

EDITORIAL : VAN DIE REDAKSIE  
**CHEMOTHERAPY OF VIRUS DISEASES**

There have been tremendous advances in the last thirty years in our knowledge of viruses as pathogenic organisms, but the brilliant therapeutic results achieved with antimicrobial drugs in diseases caused by bacteria, spirochaetes, and fungi have not been obtained in the therapy of viral infections. Good results are possible in infections caused by the so-called 'larger' viruses or members of the genus Chlamydozoaceae, i.e. in psittacosis, lymphogranuloma venereum, trachoma, and inclusion conjunctivitis. It is the 'true' viruses which are able to resist known chemotherapeutic agents, possibly because they have a different mode of multiplication from the larger viruses.

The remarkable technical advances of recent years have enabled virologists to obtain a better understanding of the structure and chemical composition of many viruses.<sup>1</sup> Two essential chemical constituents of all viruses are nucleic acid and protein; each virus contains only one form of nucleic acid, either deoxyribonucleic acid (DNA) or ribonucleic acid (RNA). The rickettsiae, and the larger viruses mentioned above, possess both these nucleic acids and differ from the true viruses not only in size but also in morphology and probably in their manner of multiplication. It would appear that virus nucleic acids are chemically specific and differ from each other as well as from their host cell nucleic acid.

A most important feature of viruses is that the nucleic acids possess the property of infectivity, and multiplication of viruses is also explained as being dependent on the nucleic acid which presumably furnishes the template for the virus protein. The outer sheath protein of viruses is also important in the process of infection in that it protects the inner core of nucleic acid and confers antigenicity upon the virus. It also appears to be essential for fixing the virus particles to the host cell. Other constituents found in certain viruses, such as lipids, carbohydrates, and even enzymes, remain less well understood, and it is not clear whether they are components of the virus or of the host cell.

The view that virus infections would never be amenable

**PRAKTIESE OORWEGINGS BY DIE VERSORGING VAN BEJAARDES**

As gevolg van die bekende feit dat die algemene lewensverwachting van die mens—deur verbeterde lewensomstandighede en die vooruitgang van die mediese wetenskap—verbasend gestyg het sedert die begin van hierdie eeu, is daar 'n baie groter aantal bejaardes in die samelewing as wat daar vroeër was en het die hele bevolkingsbalans radikaal verander.

Daar word bereken dat daar in Amerika, byvoorbeeld, nagenoeg 15 miljoen bejaardes is, dit wil sê mense van oor die ouderdom van 65 jaar. In Engeland is daar ongeveer 7 miljoen mense van oor die ouderdom van 65 en in Suid-Afrika is daar, volgens growwe berekening, ongeveer een miljoen mense van alle rasse oor die ouderdom van 65 jaar.

Wanneer ons oor hierdie probleem praat, moet ons versigtig wees om nie noodwendig na bejaardheid net as 'n

to chemotherapy has now been changed. Experimental investigation has shown that a number of these can be inhibited by chemical agents. In all cases drugs have only proved effective *in vivo* if given before the time of infection, except for idoxuridine (IDU) in eye infections. Many substances found to be promising in *in vitro* tests have failed for a variety of reasons to show activity in animals or man. To prove that a drug is clinically effective needs controlled clinical trials and particularly so in the evaluation of a drug used in the treatment of self-limiting infections without appreciable mortality. The difficulties are exemplified in the trial of a drug in patients suffering from influenza in view of the brief duration of the illness and the variation in severity from case to case. There are now well-established principles that must be applied in such investigations to obtain the requisite information on which a decision can be based on sound statistically valid principles.<sup>1</sup>

Iodoxuridine (5-iodo-2-deoxyuridine) (IDU; kerecid) is a substituted nucleoside that exerts an antiviral action in tissue culture and in experimental herpes infection of the eye in rabbits. It has been found by many workers to be useful in the treatment of herpes simplex keratitis (dendritic ulcer) in man when instilled in the conjunctival sac.

