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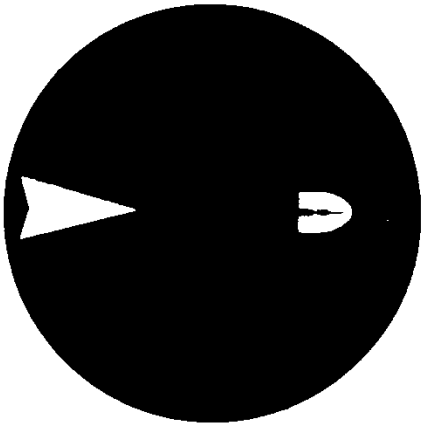

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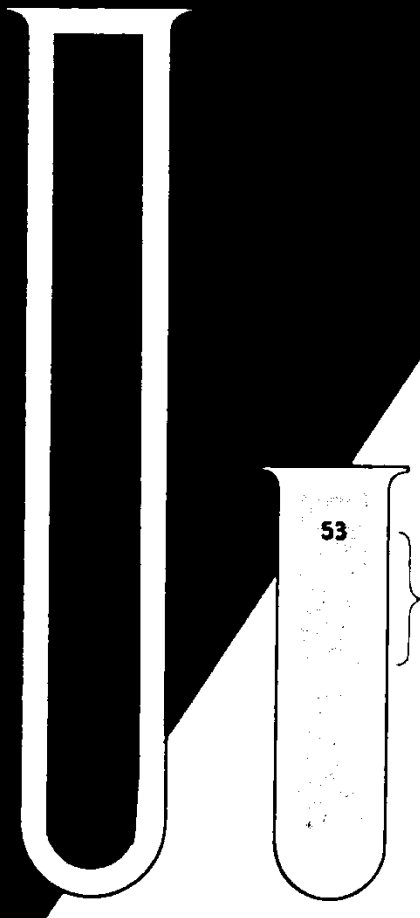

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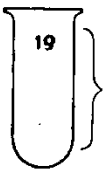

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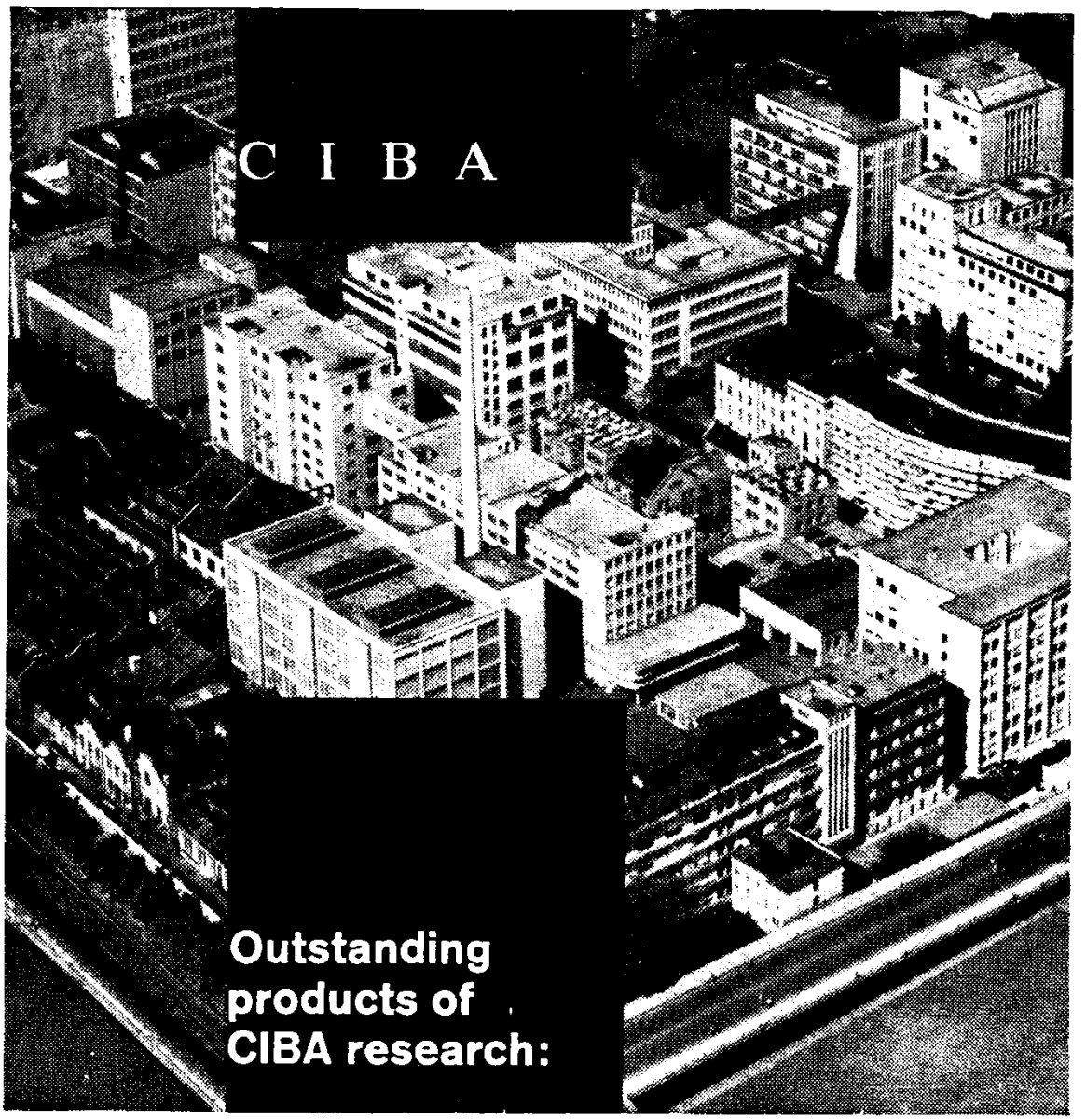

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Journal of the Hong Kong University Medical Society

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SPRING 1959

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FACT, FANCY AND OPINION

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THANKS

The Editorial Board wishes to thank Mr. R. B. Maneely for many hours of hard work and the performance of a difficult job well done.

FACT

Things are always easier said than done. We are sorry to admit that this is particularly true in the Editorial Board. All members of the Board showed wonderful enthusiasm when it was first formed. However, such spirit dissolved with the first meeting. Many suggestions were made and passed, they have remained as such and the combined effort that was to be has failed to materialize.

Repetition in any walk of life is always dull and uninteresting. We are too familiar with words like "MORE ARTICLES", "MORE POEMS", "MORE CARTOONS". It is the job of the Editors to edit. But how can we do our jobs if we do not have anything to edit? *Elixir* is published by and for the Medical Society. Its contents should

be of interest to and the concern of the members. How can this be brought about if we do not hear from YOU?

The prime difficulty with most journals and magazines is finance. They usually go out of existence because of lack of financial support. This is not so with *Elixir*. We have been well supported by local firms in the form of generous subscriptions for advertisement. In the past *Elixir* has even shown a PROFIT! However, *Elixir* seems to be marked for extinction not because of financial loss but for lack of material to print! This is certainly a ridiculous situation to be in.

FANCY

Pope wrote:

" . . . . the Grand Elixir, to support the Spirits of Human Nature. This Remedy is of the most Grateful Flavour in the World, and agrees with all Tastes whatever. 'Tis delicate to the Senses, delightful in the Operation, may be taken at all Hours without Confinement and is as properly given at a Ball or Play-house as in a private Chamber. It restores and vivifies the most dejected Minds, corrects and extracts all that is painful in the Knowledge of Man's self . . . . "

Let us try to make our *Elixir* have similar properties.

OPINION

It has been suggested that it would be better to have two voluminous issues each year instead of three of pamphlet size. This cannot be so this year as we have firm commitments for the publication of three issues with our advertizers. We would also like to point out that reducing the number of issues by one is no guarantee that each will be bigger. Without adequate support from the members of the Society the two publications might well turn out to be of the thickness of the "Undergrad".

SUGGESTIONS TO AUTHORS

We shall print anything that is printable.

All of us have been maltreated by our colleagues, our teachers or even laboratory animals. Report the incidents in *Elixir*. Write whatever strikes your knob.

— Some jokes on "Selected passages" of a lecture.
— Fun in the Anatomy dissection room.
— Mishaps in the Physiology and Biochemistry laboratory.
— The Thursday clinic.
— The Professorial rounds.
— The O. P. D.
— and all your experiences of being the cheapest animal —

A.Y.M.B.

ELIXIR

NEEDS MORE CONTRIBUTIONS

! ! !

ELEMENTARY THERMOPHYSIOLOGY

Most text-books of Physiology and of Biochemistry, when discussing the properties of isolated mammalian tissue, refer these properties to a standard temperature of 37°C as though this were the physiological temperature of all tissues. Yet it is more than thirty years since Bazett and McGlone (1927) showed that even under conditions of comfort there is a temperature gradient of about 2°C between the rectum and the deep tissues of the forearm. The average skin temperature of a person comfortably warm is about 33°C, but the hand and feet may be several degrees below this value. As pointed out by Burton and Edholm (1955), the temperature of choice for studies of excised peripheral tissue should be related to the temperature of that tissue in life and as good a case could be made for studies at 33°C as at 37°C. It is not, however, the purpose of this article to discuss this matter. The point is raised to emphasize the fact that the so-called *normal* body temperature of 35.8 to 37.4°C (Ivy, 1944) should not be taken as the *average* body temperature. The average body temperature has as yet not been accurately measured.

The present tendency, when discussing temperature regulation, is to divide the body into a central deep *core* of uniform temperature and a *shell* of cooler peripheral tissues. The temperature of the *core* is regulated and maintained at approximately 37°C while the temperature of the shell is dependent on that of the environment as well as on physiological factors (e.g. peripheral blood flow, muscular exercise). Indeed, the homeothermy of the *core* is accomplished, in great measure, by adjustment of the temperature in the shell. It would be an error to regard the *core* and *shell* as having fixed dimensions. The boundaries dividing them cannot be defined and are freely movable – peripheral vasoconstriction results in an increase in the amount of cooler peripheral tissue and consequently there is an increase in the size of the *shell* at the expense of the *core*. In spite of its limitations this concept is convenient and helpful towards an understanding of thermophysiology.

