

# South African Medical Journal

## Suid-Afrikaanse Tydskrif vir Geneeskunde

### EDITORIAL

#### DAGGA

Dagga is the common South African term which describes the coarse leaf-powder (containing seeds) made from the flowering top of the Indian hemp plant, botanically known as *Cannabis*. The hemp plant originated in Central Europe, but it now grows in most parts of the world, wild or in cultivation, as an annual. Any part of it, when rubbed between the fingers, gives off a characteristic minty odour, the flowering tops being slightly sticky to the touch. The hemp seed (*chènevis*) is used in the manufacture of varnish and paint. It was formerly used for soap-making. In hot, dry countries (the plains of India) the plant is cultivated to produce textile fibres.<sup>1</sup>

The inebriating properties of hemp have long been known. Herodotus<sup>2</sup> wrote that the plant was cultivated in Scythia and Thrace, and the inhabitants not only made clothes from it, but also intoxicated themselves by roasting the seeds on hot stones and breathing the vapours. To-day an imposing number of narcotic preparations is made from the hemp plant for consumption by addicts all over the world. Drugs may be prepared for smoking (chira, hashish, marihuana, dagga) or for drinking (assis, chats-raki). In Eastern countries much ingenuity is devoted to the making of sweet-meats which contain the Cannabis resin in mixtures of almond, chocolate or honey; these substances have a reputation as aphrodisiacs in Arab medicine.

Drugs which produce addiction generally have effects regarded as pleasurable. That hemp has these properties is evident from the serious problem created by its control and use in the United States. The recent imprisonment of a group of film actors focussed fresh public attention on Cannabis addiction and showed that it is not confined to the lowest economic groups of the population. The impression is that in South Africa dagga is used chiefly by Coloured persons and a small number of the more degenerate Europeans. There is a strong popular disapproval directed against it.

At the Grahamstown Medical Congress, in 1935, a resolution was passed asking the Minister of the Interior to arrange for an investigation of the likelihood that dagga smoking could produce psychotic states and intellectual deterioration. As a result a study of dagga smoking<sup>3</sup> was made by the staff of the Pretoria Mental Hospital. The

### VAN DIE REDAKSIE

#### DAGGA

Dagga is die algemeen bekende Suid-Afrikaanse term wat die growwe (saadbevattende) blaarpoeier beskryf wat van die blomtoppe van die Indiese hennep, in die plantkunde bekend as *Cannabis*, gemaak word. Die hennepplant het sy oorsprong in Sentraal-Europa maar dit groei nou wild of gekweek in die meeste dele van die wêreld as 'n jaarplant. Wanneer enige deel daarvan tussen die vingers gevryf word, het dit 'n kenmerkende kruisementagtige geur en die blomtoppe voel effens klewerig. Die hennepsaad (*chènevis*) word gebruik by die vervaardiging van vernis en verf. Dit is voorheen vir die maak van seep gebruik. In warm, droë lande (die vlaktes van Indië) word die plant vir tekstielvesels gekweek.<sup>1</sup>

Die bedwelmende eienskappe van hennep is reeds lank bekend. Herodotus<sup>2</sup> het geskryf dat die plant in Skithië en Thracië gekweek is en die bewoners het nie slegs klere daarvan gemaak nie maar het hulle ook bedwelm deur die saad op warm klippe te braai en die dampen in te asem. Op die oomblik word 'n indrukwekkende aantal narkotiese preparate van die hennepplant vir verbruik deur verslaafdes oor die wêreld gemaak. Verdowingsmiddels om te rook kan gemaak word (chira, hasjish, marijuana, dagga) of om te drink (assis, sjats-raki). In die lande van die Ooste word met veel vernuf lekkers gemaak wat die Cannabis-harpuis in mengsels van amandel, sjokolade of heuning bevat; in Arabiese geneeskunde word hierdie stowwe beskou as geslagsprikkelmiddels.

Verdowingsmiddels wat verslaafheid veroorsaak, het gewoonlik 'n uitwerking wat as aangenaam beskou word. Dat hennep hierdie eienskap besit, blyk duidelik uit die ernstige probleem wat deur die beheer en gebruik daarvan in die Verenigde State van Amerika geskep is. Die onlangse gevangesetting van 'n groep filmakteurs het opnuut die aandag van die publiek op verslaafheid aan *Cannabis* gevvestig en het getoon dat dit nie tot die laagste ekonomiese groepe van die bevolking beperk is nie. Die indruk bestaan dat dagga in Suid-Afrika hoofsaaklik deur Kleurlinge en 'n klein aantal ontaarde blankes gebruik word. Sterk afkeur van die publiek is daarteen gemik.