The psittacosis—lymphogranuloma venereum—trachoma organisms appear to have a life cycle; large forms which appear first later give rise to small rounded bodies. There is evidence that these organisms may have closer affinities to bacteria than to the smaller or true viruses. The tetracyclines are especially effective for the members of this group.

In many of the common benign virus infections complications may arise from secondary bacterial infection, for example in the common cold, influenza, measles, and chickenpox; and antibacterial chemotherapy may need to be instituted. Gamma globulin is another agent that has been used in certain viral infections, for example in the attenuation or prevention of measles.

1. Stuart-Harris, C. H. and Dickinson, L. (1964): *The Background to Chemotherapy of Virus Diseases*. Springfield, Ill.: Charles C. Thomas.

probleem te verwys nie. Ons moet altyd die groot bydrae wat bejaardes lewer en wat hulle gelewer het tot die vooruitgang van die gemeenskap, in gedagte hou. Die hantering van bejaardes word egter 'n probleem wanneer hulle nie gesond is nie en wanneer hulle afhanklik is.

Volgens uitgebreide opmetings van die gesondheidstoestand van bejaardes in spesiale tehuise, weet ons dat verreweg die meeste bejaardes aan twee hoofgroepe van siektoestande ly. Ongeveer 71% van die inwoners van die betrokke tehuise ly aan siektoestande van die hart- en die sirkulasiestelsel en 55% ly aan verstoring van die geestesfunksies. Dit is veral die hantering van persone wat in hierdie tweede klas val wat ons hier graag kortliks wil behandel.

Bejaarde persone by wie daar agteruitgang van geestesfunksies is, toon 'n aantal interessante en belangrike simptome. In die eerste instansie is daar die probleem van die verlies van geheue. Geheue-verlies by bejaardes het, soos ons weet, die spesiale karaktertrek dat dit die geheue vir onlangse gebeure is wat die eerste en die maklikste versteur word. Die redes hiervoor is waarskynlik soos volg: die inhoude wat ingeprent was toe hulle nog jonk was, het 'n neiging om vaster behoue te bly as die inhoude wat later ingeprent word, waarskynlik omdat inprenting op 'n jonger stadium plaasgevind het toe die senuweestelsel nog normaal was. Later, met arteriosklerotiese veranderinge, kan inprenting nie so helder geskied nie. Dit is dus die resente geheue wat dikwels die eerste belemmering toon.

Vir bejaardes het hierdie omstandigheid 'n heel spesiale implikasie. Hulle is geneig om die een of ander stap in die ketting van 'n bepaalde handeling te vergeet, en dit hou potensiële gevare in. Byvoorbeeld, bejaardes wat gasstowe besit, draai die gas aan om tee te maak en dan moet hulle dit aansteek; maar hulle het nie vuurhoutjies nie en gaan dan eers die vuurhoutjies soek. Teen die tyd dat hulle die vuurhoutjies vind, het hulle vergeet dat die gasstofie aangedraai is, met die gevolg dat die gevaar van gasvergiftiging ontstaan. Dieselfde kan ook gebeur met 'n verwarmers of 'n dompelkoker—hulle vergeet om dit af te skakel en die gevaar van 'n brand ontstaan dus.

'n Ander verskynsel wat by bejaardes voorkom, is dié van 'n algemene agteruitgang en vertraging van al hulle funksies met 'n gepaardgaande perseverasie ten opsigte van die handeling waarmee hulle op die oomblik besig is. Hulle reaksies is dus stadiger en hulle neem langer om te besluit om iets te doen, maar as hulle dan eenmaal so ver gekom het om 'n besluit te neem, dan is dit asof hulle energie sodanig gekanaliseer is dat hulle nie weer kan ophou nie. So gebeur dit, byvoorbeeld, dat bejaardes dikwels by kruisings oor strate voor motors beland. Wat gebeur is die volgende: die bejaarde kom by 'n oorgang,

staan stil en kyk beurtelings links en regs. As hy sien dat daar geen verkeer is nie, besluit hy om te loop. Maar nou moet hy eers al sy energie mobiliseer, en teen die tyd dat hy begin loop kom daar waarskynlik al 'n motor, maar nou kan hy nie stop nie. Nou moet hy aanhou loop. Dit is asof daar 'n onafwendbare voortstuwing is. Hierdie toestand van sake vorm een van die redes waarom bejaardes dikwels in ongelukke beland.

