to ordinary infantile paralysis is negligible (1%); motor sequelae are the rule: it can be estimated that at present 7% of patients remain incapacitated for work, while 75% are left with their working capacity reduced'.

1. Poliomyelitis (1955): Wld. Hlth. Org. Mon. Ser. No. 26.

by employing the muscle-testing technique of assessment, which Debré and Thieffry hail as 'a considerable advance in the clinical study of polio'. In this a conventional 'score' is assigned to the paralysed muscle on a scale ranging from 0-4. It is a simple, standard and effective method and has already withstood the test of time. The scale is as follows: 0=no sign of contraction; 1=no detectable movement but perceptible contraction of the tendon or of the body of the muscle; 2=feeble movement when the burden of gravity is eliminated; 3=movement carried out against gravity; 4=normal movement against resistance.

Many workers claim that this clinical method of assessment is superior to either electric stimulation or the newer electromyography which aims at studying differences in electrical potential between points in the muscle mass.

By this method of assessment at the end of the acute phase it is claimed that the following conclusions can be drawn: (1) A completely paralysed muscle (score 0) can probably never recover completely. (2) Muscles showing score 1 or 2 may achieve a degree of recovery, and about 50% of them become functionally useful. (3) Muscles showing score 3 have a rate of complete recovery of about 90%. (4) About $\frac{1}{8}$th of all paralysed muscles do not recover at all. (5) If recovery is going to take place, it is most likely to occur in the first year of the illness.

The chronic phase is thus more likely than not to commence with some degree of disability, which varies in severity from one patient to another. Complications that arise in this phase to disturb the placid tenor of the chronic patient's existence tend to increase his functional difficulties. Atrophy is a direct consequence of muscular inactivity and can sometimes be overcome or allayed by physiotherapy; deformities remain a constant threat since immobility, gravity and slow contractures are forces constantly at play; trophic disturbances are important, particularly in growing bodies, and local vascular changes may occur in the skin as well. Debré and Thieffry conclude 'morbidity due to ordinary infantile paralysis is negligible (1%); motor sequelae are the rule: it can be estimated that at present 7% of patients remain incapacitated for work, while 75% are left with their working capacity reduced'.

1. Poliomyelitis (1955): Wld. Hlth. Org. Mon. Ser. No. 26.

THE SISTER PROFESSIONS

The *Journal of the Dental Association of South Africa* contains an Editorial[1] speaking in cordial terms of the decision of the Medical Association of South Africa to confer its honorary membership on Dr. R. V. Bird, a distinguished member of the dental profession. The Dental Association rightly regards this gesture not only as a personal appreciation of Dr. Bird's own high merits, but also as a manifestation of the cordial relations that exist between the medical and dental professions and the Medical and Dental Associations of South Africa. That is a correct appraisal of the motives which actuated the Medical Association in this matter. Doctors and dentists provide similar services to the community and they accept the same high code of ethics. The relation of the two professions to each other is almost closer than fraternal for, in spite of their historical and world-wide separation, they are in essence branches (or groups of branches) of the one healing art for which the name of Medicine has to serve. The Medical Association is gratified at the reception which the Dental Association has given to its action, and notes with pleasure that the Dental Association has also decided to confer its own life membership on Dr. Bird, who was for many years its president, and

has for some time held the position of vice-president of the South African Medical and Dental Council.

In conferring its life membership on Miss Nothard, president of the South African Nursing Council since its institution and for long representative of the Nursing Council on the Medical and Dental Council, the Association was actuated by the same sentiments towards Miss Nothard personally and the nursing profession which she leads. The medical profession and the nursing (well called 'sister') profession are complementary and essential to each other. Neither without the other can give the community the services for which it is designed. From their student days nurses and doctors of necessity work together, and none better than doctors know the true value of the nursing vocation. Let the Medical and Nursing Associations continue to hold each other in mutual esteem and cooperate for the general benefit of the community.

1. *Editorial* (1955): J. Dent. Assoc. S. Afr., **10,** 144 (April).