Op die Grahamstadse Mediese Kongres van 1935 is 'n besluit aangeneem waarin die Minister van Binnelandse Sake gevra is om 'n ondersoek te reël na die moontlikheid dat die rook van dagga psigotiese toestande en verstandelike agteruitgang kan veroorsaak. As gevolg daarvan is 'n ondersoek na die rook van dagga<sup>3</sup> deur die personeel van die hospitaal vir sielsiektes te Pretoria gedoen. Die

1. R. J. Bouquet (1950): U.N. Bull. Narcot., **2**, 14.

2. Herodotus, *Historiae*, IV, 75.

3. Medical Staff, Pretoria Mental Hospital (1938): This Journal, **12**, 85.

1. Bouquet, R. J. (1950): U.N. Bull. Narcot., **2**, 14.

2. Herodotus, *Historiae*, IV, 75.

3. Geneeskundige Personeel, Pretoriase Gestig vir Sielsiektes (1938): Hierdie Tydskrif, **12**, 85.

conclusion was that dagga produces effects very similar to those of alcohol. The investigators were not prepared to state that dagga produces moral and mental deterioration; they suggested that moral deterioration precedes the addiction and predisposes to the use of dagga.

In the absence of more extensive clinical and sociological investigations, it is difficult to be sure how large a social problem dagga has created in South Africa. (It was not long ago that some farmers doled out a pipeful of dagga to their labourers at the end of each day, in much the same way as many farm-workers are now given a tot of wine.) Its sale or use is prohibited by law, and the vigilance of the police is strict; a short time ago a senior police official was fined because of his connexion with the dagga trade.<sup>4</sup> It is not known how much more serious the effects of dagga are than those of alcohol. Dagga produces in the smoker drowsiness, euphoria and occasional psychotic episodes, but alcohol is guilty of even graver actions. It is not certain to what extent dagga contributes to the commission of crime in this country. Alcohol does so in undeniable measure.

The hemp plant, regardless of statutory prohibition, continues to be cultivated secretly, sometimes hidden in mealie lands or on obscure islands in rivers. The runners, who carry the finger-shaped packets for sale, have to rack their wits afresh now that chimneys and hollowed table legs are suspect, and the significance of a penny nailed to the threshold has become known. The furtive smoker is himself in constant danger of being betrayed to the police by the distinctive odour of his cigarette.

Mayor la Guardia was concerned by rumours that marihuana was smoked by large sections of the population of New York, and even by school children. In 1938, on the recommendation of the New York Academy of Medicine, he appointed a committee to study the effects of marihuana. The Committee's report<sup>5</sup> is one of the most authoritative investigations of the problem.

It is probable that the effects of dagga closely resemble those of marihuana. No direct relationship was found between the commission of crimes of violence in New York and marihuana. It was smoked for the sake of conviviality and to obtain a temporary feeling of adequacy. Smoking stopped spontaneously when the desired effect was attained; unlike the alcoholic, the marihuana addict has no desire for more of the drug as soon as he feels 'high'. Smoking could also be stopped abruptly without mental or physical distress comparable to the deprivation symptoms in morphine addicts. The effects of Cannabis appear immediately and pass off in from one to three hours. Although some subjects become restless and talkative, most experienced a sense of well-being, relaxation and unawareness of the surroundings, followed by drowsiness. There was difficulty in focussing and sustaining mental attention.

4. The *Cape Times*, 9 September 1950.

5. Mayor's Committee on Marihuana (1944): *The Marihuana Problem in the City of New York*. Pennsylvania: Jaques Cattell Press.

gevolgtrekking waartoe gekom is, was dat dagga gevolge het wat baie met dié van alkohol ooreenkoms. Die ondersoekers was nie bereid om te sê dat dagga morele en verstandelike agteruitgang veroorsaak nie; hulle het te kenne gegee dat morele agteruitgang verslaafheid voorafgaan en aanleiding tot die gebruik van dagga gee.