Thermophysiology involves the physiological measurements which reveal temperature and heat exchange between the organism and its environment (Carlson, 1954). Burton (1934) and Hardy and Soderstrom (1938) are mainly responsible for the development of this field of physiology.

We mentioned that the average body temperature has not been accurately measured. We can go further and say that, for technical reasons, the average body temperature of man cannot be measured accurately. This, however, does not preclude us from attempting to estimate it. On a theoretical and experimental basis Burton (1935) derived the following mixing formula:

$$Tm = .65Tr + .35Ts \quad - - - \quad (1)$$

where:

Tm = average body temperature in °C
Tr = rectal temperature in °C
Ts = average skin temperature in °C

Hardy and DuBois (1938) use a different formula:

$$Tm = .8Tr + .2Ts \quad - - - - \quad (2)$$

These equations tell us that the average body temperature does not change if a fall in rectal temperature is accompanied by an appropriate rise in skin temperature. All that has happened is a redistribution of the heat in the body. This situation can be brought about by the administration of vasodilator drugs to a cold subject (Hsieh, 1958). The shift of heat from *core* to *shell* can also be brought about by the application of heat to the skin of a cold subject. If the weather is cold enough the following simple experiment can be performed to verify this statement. The subject stands under a cold shower for about five minutes (it would be even better if he could be persuaded to lie in a bath of cold water for, say ten minutes) and then turn the water to hot. If the *shell* is adequately cold there will be a burst of shivering following the application of heat. This is due to the fall in *core* temperature. The fatter the subject, the bigger the *shell*, the more precipitous the fall in *core* temperature and the more vigorous the shivering. It should be noted that, while Tr is also used as a measurement of *core* temperature, equations (1) and (2) do not give the relative dimensions of *core* and *shell*.

A knowledge of the average body temperature is important in calculating the heat content of the body:

$$D = W \times Cb \times Tm \quad - - - \quad (3)$$

where:

D = heat content in kg.cal.
W = weight in kg.
Cb = average specific heat of the tissues and is usually given the value: .83 kg.cal/°C.kg.

Change in heat content is calculated by the equation:

$$dD = W \times Cb \times dTm \times \frac{1}{S} \quad - \quad (4)$$

where:

dD = change in heat content in kg.cal./sq.m.hr.
dTm = rate of change in temperature in °C/hr.
S = surface area of subject in sq.m.

The law of conservation of energy allows us to assert that, in the system with which we are dealing, energy in equals energy out. This may be stated in equation form:

$$M = H + dD \quad - - - - - - \quad (5)$$

where:

M = metabolic rate in kg.cal./sq.m.hr.
H = total heat loss in kg.cal./sq.m.hr.
dD in this equation carries a positive sign if heat content is increasing and a negative sign if heat content is decreasing.

The total heat loss is usually divided into two parts:

$$H = Hcdr + He \quad - - - - \quad (6)$$

where:

Hcdr = heat loss by conduction, convection and radiation.
He = heat loss by evaporation.

Heat loss by evaporation is very difficult to measure and is usually taken as being 25% of the total heat loss. Thus:

$$Hcdr = .75H \quad - - - - - \quad (7)$$

Combining (5) and (6) we get:

$$M = Hcdr + He + dD \quad - - \quad (8)$$

Equation (8), in various forms, appears in all text-books of physiology and fundamental to our understanding of the subject under discussion. It tells us that when metabolic rate is equal to the rate of heat loss (M = Hcdr + He) there will be no change in heat content of the body (dD = O); when this condition exists the body is said to be in a steady state. If evaporative heat loss is reduced (such as would happen when the humidity of the air is high) then loss of heat by means of conduction, convection and radiation must be increased or metabolic rate reduced in order to maintain the same heat content; if this does not happen, body temperature will rise. If heat loss is nil (Hcdr + He = O) then the heat content of the body and consequently, body temperature, will increase at a rate proportional to the metabolic rate.

In most experiments on temperature regulation conditions of steady state are aimed at, since metabolic rate then becomes equal to heat loss and it is much easier to measure metabolic rate (indirectly by determining oxygen consumption). It is doubtful, however, that the body ever is in a steady state with respect to average body temperature and metabolism. While it would be more accurate to calculate heat loss from M − dD, the error introduced by assuming a steady state is small under usual laboratory condition and to insist on an estimation of dD would be splitting hairs. The splitting of hairs has not contributed much to scientific knowledge.

To return to our *core* and *shell*, the heat lost from the core must pass through the shell and from the surface of the shell (skin) to the environment.

The heat lost from the *core* to the *shell* will be:

$$Hc = C\ (Tr - Ts) \quad - - - - \quad (9)$$

where:

Hc = heat loss from the core in kg.cal./sq.m.hr.
C = a conductivity parameter which depends upon conductivity of the tissues and on the amount of convective heat flow (blood flow), it has the units kg.cal/°C.sq.m.hr.

The student will recognize (9) as the mathematical expression of Newton's law of cooling. However, in this equation C is not constant and changes with alterations in blood flow. Changing the symbols in (9) yields the mathematical expression of Fick's principle. This has been used by Pennes (1948) in an analysis of tissue temperature of the forearm.

The heat lost from the surface of the skin is:

$$H = C'\ (Ts - Ta) + He \quad - \quad (10)$$

where:

C' = a parameter depending on clothing, surface area and external environment.

In (10), C' (Ts – Ta) = H – He = Hcdr (see equation 6).

We can combine (9) and (10) by substituting for Ts and obtain the following equation:

$$Tr = \frac{He}{C'} + \frac{Hcdr}{C'} + Ta \quad - \quad - \quad (11)$$

Under conditions of steady state:

$$M = Hc = H \quad - \quad - \quad - \quad - \quad - \quad (12)$$

By assuming Hcdr = .75H (see equation 7) we may rewrite (11):

$$Tr = \frac{M}{C'} + \frac{.75M}{C'} + Ta \quad - \quad - \quad (12)$$

This equation tells us that if there is a fall in external temperature the *core* temperature can still be maintained, without the necessity of increasing the metabolic rate, by reducing C (vasoconstriction) and C' (putting on more clothes). Animals reduce C' by piloerection, taking shelter from the wind and reducing the surface exposed to the weather (curling up into a ball).

If the ideas presented here seem simple and elementary then we have succeeded in our purpose. In future we hope to wade into deeper, and colder, water.

THERMOS.

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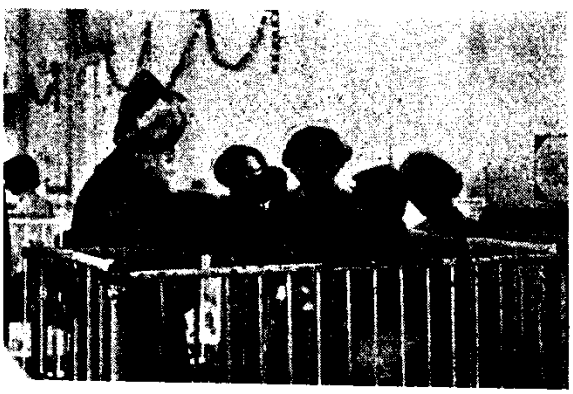
Santa Claus Visits Some Sick Children

A Santa Claus was born on Dec. 23rd, 1958 in the Sisters' Duty Room and rapidly grew to reasonable proportions in half an hour.

Santa next appeared in the Pediatric Ward, Queen Mary Hospital. By now his beard was somewhat distorted and coming adrift but the children were most polite and even helped him repair the damage. Many a sad heart was lightened by the hilarious performance of Santa who also led them in the singing of a few Christmas carols.

He visited the children at the Convalescent Home in Sandy Bay and distributed more than 300 parcels of sweets and toys.



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SETTING UP PRACTICE

So you've got your M.B., B.S., and finished your housemanship too. You believe in the quick way; you want to get into general practice right away. Your second cousin Priscilla insists that you be a junior partner to her sixty-year-old brother-in-law in Macao. And you simply can't refuse your widowed aunt to procure and equip an office for you in Alexandra House. She's been reminding your mother of the promise every year since your matriculation.

Well, what do you do? Take my advice: thank them both and say No. You and your Macao old doc can never put up with each other – your differential diagnosis is bunk, and your therapeutic theories are fairy tales. It is gratifying to see a plate bearing your own name, *M.B., B.S.,* shining in Alexandra House, but no matter how much gold you gild it with, I'll eat my hat if a single patient comes to see you. Plates don't fetch patients – it's a cold fact known by men with qualifications far better than yours.

Doctors can't live without patients, and the world grade doc ors by the number of patients they get. You must build up your stock of patients. For a start, you must be humble. Condescend to a place in a small hospital. I know it is humiliating to do so while your former class-mates get appointed to the largest hospital in town, but believe me, you will not have to wait long for your gratification.