Die verskynsel van oorvertel van dieselfde storie by bejaardes is ook verwant hieraan. Selfs al word hulle daaraan herinner dat hulle voorheen dieselfde storie vertel het, dan maak dit nog nie saak nie—hulle moet onafwendbaar voortgaan om die aktiwiteit waarmee begin is (die vertel van die storie) tot voltooiing te voer. Anders raak hulle gespanne en ongelukkig. Begrip van hierdie meganisme kan daartoe lei dat hierdie soms ergelike verskynsel met meer geduld aanvaar kan word.

'n Ander belangrike faktor by die geestesversteuring van bejaarde mense wat in gedagte gehou moet word, is die faktor van emosionele onstabieliteit. Die bejaarde se emosies is baie meer labiel as dié van jonger mense; dit is dus ook makliker versteurbaar. Trouens, die emosies van die bejaarde toon nogal heelwat ooreenstemming met dié van 'n kind. Hierdie emosionele labiliteit veroorsaak soms ernstige moeilikhede in huishoudings waar bejaardes by hulle kinders bly en veral waar daar kleinkinders is. As die kinders lastig of gespanne is, kan dit lei tot uitbarstings van emosionele onstabieliteit by die bejaarde persone.

'n Goeie insig in die faktore wat ons hierbo genoem het, kan veel daartoe bydra om die lewe van bejaarde persone vir hulle self en vir hulle naasbestaendes makliker en draagliker te maak. 'n Mate van opvoeding van die betrokke ouere en jongere persone wat met mekaar moet saamleef en die verstandige gebruik van kalmeer middels in tye van krisis en ontsteltenis kan veel daartoe bydra om die versorging van bejaarde mense minder van 'n probleem te maak as wat dit somtyds wel is.

### TELEPHONE ANSWERING DEVICES

It would seem that telephone answering devices have come to stay in many doctors' homes. These instruments have unquestionably been proved a boon, not only to busy doctors whose comings and goings are greatly curbed by frequent telephone calls, but also to their harassed wives who, in many instances, have the onerous and unrelieved duty of minding the telephone in the absence of their husbands. These devices not only inform the caller of the doctor's whereabouts, when he is expected to return home or whether his partner is on duty to accept calls, but also record messages from the caller. They are often more reliable than servants, to whom this duty is allocated, and less trouble to the practitioner than having his calls

diverted by the GPO, and therefore also of greater service to his patients.

However, it is probably going to take some time before such devices come to be generally accepted by the volume of patients. They certainly provide cold comfort to the agitated caller who seeks, above all else, reassurance to calm his fears and to be informed in a friendly voice: 'Doctor will soon be on the way. I shall contact him where he is at present.' Although these telephone answering devices provide greater freedom of movement to the practitioner and his family, they will, until such time as the public becomes used to them, add further to the image of the doctor-patient relationship becoming less personal.

### UITTREKSEL

#### GESLAAGDE BEHANDELING VAN MALATION-VERGIFTIGING<sup>1</sup>

'n Vrou wat sterwend was nadat sy malation gedrink het, oënskynlik in 'n poging om selfmoord te pleeg, is behandel met die toediening van groot intraveneuse dosisse van atropien (850 mg. oor 'n periode van 7½ dae) en kunsmatige asemhaling. Sy is deurgehaal en het tot goeie

gesondheid herstel. Die gevolgtrekking word gemaak dat die vinnige en verlengde toediening van atropien in groot dosisse 'n pasiënt se lewe kan red van 'n skynbaar noodlottige vergiftiging deur 'n organiese fosforiese insektedoder.

1. Richards, A. G. (1964): *Canad. Med. Assoc. J.*, 91, 82.