By afwesigheid van uitgebreider kliniese en sosiologiese ondersoek is dit moeilik om seker te wees van die omvang van die maatskaplike probleem wat dagga in Suid-Afrika geskep het. (Dit is nie so lank gelede nie dat boere 'n pypvol dagga aan die end van elke dag aan hulle arbeiders uitgedeel het, soos baie arbeiders vandag op die plase 'n dop wyn kry.) Die verkoop of gebruik daarvan is deur die wet verbied en die waaksamheid van die polisie is streng; kort gelede is 'n senior polisie-amptenaar beboet weens sy verband met die daggahandel.<sup>4</sup> Dit is nie bekend hoeveel ernstiger die gevolge van dagga in vergelyking met dié van alkohol is nie. Dagga veroorsaak lomerigheid, 'n welsynsgevoel en af en toe psigotiese episodes by die roker, maar selfs ernstiger inwerkinge kan aan alkohol toegeskryf word. Dit is nie duidelik in watter mate dagga tot misdaad in hierdie land bydra nie. Alkohol doen dit wel in onteenseglike mate.

Die henneppplant word ten spye van die verbod deur die wet nog steeds in die geheim gekweek, soms versteek in mielielande of op afgesonderde eilande in riviere. Die verspreiders wat die vingervormige pakkies te koop rondra moet hulle verstand opnuut inspan noudat skoorstene en uitgeholde tafelpote onder verdenking staan en die betekenis van 'n pennie wat op 'n drempel gespyker is, bekend geword het. Die versigtige roker loop self altyd die gevær dat die kenmerkende geur van sy sigaret hom aan die polisie verraai.

Burgemeester la Guardia was besorg oor gerugte dat marijuana deur groot dele van die bevolking van New York en selfs deur skoolkinders gerook word. In 1938 het hy op aanbeveling van die *New York Academy of Medicine* 'n komitee aangestel om die gevolge van marijuana te bestudeer. Die Komitee se verslag<sup>5</sup> is een van die mees gesaghebbende ondersoekte van die probleem.

Dit is waarskynlik dat die gevolge van dagga 'n noue ooreenkoms met dié van marijuana vertoon. Daar is geen regstreekse verband tussen die pleeg van geweldmisdaad en marijuana gevind nie. Dit is ter wille van die gevoel van vrolijkheid gerook en om 'n tydelike gevoel van voldoening te kry. Die rook daarvan het spontaan opgehou wanneer die begeerde uitwerking verkry is; anders as in die geval van alkohol, het die verslaafde aan marijuana, sodra hy 'hoog' begin voel geen begeerte vir meer van die verdowingsmiddel nie. Die rook daarvan kan ook opeens gestaak word sonder die geestelike en liggaamlike nood wat met die ontnemingsimptome van morfienverslaafdes vergelyk kan word. Die uitwerking van *Cannabis* word dadelik merkbaar en dit verdwyn weer binne een tot drie uur. Alhoewel sommige rokers rusteloos en spraaksam word, ondervind die meeste 'n gevoel van welsyn, ontspanning en onbewustheid van die omgewing gevolg deur lomerigheid. Dit is moeilik om verstandelike aandag toe te spits en te handhaaf.

4. Die *Cape Times*, 9 September 1950.

5. Mayor's Committee on Marihuana (1944): *The Marihuana Problem in the City of New York*. Pennsylvania: Jaques Cattell Press.

In company, the subjects were given to talkativeness and good-natured joking. The pleasurable effects of marihuana, usually regarded as euphoric, were frequently interrupted by apprehension of varying degree. In a limited number of persons there were alterations in behaviour giving rise to unconventional acts, anxiety reactions, antagonism and eroticism. However, any tendency towards violence was expressed verbally and not by physical actions. Physical symptoms experienced were tremor, ataxia, dizziness, a sensation of floating in space, nausea and a desire to urinate. Psychotic episodes occurred very rarely and were of short duration, being characterized by mental confusion and delirious excitement, with periods of laughter and of anxiety.

It was concluded that marihuana does not change the basic personality structure of the individual. While it lessens inhibition and brings out what is latent in the thoughts and emotions, it does not evoke responses which would be totally alien. Marihuana is not a drug of addiction, comparable to morphine and, if any tolerance is acquired, it appears to be of a very limited degree. The drug produces its effects in man through its actions on the central nervous system.