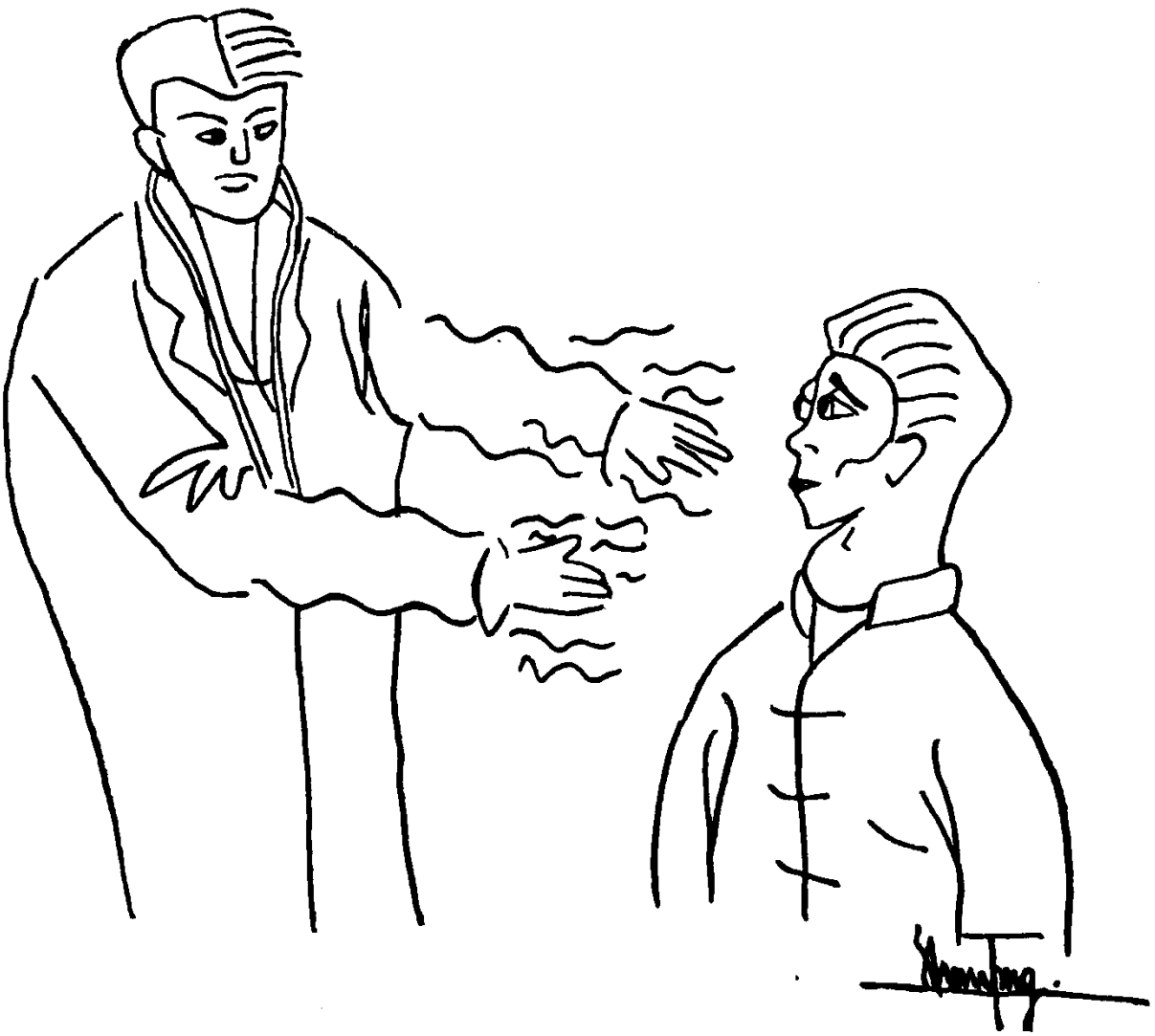
Your choice of a hospital is important. Find one subsidised by some organisation and located in a residential district of the "passing rich" and the "semi-rich". These, you know, are the people who can afford consulting a doctor in Alexandra House, but would rather queue up for a three-dollar drug-free morning clinic in your hospital. Your object is to get them to know and like you. Give them a chance to see you often. You can't expect them to do so if you are in the skin or E.N.T. section; but they do come round once in a while to the physician complaining of minor maladies like coughs, diarrhoea, worms passed by their children, and the like. Be a friend to them: sympathise with their complaints and lure them into conversation. Be understanding if they like to talk of financial difficulty at home. Show an affection for children; it can be most impressive. If you can help it, never contradict the pediatric opinions of mothers with a dozen or so children. Some people think you are a good doctor if you confirm their judgement and praise their ideas; experienced mothers are such people. They are also the people who will bring most patients to you in future. Besides entrusting all their children to you once you have gained their confidence, they will also advertise you to their comrades on the *majong* table – *majong* being a game surprisingly popular amongst multiparous women. So, it pays to buy their good will. Little conveniences like unofficially exempting them from queuing to see you, granting sleeping pills for post-*majong* insomnia, etc., will work miracles.

Somehow people find out where you live, and some unexpected evening, one of those mothers you know so well will pop into your house with a sick child in her arms. Before she leaves completely reassured, don't forget to say, "Please do drop in and have a cup of tea any time you happen to pass by." With that you have already started your home-clinic. Your better-off patients will prefer seeing you at your place to queuing up for the hospital clinic. Never mention a word about fees in the beginning; flatly refuse them if they indicate it for the first few times. Then as they come more often and press on you harder each time, you can tell your wife to accept it. Accept anything they give; only let them leave you with the feeling that you have cured their cough or what not for that little, while it got no better last time after paying $35.00 at Alexandra House. Under the circumstances you are a better doctor. It's good to establish such a conviction in your patients' minds.

It is hard to say how long you have to stick to your hospital; the longer you stay, the more patients you'll fetch. Of course you want to run your own office early, but never be too hasty to quit your hospital. Here your judgement comes in. You've got to be sure that a lot of people have heard about you, that many among these prefer

you to any other doctor, and that most important of all, a number of them are advertising you all the time. Watch for a few signs. Your home clinic in the evening may be getting more and more prosperous. You may one day receive a patient from the New Territories coming to see you by train.

So you have your office in Alexandra House at last. Here you will be seeing your old friends the ' semi-rich ' and ' passing-rich ', but you will also be seeing more and more of your patients who once came to you in a *Jaguar*, and many of her class. These last are accustomed to seeing doctors as a



Some gracious lady you never saw before may suddenly turn up in a luxurious *Jaguar* and consult you for a sore throat, saying how much she's heard about you from Mrs. X and Mrs. Y. whose sick children you always so admirably cured. Then – good luck; your day has come. Your aunt can now fulfil her promise.

luxury, and though they rarely visited you at home previously, they will now come to you in Alexandra House. You will make an effort to get more of these patients, of course. To your old patients, you can show your gratitude by a small fee, but to your new wealthy clients, you must show them some ' class '. There are a few tricks which you can employ.

First and foremost, you must have your reception room well-filled by waiting patients. If you cannot get enough of them, concentrate your office hours to 9.00 – 10.30 and 3.00 – 4.00, and give the reason that you have hospital rounds at other times. Nothing scares away patients more than the impression that the doctor is not doing good business. Use new drugs whenever possible, and charge handsomely for a psychic effect. In the case of children, bring down their fever on the first day at all cost, or they will go to another doctor. If you succeed, the parents will broadcast your feat; to a lot of people, ability to get a child to 98.4° by one injection is the symbol of a really competent doctor. For real 'class', you can disappear for a fortnight now and then; your nurse can answer on the telephone that you are on a research tour to Japan, or that you have been invited to some conference in Manila, while actually, you are having a second honeymoon with your wife.

One last word, if your wife thinks you look more like a patient in the wards wearing a white gown, for goodness' sake don't put on the darn thing. Some people are just not born to have that doctor-look, and a fashionable suit creates more respect in your clients than an ill-fitting gown.

SOPHIA M. HELENE.

THOUGHTS ON THE FINALS

Calmly or sadly, lightly or grave,
Three cliffs you scale or three ways you fail.
Scored be your topics as onward you brave,
As three cliffs you scale or three ways you wail!

Cherry or dreary, bleakly or brave,
Three hills you scale or three heights you fall.
Thousand the muscles that save you the grave —
As three cliffs you climb, lest three heights you fall.

Weary or bleary, when comes the show,
Three heights you face as three winds now blow.
Hard down upon you their icy brea hs blow
As hard down the cliffs the three winds now blow.

Bitter's the challenge – more want the slide!
Bright blaze their hopes as high, high they go;
Cold grows their manner and vacant their pride,
When bleak, bleaker winds blow – Mercy forgo!

Coldly or warmly, for minds adrift,
Still dawns the day when dull seems the sun.
Flutter will hearts as red glints from those cliffs,
When those who have faltered trail in the run.

PRO GLORIA MOR!

OATH OF HIPPOCRATES

Born about 465 B.C.

I swear by Apollo the Healer, and Aesculapius, and Hygieia, and Panacea.

And I call all Gods and Goddesses to witness, that I will, according to my power and judgment, make good this oath, and this covenant which here I sign.

To think of him who taught me this art as I think of my parents. To hold my life as his life, and to give him, in the time of his need, a share of my belongings. To consider his sons as my brothers, and to teach this art, to such of them as wish to learn it, without payment or agreement.

To impart the doctrine, and the interpretation, and the whole learning, to my sons, and to my master's sons, and to students enrolled and sworn under medical law, and to nobody else.

And I will use all ways of medical treatment that shall be for the advantage of the sufferers, according to my power and judgment, and will protect them from injury and injustice. Nor will I give to any man, though I be asked to give it, any deadly drug, nor will I consent that it should be given. Likewise, I will not procure abortion. But purely and holily I will keep guard over my life and my art.

Nor will I cut them that have the stone, but will send them to men whose work it is to perform that operation.

And, into whatever houses I enter, I will enter into them for the benefit of the sufferers, departing from all wilful injustice and destructiveness, and all lustful works, on bodies male and female, free and slaves. And whatever, in practice, I see or hear, or even outside practice, which it is not right should be told abroad, I will be silent, counting as unsaid what was said.

Therefore, to me accomplishing this oath and not confounding it, may there be enjoyment of life and of art, being in good repute among all men for ever and ever: but, to me transgressing and perjured, the contrary.

FUTURE OF THE MEDICAL PROFESSION

The prime aim of the medical profession is to treat the diseased and to relieve the sick of their suffering. It is, therefore, regarded as one of the most honourable professions.

