

South African Medical Journal: Suid-Afrikaanse Tydskrif vir Geneeskunde

EDITORIAL

ANTIBIOTIC FOR MALTA FEVER

With the discovery of the effectiveness of chloromycetin against typhoid fever, of streptomycin against plague and of aureomycin against typhus, these exanthemata have to a large extent been robbed of their terrors.

The appearance of a recent paper¹ calling attention to an antibiotic (cathomycin) effective against Malta fever puts a new look onto another of the serious infective fevers.

Malta fever, Mediterranean fever, undulant fever or brucellosis has been a scourge of temperate climates. This group of fevers, though uncommon in South Africa, is here represented by infection with an organism, *Brucella abortus*, whose animal vector is cattle. Goats not being commonly used for milking in South Africa, typical caprine Malta fever seldom occurs. It is to be hoped that cathomycin will be equally effective against these allied strains of *Brucella*. While the disease does not ordinarily carry a large mortality, the morbidity is high and only supportive measures have been available to keep the mortality figures down. The new antibiotic will have a very welcome effect in cutting short a long debilitating disease and in abolishing the permanently crippling complication of arthritis. Gost reports a very simple treatment as being completely effective; the drug is dispensed in 0.25 gram capsules and 'one of these is given 4 hourly until the day after the crisis, thereafter 6 hourly for 9 days up to a total of 18 g'. He says: 'The constant effect of cathomycin was remarkable. During the first 5 days of treatment no change is apparent; the pyrexia continues as before, and the symptoms remain just the same, but almost always on the fifth day all the symptoms (headache, insomnia, articular pain, anorexia, sweating, etc.) disappear. Splenomegaly also disappears and by the end of the treatment the spleen has returned to its normal size and shape, no matter how large it was. None of the patients relapsed.'

Side-effects are few, about 25% of the patients showing intolerance in the form of a generalized urticarial rash, but this is treated symptomatically and treatment is persisted with, the exanthem disappearing a few days after the drug is stopped. The leucopenia normally present in undulant fever has in no cases been aggravated and 'so far the urticarial eruption has been the only inconvenience caused by cathomycin'. The author concludes that 'if our findings are confirmed, as we feel sure they must be, we may consider the battle against brucellosis to have been won'.

This most heartening report will focus the clinicians'

VAN DIE REDAKSIE

'N ANTIBIOTIESE MIDDEL VIR MALTAKOORS

Toe dit ontdek is hoe doeltreffend chloromycetin teen maagkoors, streptomisien teen die pes en ouromisien teen vlek-tifus is, het hierdie uitslagsiektes baie van hul vreesaanjaendheid verloor.

Die verskyning van 'n onlangse verhandeling¹ wat die aandag vestig op 'n antibiotiese middel (katomisien) wat effektief is in die behandeling van Maltakoors, het nuwe hoop gebring in die stryd teen 'n ander van die ernstige besmetlike koorsiektes.

Maltakoors, Mediterranean-koors, spirochetekoors of brucellose was nog altyd 'n plaag wat die gematigde klimaatstreek geteister het. Hierdie groep koorsiektes alhoewel hul nie dikwels in Suid-Afrika voorkom nie, word hier veertienwoordig deur besmetting met 'n organisme, *Brucella abortus*, waarvan beeste die dierlike draer is. Aangesien bokke maar baie min vir melkdoeleindes in Suid-Afrika gebruik word, kom die tipiese Maltakoors baie selde voor. Dit is te hope dat katomisien net so doeltreffend sal wees teen hierdie verwante *Brucella*-soorte. Hoewel die siekte nie gewoonlik gepaard gaan met 'n hoë sterftesyfer nie, is die siektegevalsyfer baie hoog, en slegs hulpmaatreëls was beskikbaar gewees om die sterftesyfers laag te hou. Die nuwe antibiotiese middel sal 'n baie welkome uitwerking hê omdat dit die duur van 'n lang, verswakkende siekte sal verkort en die blywende verminkende komplikasie van gewrigsontsteking uit die weg sal ruim. Gost maak in sy verslag melding van 'n eenvoudige behandeling wat heeltemal doeltreffend geblyk het; die middel word opgemaak in 0.25 g. kapsules en een van hierdie kapsules word elke 4 uur toegedien tot die dag ná die keerpunt van die siekte, en daarna elke 6 uur, 9 dae lank, totdat 'n totaal van 18 g. bereik is'.

'Die konstante uitwerking van katomisien was merkwaardig. Gedurende die eerste 5 dae van die behandeling kan geen verandering waargeneem word nie; die koors hou soos tevore aan en die simptome bly onveranderd, maar gewoonlik verdwyn al die simptome (hoofpyn, slapeloosheid, pyn in die gewigte, aptyverlies, oormatige sweet ens.) op die vyfde dag. Die miltvergroting neem ook af en teen die afloop van die behandeling is die milt weer normaal van grootte en vorm al was dit ook hoe groot. Geeneen van die pasiënte het 'n heraanval ondervind nie.'

Daar is min nuwe-effekte; omtrent 25% pasiënte toon gevoeligheid in die vorm van 'n algemene urticaria, maar dit word simptomaties behandel en die behandeling as geheel word voortgesit—die uitslag verdwyn weer 'n paar dae nadat die toediening van die middel gestaak word. Daar was geen gevalle waar die leukopenie wat gewoonlik gepaard gaan met brucellose vererger was nie en 'dusver was die netelroos die enigste hinderlike gevolg van die toediening van katomisien'. Die skrywer som op dat 'indien ons bevindings bevestig word, en daarvan is ons seker, kan ons die oorlog teen brucellose as gewonne beskou'.