While it does not at present appear likely that dagga will provide as serious a problem as does its American counterpart (for in some cities the drug is reported to have obtained a hold even on children<sup>6</sup>), a careful study of the social effects and psychological actions of dagga is long overdue.

6. Walton, R. P. (1938): *Marihuana: America's New Drug Problem*. Philadelphia: J. B. Lippincott Co.

In geselskap was die proefpersone geneig om spraaksaam te wees en grappies te maak. Die aangename uitwerking van marijuana wat gewoonlik as eufories beskou is, is dikwels deur vrees van 'n wisselendegraad onderbreek. By 'n beperkte aantal persone was daar gedragsveranderings wat aanleiding gegee het tot onkonvensionele dade, vreesreaksies, vyandigheid en erotiese verskynsels. Alle neiging tot geweld is egter slegs deur woorde gelug en nie deur dade nie. Die volgende liggaaamlike simptome is ondervind: bewerigheid, ataksie, duiselheid, 'n gevoel van in ruimte te sveef, mislikheid en 'n begeerte om te urineer. Psigotiese episodes het uiterst selde voorgekom, was van korte duur en is gekenmerk deur verstandelike verwarring en ylhoofdigte opgewondenheid met tydperke van gelag en vrees.

Daar is afgelei dat marijuana nie die basiese persoonlikheidstruktuur van die individu verander nie. Alhoewel dit inhibisies verminder en wat in die gedagtes en emosies latent is na die oppervlakte bring, verwek dit nie reaksies wat heeltemal vreemd is nie. Marijuana is nie 'n verdowingsmiddel met 'n verslaafdehedsvermoë wat met morfien vergelyk kan word nie en wanneer weerstand verkry word, skyn dit slegs in beperkte mate te wees. Die verdowingsmiddel veroorsaak sy uitwerking by die mens deur sy inwerking op die sentrale senuweestelsel.

Alhoewel dit nie op die oomblik waarskynlik lyk dat dagga so 'n ernstige probleem sal skep as sy Amerikaanse teenvoeter nie (want daar word berig dat die verdowingsmiddel in sommige stede selfs 'n houvas op kinders gekry het<sup>6</sup>) is 'n sorgvuldige ondersoek van die maatskaplike gevolge en sielkundige inwerking van dagga reeds lank agterstallig.

6. Walton, R. P. (1938): *Marihuana: America's New Drug Problem*. Philadelphia: J. B. Lippincott Mky.

## ANNOTATION

### HAEMYTHOLOGY: II

BY POLIOCYTE

*Haemoglobin Estimation.* It is a general rule that the more instruments that have been invented for a certain estimation, the less satisfactory the results are. During the hundred years since Welcher<sup>1</sup> first compared the red colour of a drop of blood with a series of colour scales—the procedure now going under Tallqvist's name—more than one method for haemoglobin estimation has been suggested every year.

In spite of this avalanche of instruments, the haemoglobin estimation is to-day the simplest and one of the most accurate haematological investigations. With a well-calibrated instrument the error is less than 3%<sup>2</sup>; but it is still advisable to look at the patient's mucous membranes before accepting any given figure. In one clinic it was noticed that although the patients were as white as labora-

tory coats, the haemoglobins were all about normal. A technician suffered from hay fever and when blowing out his pipettes different quantities of upper respiratory secretions found their way into the diluting fluid. The turbidity produced was duly read as haemoglobin in the colorimeter. Perhaps an ingenious soul may invent yet another machine: the anti-histaminic haemoglobinometer!

The *enfant terrible* of haematology, the 'haemoglobin percentage', remains eternally young like the children of the weekly comics. The story goes that one unfortunate person (with 15.5 gm. of haemoglobin per 100 ml. of blood) was first given a blood transfusion in Bern because his haemoglobin was 87% (Sahli), and later had a pint taken off in London as the percentage there was 112 (Haldane). As patients are, he naturally enjoyed the excitement and has since gone to the Riviera for a small rest.

The haemoglobin content should be expressed in gm.

1. Welcher, H. (1854): *Vrtscr. f.d. Prakt. Med.* 44, 11.  
2. Biggs, R. and MacMillan, R. L. (1948): *J. Clin. Path.*, 1, 269.