At present, in our society we have general practitioners who are registered doctors having had one or more years of hospital training after their graduation from their universities or colleges. There are many difficulties in the practice of medicine, we must agree, and the general practitioners encounter them all since they are the doctors in the general public. It is often taken for granted, maybe too readily, that all doctors are omnipotent and infallible to their advantage or disadvantage. A medical man will be accused of ignorance if a case is wrongly diagnosed; for negligence if prompt treatment is not given; and of malpractice if the drugs prescribed to his patients are ineffective. Fortunately, doctors seldom find themselves in these unpleasant situations. If a patient survived after treatment, one could never tell what would have happened if he was not treated, and had he died, he might have died of natural causes.

Doctors are looked upon by their friends and relatives with great admiration and respect, perhaps, not because of their respect towards doctors, but because doctors have good prospects in the sense that fame and wealth will soon be theirs. This wrong attitude is magnified by those who take up medicine as their career so as to become rich when they graduate and will soon reduce respectable medical personnel to nothing more than usurpers and liars.

In the past, the Hippocratic Oath was highly valued, yet I wonder how many of us, both medical students and doctors, really know the contents of the Oath. It is true that there are many patients who demand injections and operations, which should have been decided by doctors, be it for criminal purpose or not. There are others who are displeased when they are told there is nothing wrong and all they need is a holiday. Would it not be better for the doctor to tell his patients the truth than to keep them in the dark in order to please them? Every doctor knows very well that his bank account is not measured by the time he spends on seeing one patient but by the number of patients he sees and that a good bedside manner will bring him wealth and good repute whereas strict supervision of his patients' activities, dietary habits and complete physical examinations will sooner or later land him in bankruptcy. In order not to lose patients he tries his best to please them which I suppose is not the duty of a medical man. Doctors who have to live by pleasing their patients will soon find themselves prescribing glucose water to hypochondriacs and alcohol to drunkards. There are also doctors who use antibiotics indiscriminately for a trial, when their clinical sense and judgement fail them, on patients which should have been referred to their senior colleagues and specialists. As a result, many cases are hopelessly delayed and many bacteria are rendered resistant to most useful antibiotics.

To blame the general practitioners for their wrong attitude towards their patients is just like blaming managers of theatres showing bad motion pictures which will not be put on show if the public does not like it. On the other hand, the public will have no chance to see bad pictures if there is none around. To enable general practitioners to withdraw themselves from degrading slavery by their patients, more hospitals should be built with adequate vacancies and reasonable pay for those who decide to go into government service. More stress should be laid on Public Health Work, the teaching of social hygiene and environmental sanitation to promote public health. The other solution is to nationalize medicine. This will eliminate competition for patients and will raise the moral standard of general practitioners. A National Health Service Scheme can do much to remove these evils. However it involves such radical discussions that lack of space prevents its being dealt with here.

There are many solutions to the problem since so many factors are responsible for the present situation, but none would be better than the education of the general public and the proper selection of medical students. The fundamental revolution should be in the man himself. A man with a mature mind is more reluctant to be influenced by his environment, whereas a man with no conscience is not only a slave to his environment but is furthermore creating bad influence on others.

The futures of medical profession are in the hands of recently graduated doctors, students who have already chosen or are going to choose medicine as their career, and especially on teachers of medical schools on whose shoulders are laid the heavy burden of training future doctors. To enable the general public and those who are about to take medicine as their career to have a more sound understanding and attitude towards the medical profession, the profession itself should take the lead in giving them correct and adequate information of health and disease in their proper prospectives, to replace the hotch-potch of novels or cinema which hitherto form the only drink that quenches the thirst of the public. The selection of successful candidates before admission into medical universities should be strictly carried out on the basis that their personality is as important as their academic work if not more important. In regards to the training of medical students, lectures should be given in such a way as to teach the students how to think instead of spoonfeeding materials which can be read up from textbooks. Patients are too often looked upon not as living beings but either as interesting disease entities or else as feeders of the doctor's purse. Had all these been realised and carried out, we would have no more gloomy situation to face and the medical profession will have a brighter future.

G. PEI.

[*Editor's Note:* Neither the Cartoonist nor the Editor himself has seen a real bagpipe. We will be grateful if someone would enlighten us on this.]

IF DOCTORS COULD ADVERTISE

Have you ever asked yourself the question: 'Why don't doctors advertise?' The answer is exceedingly simple: 'They are strictly forbidden to indulge in such undecorous practice, both by law and by the dignity of their profession.'

Supposing one day this ban were, for some unforeseeable reasons, lifted, it would indeed be interesting to contemplate the consequences.

Promptly on the next day's newspapers, a group of doctors impatient to be introduced to the world will make their existence known in advertisements of the following nature:

'Take Dr. X and one other doctor,
(1) Get sick and let Dr. X cure you
(2) Do the same thing with the other doctor
Notice that Dr. X is definitely better
Always ask for Dr. X in health and in disease.'

In a few days other doctors will discard their professional modesty and announce their accomplishments to the public:

'For operations, minor and major, ask for Dr. X,
He gives the neatest scars this side of the Pacific.'
and
'For fast surgery, Dr. X beats all,
He can remove more out of you in less time.'

Some less conservative doctors will think that only dramatic wording can impress the average layman. Thus an orthopaedic surgeon will put in the following advertisement:

'Notice to all athletes and sportsmen:
Fear no more rough and robust games,
Have every bone of your body fractured,
Every joint dislocated, every ligament torn,
Rely on Dr. X to re-assemble your parts,
Just like a jigsaw puzzle.'

Other doctors, who blush even at the thought of boasting about themselves, must resort to other schemes. For instance, they may prepare statements of a menacing character, with the aim of scaring the daylight (pardon the expression) out of the more sensitive populace:

'Do you suffer from headaches?
You may be having a brain tumour.
For the sake of your wife and children,
Come to Dr. X for advice before it's too late.'

A proportion of statistically-minded doctors who think that only figures and numbers can win the public's confidence, will advertise themselves thuswise:

'98.4 babies out of 100 agree:
Dr. X's slaps (at birth) are milder than any other doctor's.'

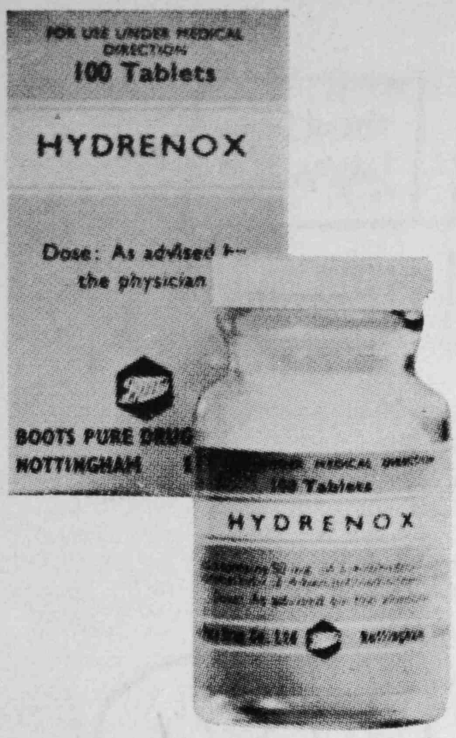
Some doctors, at a loss to associate themselves with any particular skill, must try to attract clients from a different angle. Thus a mediocre psychiatrist will give the following notice:

'For comfortable psychoanalysis, go to Dr. X,
Heavily cushioned couch provided,
Your nails trimmed and shoes shined while you are analysed.'

As the vogue of advertising gathers pace, doctors will be quick to learn the tricks of commercial advertisement. Their notices will become concise, emphatic, pleasant-sounding and (alas) unintelligible, like the following:

' Dr. X contains chlorophyll:
Sweetest smelling doctor in existence.'
and
' Dr. X is radioactive:
Gets to the root of your troubles.'

Interesting as these thoughts are, let us sincerely hope that they remain mere thoughts, and that we may never see the day when the medical profession stoops so low as to advertise itself like stocks.



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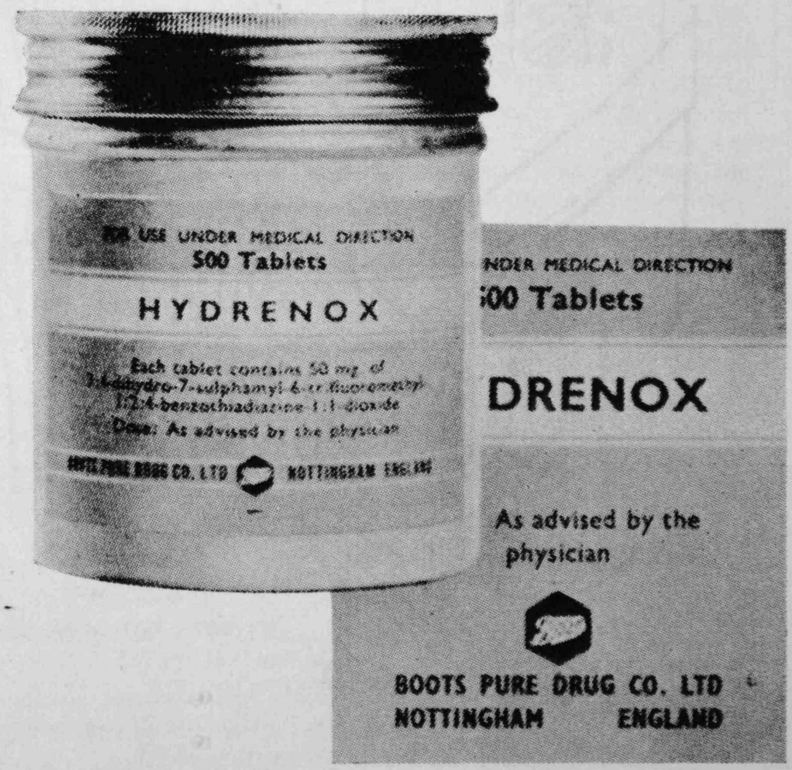

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MECHANISM OF ACTION OF DIURETICS

In general most systems of classification of diuretics are based, in part at least, on their mechanism of action. On the surface this would seem to imply that the mechanisms involved are well understood. Unfortunately this is not true. With some groups of compounds, such as the osmolar diuretics, a reasonably satisfactory explanation of the mechanism of action may be given. In other cases we may only be able to give a descriptive account on the changes which may be observed following the administration of a diuretic. Although these changes may be highly significant they may not necessarily aid in the explanation of the primary factors involved in drug activity. To some extent such descriptions may remind one of the diagnosis of a skin eruption characterized by red irregularly shaped patches. Although the term " erythema multiforma " may be absolutely correct, it tells us little of the underlying causes which are involved.