Hierdie uiters aanmoedigende verslag sal die klinici se

attention more and more on earlier diagnosis; with the knowledge that we can hold the disease and prevent the crippling arthritic complications, the pyrexia of unknown origin which lasts more than 7 days will more frequently be given the specific agglutinating test. The public health authorities may likewise be able to strengthen their organization for securing pure milk supplies, for doubtless the effect of the antibiotic on infected cattle will be fully investigated.

To a small group of people the new discovery is of vital importance; undulant fever is well known to be the most infective organism for laboratory workers and to these especially, the new discovery will give a great deal of comfort.

1. Gost, J. T. (1958): *Lancet*, 1, 191.

aandag des te meer spits op vroeë diagnose; met die wete dat ons die siekte kan stuit en die verminkende komplikasie van gewrigsontsteking kan voorkom, sal die koors van onbekende oorsaak wat langer as 7 dae duur meer dikwels onderwerp word aan die spesifieke agglutinasie-toetse. Die volksgesondheid-owerhede mag dus in staat gestel word om hul organisasie vir die bekom van suiwer melkvoorrade te verbeter, want die uitwerking van die antibiotiese middel op besmette beeste sal sonder twyfel deeglik ondersoek word.

Vir 'n klein groepie mense is die nuwe ontdekking lewensbelangrik; dit is goed bekend dat brucellose die mees besmetlike organisme vir laboratoriumwerkers is, en vir hierdie mense in die besonder sal die nuwe ontdekking baie meer gemoedsrus besorg.

1. Gost, J. T. (1958): *Lancet*, 1, 191

HOSPITAL INFECTION

Infection acquired by patients while in hospital has for ages been a major problem in medicine. Before the days of Semmelweis and Lister obstetrical and surgical wards were often little less than death traps as the result of the spread of virulent septic infection. These terrors lost most of their sting as the result of the practical application of bacteriological knowledge, but even to this day cross infection remains a serious threat, especially in children's hospitals and hospitals for infectious diseases, and even in general medical and surgical wards there is commonly evidence of the spread of disease through the use of instruments, dressings, gloves and other equipment that are inadequately sterilized.

For many years most hospitals have been equipped with a central unit for the sterilization of ward and theatre dressing drums, but it has remained the general practice to decentralize much of the hospital sterilization work in different floors, departments and wards, where the processes used commonly provide no assurance of effective sterilization.

An article on the subject is published in this issue of the *Journal* (p. 537) in which Dr. Wm. Laurie describes the sterilizing unit of Edendale Hospital, Pietermaritzburg, a new 750-bed general hospital. Dr. Laurie points out that 'there is no place in hospital practice for boiling as a method of attempted sterilizing'. A temperature of 100°C (and in many parts of South Africa water boils below 100°) will not kill all spores and viruses; to obtain true sterilization the minimum necessary is 121°C moist heat for 30 minutes, and even this may fail to kill all organisms in dressings etc. that are badly packed in the sterilizer. The viruses of serum jaundice and poliomyelitis are amongst those which may survive mere boiling. The problems presented in the sterilization of hospital equipment are difficult and intricate and require apparatus which can hardly be used except in a

central installation, and certainly cannot be duplicated in numerous parts of the hospital. Moreover in order that the plant shall work with full efficiency it is essential that it shall be operated under the close control of a competent bacteriologist and regularly checked by laboratory and other tests.

Syringes¹ are an example of widely used medical implements that are not easily sterilized and at the same time maintained in good working condition and protected from contamination after sterilization. Recently the Nuffield Provincial Hospitals Trust conducted an enquiry and published a booklet² on a syringe service for hospitals and hospital groups. Steam heat is not recommended for syringes, the method of sterilization that is favoured being a hot-air oven fitted with a fan to circulate the air.

Those who have had to do with the spread of infectious disease in hospitals, especially amongst children, will agree that its prevention is by no means entirely a question of instruments and dressings. Personal contact between patients and between patients and nurses, droplet infection, infected dust and infected food are active spreaders of infection of sepsis or of infectious diseases which present their own problems. If every patient is provided with his own personal utensils, and the use of utensils in common is stopped, much sterilization (or attempted sterilization) may be avoided. A simple example is to provide every patient with his own thermometer.³ It is a common experience today for patients to enter hospital with conditions (e.g. osteomyelitis) from which organisms (e.g. staphylococci) are recovered which are resistant to the more commonly used antibiotics. This would appear to be an indication of the spread of infection from patients under antibiotic treatment in hospitals or elsewhere.

1. Editorial (1958): *Brit. Med. J.*, 1, 93.

2. *The Planning and Organization of Central Syringe Services* (1957): Nuffield Provincial Hospitals Trust, London.

3. Mirvish, I. (1956): *S. Afr. Med. J.*, 30, 413.

Medical, Dental and Pharmacy Act 1928: Labelling of Potentially Harmful Drugs. The Minister of Health after consultation with the South African Medical and Dental Council has made the following regulation with effect from 1 July 1958 (Government Notice No. 613 of 2 May 1958):

1. Every package containing a potentially harmful drug when sold or supplied shall be labelled with the letters 'P.H.D.-M.N.M.' in type of a contrasting colour from that of the remainder of the label; provided this regulation shall not apply to medicines dispensed on the prescription of a medical practitioner, dentist or authorized veterinarian.