After many years of extensive investigation the mechanism of action of mercurial diuretics, for example, still has not been established with certainty. Our failure to solve such problems probably arises in part from our ignorance of normal renal function. In discussing renal function with students we may explain that glomerular urine represents a plasma filtrate and as this urine passes down the tubules certain substances are reabsorbed, others are secreted into the tubular urine while still others may be both reabsorbed and secreted. This oversimplification fails, of course, to answer many important questions. How, for example, are substances transported across the tubular membrane? What metabolic processes are involved? What factors influence and control the magnitude of tubular transport? The answers to these and similar

Table 1. Classification of Diuretics.

A. Water.

B. Osmotic Diuretics.
   1. Electrolytes.
      Sodium Salts (Chloride, bicarbonate and sulphate).
      Potassium Salts (Chloride, nitrate, bicarbonate, acetate and citrate).
   2. Non-Electrolytes.
      Urea.
      Saccharides (glucose, sucrose, mannitol).

C. Acid Forming Salts – (ammonium chloride, ammonium nitrate).

D. Inhibitors of tubular transport mechanisms.
   1. Xanthines (theophylline, theobromine and caffeine).
   2. Pyrimidine derivatives (aminometradine, aminoisometradine).
   3. Organic mercurials.
   4. Carbonic anhydrase inhibitors (acetazolamide).
   5. Benzothiadiazine derivatives (chlorothiazide).
   6. Aldosterone inhibitors.

E. Extra-Renal " diuretics ".
   1. Decreased sodium intake (low sodium diet, use of ion-exchange resins).
   2. Agents which increase colloidal osmotic pressure (albumin, dextran, gelatin, acacia).
   3. Digitalis and its derivatives.
   4. Posterior-pituitary inhibitors.

questions are required before we can satisfactorily explain normal renal physiology and, therefore, before we can adequately explain the mechanism of action of various diuretics.

Unfortunately we cannot give definitive answers to these questions at present. Even when we restrict ourselves to those substances which are most significantly influenced by diuretics, i.e. water, sodium, potassium, hydrogen, bicarbonate and chloride, we find many unsolved problems. To cite only one example, the reabsorption of chlorides has been attributed to a specific transport mechanism, chiefly because mercurial diuretics may induce significant chloruresis without producing a comparable increase in sodium excretion. Recent evidence suggests, however, that under normal conditions reabsorption of chlorides may be merely secondary to electrical gradients established by the active reabsorption of sodium. In this case it is possible that the interpretation of results obtained following the use of mercurials hindered our understanding of normal renal physiology. On the other hand, the results obtained following the administration of carbonic anhydrase inhibitors, such as acetazolamide, has clarified our understanding of the mechanisms involved in the renal regulation of acid-base balance. It is likely that further development of our knowledge of both normal renal function and the mechanisms of action of diuretics will proceed together and progress in one aspect will be accompanied by increased understanding in the other.

Following these introductory remarks and bearing in mind the limitations in our knowledge we may now briefly consider the classification of diuretics and a few notes on certain aspects of the mechanisms involved in their action. In the broadest sense a diuretic is any substance that promotes urine production. Therefore, as shown in Table I, numerous substances may be classified as diuretics. We are, however, most concerned with those substances which produce diuresis by affecting tubular transport mechanisms.

Despite the fact that the xanthines and related pyrimidines (Figure 1) have been used extensively as diuretics little is known regarding their mechanism of action. In some cases, especially in heart failure, the xanthines may increase renal blood flow, both through their cardiac action and possibly through a direct vasodilator effect on the kidney. In anesthetized dogs renal vasodilatation may be observed following the injection of theophylline into the renal

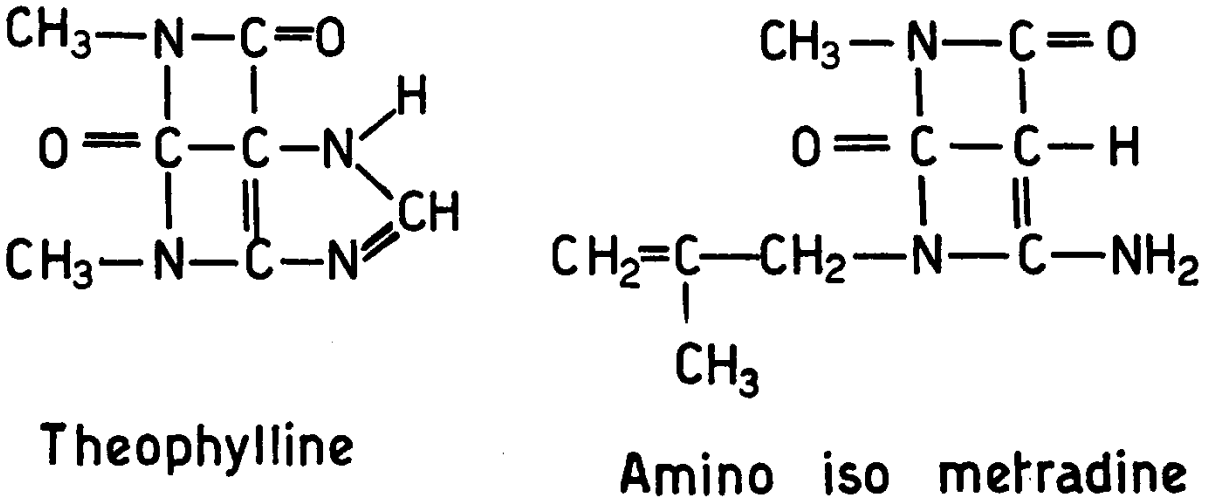


Figure 1. Comparison of theophylline and pyrimidine type diuretics

artery. The magnitude of the vasodilatation is usually slight, however, unless renal vasoconstriction was induced prior to the administration of theophylline. In addition, the ability of the xanthines to produce diuresis in the absence of any change in glomerular filtration rate or renal blood flow indicates that tubular transport mechanisms are also involved. As yet there is no conclusive evidence regarding the nature of the mechanism or mechanisms affected by the xanthines. The increase in sodium and chloride excretion produced by the administration of the xanthines during water diuresis suggests that perhaps these compounds affect the same mechanisms as the mercurial diuretics. Our knowledge of the factors involved in the diuretic action of the closely related pyrimidines is also meagre, but presumably they act in a manner similar to the xanthines.

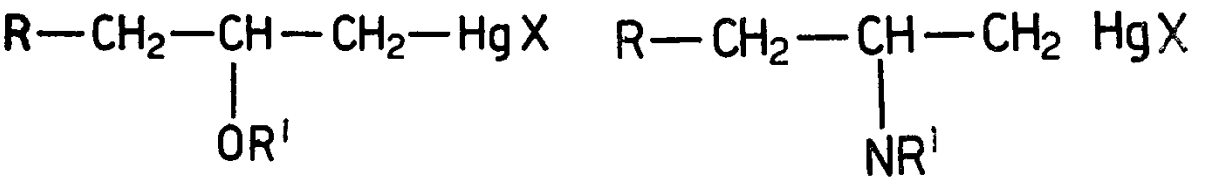


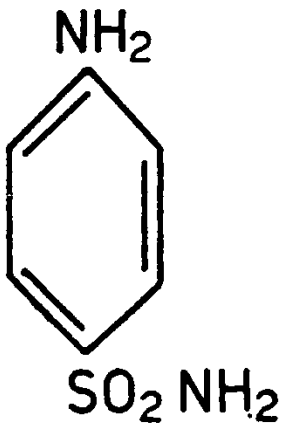
Figure 2. General structure of mercurial diuretics

Numerous mercurial compounds have been tested for diuretic activity and many of these have been employed clinically. In general these compounds have the structure indicated in Figure 2. The nature of the attached groups varies considerably. The hydrophylic R group which may be alicyclic, aromatic or heterocystic is linked to the propylmercuric chain by an amide, urea, ether or carbon to carbon linkage. The R' group is usually methyl although other substituents have also been employed. The nature of the X group primarily affects the absorption, side effects and toxicity of the compounds. Theophylline is most commonly employed.

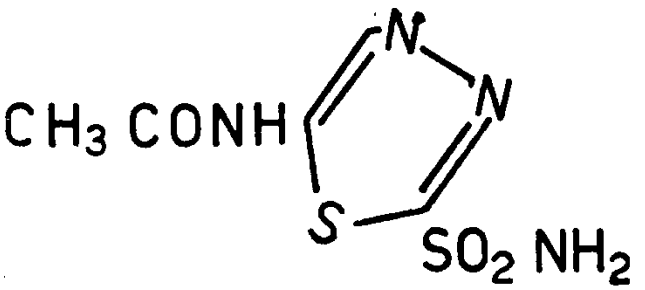
Considerable controversy exists regarding the mechanisms of action of the mercurial diuretics. Although the relatively greater chloruresis than naturesis suggests that mercurials might act by inhibiting the reabsorption of the chloride ion, alternative hypotheses have been presented which point out that similar changes might be produced secondary to the inhibition of sodium reabsorption in the proximal tubule. It is impossible to say with certainty what is the active form of the mercurial diuretics. It has been proposed that the organic mercurials act as "intact molecules", or in contrast, that they are effective because they liberate mercuric ions. Space does not permit a discussion of the evidence in support of each theory, but it should be pointed out that both hypotheses may be correct and that the cellular receptors involved are capable of reacting with either the mercuric ion or the organic mercurials.

The development of diuretics which inhibit carbonic anhydrase was secondary to the observation that the administration of sulfanilamide (Figure 3) produced acidosis in some patients. Subsequent research demonstrated that this side affect was due to the inhibition by sulfanilamide of the enzyme carbonic anhydrase which normally catalizes the reaction $H_2O + CO_2 \rightleftarrows H_2CO_3 \rightleftarrows H^+ + HCO_3^-$. The blockade of carbonic anhydrase decreases the availability of hydrogen ions to exchange with sodium ions of the tubular urine. This ion exchange mechanism normally plays an important role in the reabsorption of bicarbonate, the acidification of the urine and the excretion of ammonia. The absence of sufficient hydrogen ions, therefore, will result, in an increase in urinary sodium, and bicarbonate excretion and a decrease in urinary acidification and ammonia excretion.

The ability of sulphonamides to inhibit carbonic anhydrase is dependent on the



Sulphanilamide



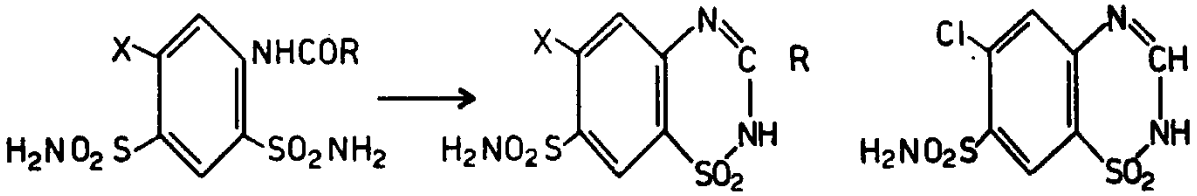
Acetazolamide

Figure 3. Carbonic anhydrase inhibitors

presence of the unsubstituted sulfamyl ($-SO_2NH_2$) group. Many other compounds containing this radical have been synthetized and investigated for their diuretic activity. Probably the best known of these is the effective diuretic acetazolamide. (Figure 3).

In general, the aromatic sulphonamides which were first investigated, such as sulphanilamide, proved to have to low diuretic activity to be of important clinical value in this respect. Certain aromatic disulphonamides, especially, halogen amine and acylaming, derivatives of benzene 1-3 disulphonamide (Figure 4), have however shown to possess a high degree of activity. When acylamines groups are adjacent to an unsubstituted sulfamyl ring closure occurs readily yielding compounds of the general structure shown in Figure 4. Numerous members of this series have been investigated for diuretic activity and of these chlorathiazide was selected for further intensive study and clinical investigation.

Both the substituted benzene 1-3 disulphonamides and cyclized compounds differ from acetazolamide in that they produce marked chloruresis in addition to naturesis. In this respect they produce an effect which is similar to that which might be expected from the combined use of organic mercurials and acetazolamide. It is tempting to hypothesize, therefore, that chlorothiazide is



Substituted benzene-1,3-disulphonamide

Cyclized structure

Chlorothiazide

Figure 4.

effective because it affects both carbonic anhydrase and the mechanisms involved in the response to the mercurials. However the action of chlorothiazide differs from both acetazolamide and the mercurials. Although both chlorothiazide and acetazolamide inhibit carbonic anhydrase *in vitro,* there is no evidence to suggest that chlorothiazide acts *in vivo* as a carbonic anhydrase inhibitor. Furthermore, chlorothiazide is effective during ammonium chloride acidosis which inhibits the action of acetazolamide. In addition, acetazolamide characteristically produces an increase in bicarbonate excretion, whereas chlorothiazide may fail to do so.

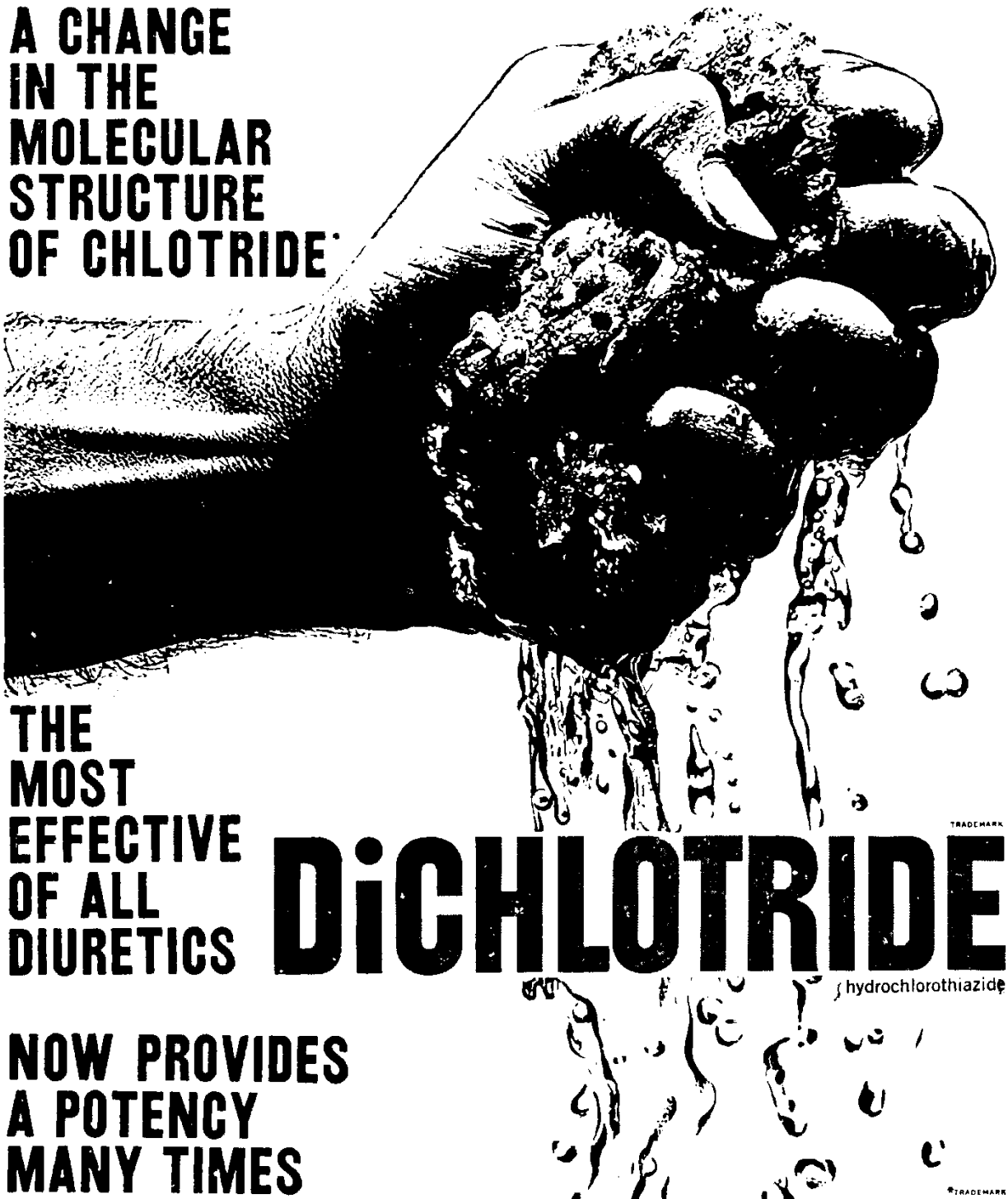
The action of chlorothiazide also differs from the organic mercurials in several important aspects. The administration of 2, 3-dimercaptopropanal (BAL) inhibits the action of the mercurial diuretics but has no significant effect on the saeuretic action of chlorothiazide. The mercurials are relatively infective during alkalosis induced the administration of sodium bicarbonate but chlorothiazide is active under these conditions. The mercurials diuretics usually do not increase urinary pH significantly whereas chlorothiazide may. It appears, therefore that the chlorothiazide does not affect the same mechanisms involved in the action of the mercurial diuretics.

Although chlorothiazide inhibits the sodium retention induced by various adrenocorticoids, it leads to a further increase in potassium excretion. Therefore it is unlikely that chlorothiazide acts primarily as an aldosterone antagonist. Likewise the effectiveness of chlorothiazide cannot be attributed to its ability to antagonize the antidiuretic hormone of the posterior pituitary. During the infusion of this hormone chlorothiazide may induce marked increases in sodium and chloride excretion although urine volume may not be altered significantly.

It appears, therefore, that chlorothiazide probably affects different mechanisms than those involved in the response to the mercurial diuretics, the typical carbonic anhydrase inhibitors such as acetazolamide, the antialdosterone compounds and the posterior pituitary antagonists. As yet, however, sufficient evidence is not available to allow one to comment further on the exact mechanism of action of chlorothiazide. It is hoped that future experimental investigation will not only lead to a greater understanding of the mechanism of action of chlorothiazide, but will also increase our knowledge of normal renal physiology.

Contributed.

A CHANGE IN THE MOLECULAR STRUCTURE OF CHLOTRIDE*



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MY COLLEAGUES & I

. . . . . and so we have come to the last lap in our medical training (I hope it is the last) – the Specialty Clerkship.

Feeling proud! Yes, because we have got to this stage at last.

Frightened! Yes, because we are no better than the 2nd M.B. chaps.

Good or bad, bitter or sweet, we have to swallow the facts – this is why we on many an occasion find ourselves in embarrassing and awkward situations —.

A pretended ignorance at the start of the clerkship on the 1st of January excused us for not going to the wards on the date due until the 5th day of the same month because that was when the full term began.

The Gynae OPD —

We sat there in the most handsome manner with a profound look writing down histories. Many patients really thought that our magic touch could relieve them from their pelvic ailments. I wonder what do we know really? Inexperienced and shy, for our area of interest is the realm of mystery to the layman.

An instructor told us that the normal cervix feels like the tip of the nose in consistency. So being eager to learn, I (who have decided to really do something during the Specialty appointment) put my left index finger on my own nose and the right index and middle fingers per vaginum. Thereby assuming a very awkward and funny-looking posture.

" Well, what are your findings? " A question was asked – don't know from where.

" Eh-eh- I think everything is normal " – in fact, I didn't even know where my fingers were – per vaginum or per rectum.

The afternoon soon approached evening and we signed off by the question – " What are the common causes of acute retention of urine in gynaecological cases? " and the answer – " benign hypertrophy of the prostate . . . . . ".

In the Gynae wards & Laboratory.

In order to assess the patient's condition for operation all investigations on blood and urine have to be completed before the patient is removed from the ward.

Since we are scientific and honest, we report all findings as the figures reveal – no " crooked " results —

Blood:	Hgb. *15 gm%*	Urine:	
	R.B.C. *3,000,000.*	Reaction: *acid*	
	W.B.C. 5991.	Casts: /	
	Differential count:	Epith. cells: few	
	P. L. E. M. B.	*Phosphate crystals:* + +	
		Albumin: /	
		Sugar: /	

Though it is tedious work to count R.B.C. in 80 small squares, we find much pleasure in doing so. Trouble and confusion arises very often when someone returns from the wards and says:

" Today my technique was superb. I only pricked the patient's finger once for each sample – once for Hgb., once for R.B.C. and once for W.B.C. I ignored the differential count, because after all it is not fair to prick the same finger four times.

" It was good technique I tell you – because the blood did not move in and out the tube and I did not drip saliva into it (as I did last time). I took special precaution and care this time because the patient is V.D.R.L. positive."

Another colleague came into the lab. complaining that he had been insulted by the patient: the patient said to him, " *sup tse toon ho sum gur,*" don't you know that. You have pricked me again and AGAIN." Actually I was in that ward when my colleague was trying to get blood from the patient and I saw him puncture the patient's finger no less than half a dozen times.

Just as I was about to finish counting R.B.C.s I was startled by a yell from one of my colleagues, and had to start counting afresh. I excused him when I realised that he had an urgent call of Nature and there is no " Gents " on the 6th floor. All the wards on this floor are female wards so that it would be an adventure if he dared to sneak into one of the toilets attached to these wards to relieve himself of the urgency.

In the Operating Theatre —

It was a fine and refreshing morning, a colleague and I, urged by the desire to

learn, went up to the 5th floor (where the O.T. is). But we did not know where to go from there. Having loitered in the corridors for 5 minutes, my colleague at last plucked up sufficient courage to ask, blushingly and in a most humble manner, one of the nurses who happened to pass by.

In less than a minute we found ourselves in the " SURGEONS' CHANGING ROOM ".

In half an hour we were all in white. My colleague found a pair of white boots which had no name on. He was lucky because they seemed to fit him well. I had to be satisfied with a pair of old and worn ones from a pile set aside in a corner – they were obviously meant for us. I had just taken up one of the shoes when a voice in the corridor said: " Eh, you are dressed back to front! How did you button yourself? " My friend came back – with a very unnatural look on his face.

No vantage point from which to view the abdominal opening was left when I finally got in. At the top of the table sat the anaesthetist with his big frightening machine on his left and the I.V. drip stand on his right, on either side of the table were the surgeons and their assistants and the sister, and at the foot of the table stood the trolleys which formed the prohibited area, even looking at them was frowned upon.

Some time later we were in the corridor exchanging views concerning the case. My colleague who had been so fortunate to have found a pair of boots complained to me, " My right foot hurts, especially the toes ". Everyone was laughing because my fortunate colleague's boots were both left-sided.

Our discussion went on —

" Is it common practice to do appendicectomy in such Gyne operations? "

" Do you mean to say that they removed the appendix? "

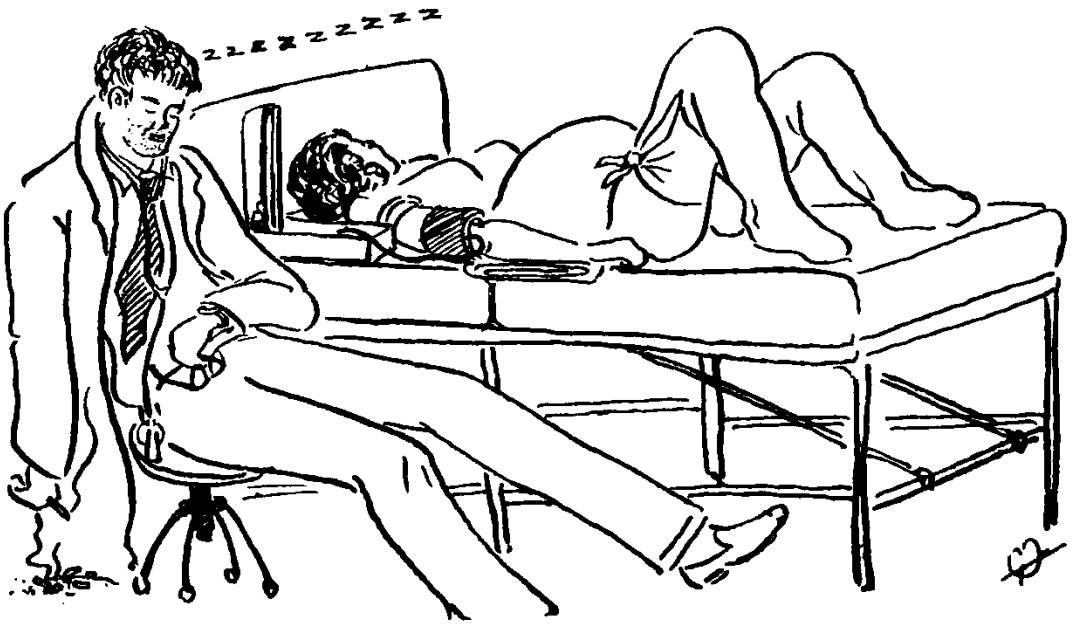
" Yes, didn't you see that! "

" I didn't know that it was done."

" Oh, you have eyes but you don't see! "

" The surgeons were very efficient and quick and with the OT mask on my spectacles were steamed over. I actually didn't see a thing."

— more to come in the next issue from the 'Crack-fellow'.



The Study of Memory

— Without any physiological basis

Introduction

Memory is a mysterious faculty difficult to explain and analyse. The aim of this paper is not to give a study of the subject. It will succeed, I hope, not to clarify the subject but rather to make it more confusing and complicated, and consequently arouse your interest. Then the aim of my rubbish writing would be fulfilled.

To start with definitions.

Memory: The power of retaining in subconsciousness and of reviving an impression or idea of which the mind has once been conscious; recollection. . . . . Stedman's medical dictionary.

Memory: That mental faculty by which sensations, impressions and ideas are recalled. . . . . Dorland's medical dictionary.

If you can give a better definition than they do, you are a better man than they are!

A Hunterian Professor of Surgery, Kenneth Walker, once said: The study of physiology as an isolated subject is apt to give the student a lopsided view of man. We must therefore add to it knowledges from other branches. That's why our Professor of Physiology says: 'A physiologist is ready to steal! (knowledge from other branches of science). The study of memory should be put in the very first place in the physiology course. But we find it also studied in other fields, psychology and neuroanatomy daily experience. Yes, memory is a part of us mentally, morally and even physically so that we exercise it during every minute of our lives.

The uses of memory are so evident that I don't need to stress them very much. A 2nd M.B. student, if able to master this mental faculty well will have no difficulty in reciting Gray's anatomy line for line. How wonderful that would be!

In our daily lives, we sometimes meet people with surprisingly good memories. We call these 'good memory' men. A Jesuit Father in Wah Yan College can memorize 80% of the names of the students, i.e. some 800. That's quite a lot. We sometimes laugh at him by saying, 'Father, you see, you use 80% of your brain to memorize names but we use 80% of our brains to memorize the books.' We now know that the cerebrum is responsible for memory and not the brain as a whole.

A science master once told me that he could recite passages from some Chinese literary books, without knowing what they meant after one reading only. Then I asked him how he managed to do it. He could recite them to me in reverse order. I believe he can do it, but he never let me see him try.

Some people are gifted with 'photographic' memory. A missionary once walked through a blind street in Canton. He did not know many Chinese characters, but he knew enough that he could tell you all the sign boards of the shops he passed in the correct order, just by going through the street once.

Some people are afflicted with bad memory. This is not true. Every man possesses this power although it varies with different individuals. Its degree depends whether you use it or not. If memory is used and trained, it can be very effective and efficient. It can be trained according to two laws.

The first is the Law of Association, by means of which events, persons, and facts are connected together in our minds so that the presence of one suggests another. Associations are related to our senses; sight, sound, touch, odour; to these add common sense and nonsense. Thus, a sight, a sound, a touch, a bit of nonsense will help us to bring back to our minds events associated with it years before.

The Second is the Law of Repetition as Prof. Chang explains well. Memories are made like this. A statement or incident is sent around the intercalary neurons and, like a telegram sent around the world, around and around. If the statement or incident is strengthened and kept up, it can be picked up at any time. But sometimes the impression seems to fade, and we find

it impossible to recall what we want to remember. But more often, after a short time, the thing we wish to recall comes back suddenly, indicating that the telegram going around and around is still intact, although it takes us some time to 'pick' it up and 'refresh' it.

Memory can be accumulated in various forms:

First, there is verbal memory. This gives the individual the power of recalling with ease any words that have been learnt through the medium of ear and tongue.

Then there is visual memory, which enables the individual to recall the appearance of any place or thing. The best visual memory is what we usually call photographic memory.

Lastly there is local memory, which enables us to recall the relative positions of places so that a person can find his way easily in places he has once visited, and remember relative situations. This is also called scout memory.

As memory can be accumulated in different forms, it is also stored to a varying extent depending on the amount of concentration and interest. A certain student once went to see the Professor of Anatomy confessing that he was absentminded and his 'bad memory' was a great trouble both to him and to those with whom he had to do. The professor explained to him that memory could be trained and instances could be recalled easily if they had been stored with some amount of effort and concentration. One day, the student went to a beach and luckily he met a beautiful girl and somehow or other made friends with her. This time, remembering the professor's words, he managed to remember her phone number, home address, etc. He succeeded because the amount of concentration and effort he spent gave him enough reward. So if a medical student studies Gray's anatomy as if life and death depend upon it, he can do well. Serious reading once is better than ten times of light reading.

In conclusion, I wish to say a few words to those who, after reading my bit of writing, perhaps decide to train themselves to be 'good memory' men. Good memory is one thing but we must also think and observe. (as Prof. K. says).

C.Y.C.

THE INTERNAL ENVIRONMENT

Although for simple unicellular organisms the immediate environment is the apparent external environment, i.e. the water, sea, or air in which the organisms have their habitation, the deep seated cells of complex multicellular organisms have an immediate environment of interstitial fluid.

It is from this surrounding fluid that the cells draw their supply of nutrients and all other essential substances, and into which they pour their metabolic products. As a consequence this internal environment of interstitial fluid is continuously undergoing depletion of nutrient materials and accumulation of metabolites. This interstitial fluid then plays a very vital and essential part in the well being of the cells it surrounds. In order for the cells to remain healthy, it is necessary to keep certain physical and chemical factors of the interstitial fluid constant. Physiology can, in a narrow sense, be considered a study of the maintenance of the constancy of this interstitial fluid.

The concentration of inorganic ions of the interstitial fluid is much lower than that of the present-day sea water, but it greatly resembles sea water at the dawn of organic life on earth, millions of years ago. This sug-

gests that at an early period of evolution organisms actually created an internal environment of interstitial fluid that was very much like the external one sea water. This internal environment has not undergone marked changes in the subsequent years.

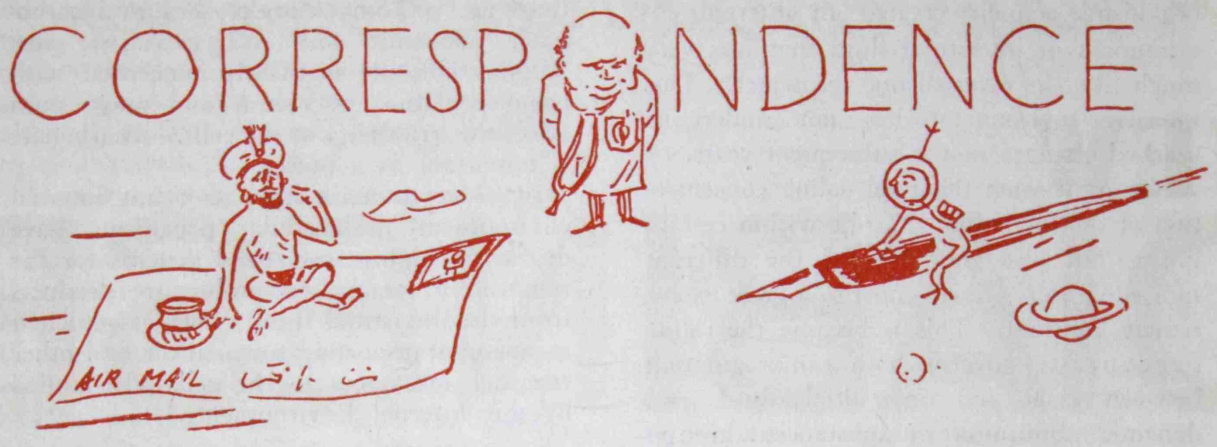
Not only must the total saline concentration of the interstitial fluid be within certain limits, but also the ratio of the different individual salts present must to a great extent remain constant. This is because the saline percentage governs both osmoregulation between cells and interstitial fluid and dynamic absorption of substances through the membranes of the cells.

The main salts present in the interstitial fluid are sodium chloride, sodium bicarbonate, potassium and magnesium salts. Sodium chloride is mainly concerned with osmo-regulation potassium and magnesium affect the irritability of the cells. Bicarbonate is important as a buffer.

In order to maintain a constant internal environment multicellular organisms have developed highly specialized systems for the removal of metabolites and waste products from the interstitial fluid as well as efficient means of transporting nutrient air and other essential substances to the cells surrounded by this Internal Environment.

GORDON.

CORRESPONDENCE



Dear Sir,

I was present in the recent Medical Night, and was shocked by the vulgarity of a reversed popular song about Medical students and nurses. Such vulgarity could only come from minds which have been his guided by some pent-up passions.

It is natural that medical students should talk about nurses, think about them and even sing about them. With reservation, I should think that nurses return the same compliments to the Students. It seems however that in Hong Kong, a tradition is sadly lacking for them to exchange their mutual admiration. It is because there is little chance for them to be properly introduced. Consequently wistful thinking is furned into vulgar ideas. There is urgent need for the establishment of such a tradition, as it will not only facilitate the work of the students in the wards, but will also transform their whole-beings.

Now we have the etiology and the principles of treatment clear. May I suggest that we leave the investigations and management to the Committee of the Society?

Eagerly,

ONE - TRACT - MIND.

Dear Sir,

Two medical students have been awarded the Students' Union Bursary grants, and, to my knowledge, many more have applied but failed. There exists an urgent need for financial assistance to many of our dear colleagues.

The Medical Scholarship Fund has been accumulated slowly for years, and has never been used. I should think the time has come for the Committee to consider seriously renewing their efforts to increase the Fund, and its utilization in the best possible way within the nearest future.

Yours sincerely,

A. MEMBER.

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Contributions may be sent to the Circulation Manager, Elixir, c/o Department of Physiology, Hong Kong University. Cheques should be made payable to: Hong Kong University Medical Society "ELIXIR" Account.

NOTES AND NEWS

APPOINTMENTS

Dr. P. H. Teng, M.B., B.S. (Hong Kong), D.P.H. (London), reappointed to be Acting Head of the Department of Social Medicine for one year from August 29, 1958.

Dr. Cheng Kwok Kew, M.B., B.S. (Hong Kong), Ph. D. (Path.) (London) to be Research Fellow in the Department of Obstetrics and Gynaecology for the period August 1, 1958 to March 31, 1960.

Dr. H. S. Y. Fang, Lecturer in Orthopaedic Surgery, from September 30, 1958.

LEAVE OF ABSENCE

Dr. P. S. Kan, Assistant Lecturer in Obstetrics and Gynaecology, has been granted six months' unpaid leave from September 1, 1950 to enable him to take up an appointment in Medicine in order to complete the requirements for the M.R.C.O.G.

Mr. R. B. Maneely, Senior Lecturer in Histology, has been granted long leave from April 1 to September 22, 1959.

RESIGNATION

Dr. H. E. Reiss, Senior Lecturer in Obstetrics and Gynaecology, from February 1959.

PERSONALIA

Dr. H. C. Kwaan, Assistant Lecturer in Medicine, has been granted leave for a further year to enable him to take up a China Medical Board Fellowship for work in Columbia University.

Mr. C. C. Liang, Demonstrator in the Department of Physiology, has been granted leave for a further year as he has been given an extension of his Fellowship from the Sino-British Fellowship Trust.

Dr. D. E. Gray was granted leave of absence to attend the Fourth International Congress on Biochemistry held in Vienna in the summer, 1958.

Dr. S. M. Loh, Demonstrator in Physiology, has been awarded a Fellowship by the National Research Council of Canada, for further studies at the University of Saskatoon.

Dr. Y. Y. Huang, Demonstrator in Physiology, has been awarded a Fellowship

from the China Medical Board of New York, Inc., for further studies at the University of Alberta, Canada.

Dr. J. H. Y. Fung, Lecturer in Surgery has been awarded the degree of Master of Surgery by the University of Liverpool.

PUBLICATIONS

Department of Anatomy

M. M. C. Lee (with G. W. Lasker): "The Thickness of Subcutaneous Fat in Elderly Men", *American Journal of Physical Anthropology* Vol. 16, No. 1 (March 1958).

Department of Surgery

S. F. Lam: "A Comparison of Foot Forms Among the Non-Shoe and Shoe Wearing Chinese Population", *The Journal of Bone and Joint Surgery* (1958. Vol. 40-A. 1058).

Department of Physiology

D. E. Gray: *Studies on the Function of Alpha-tocopheryl Acetate* (IV International Congress of Biochemistry 1958, Pergamon Press, Ltd., London, N.Y., Paris, Los Angeles).

D. E. Gray: "Some Effects of Vitamin E and Insulin on Glycogenesis and Glycolysis in the Isolated Rat Diaphragm", *Journal of Vitaminology* (1958, 4, 172 - 177).

C. C. Gruhzit: "Pharmacological Investigation and Evaluation of the Effects of Combined Barbiturate and Heroin Inhalation by Addicts", *Bulletin on Narcotics* (1958, 10, No. 3).

A. C. L. Hsieh (with L. D. Carlson, F. Fullington and R. W. Elsner): "Immersion in Cold Water and Body Tissue Insulation", *Journal of Aviation Medicine* 1958, 29, 145-152.

A. C. L. Hsieh: "The Effects of Hexamethonium Bromide on Temperature Regulation in Man", Journal of Physiology 1958, 141, 281-290.

Department of Medicine

H. C. Kwaan, R. Lo, and A. J. A. McFadzean: "On the Lysis of Thrombi Experimentally Produced in Veins", *Brit. J. Haematol.* 1958, 4, 51.

H. C. Kwaan, R. Lo, and A. J. S. McFadzean: "On the Inhibition of Plasma Fibrinolytic Activity by Exercised Ischaemic Muscles", *Clin. Sci.* 1958, 17, 361.

A. J. S. McFadzean, D. Todd, and K. C. Tsang: "Polycythaemia in Primary Carcinoma of the Liver", *Blood* 1958, 13, 427.

A. J. S. McFadzean, D. Todd, and K. C. Tsang: "Observations on the Anaemia of Cryptogenetic Splenomegaly. 1. Haemolysis", *Blood* 1958, 13, 513.

A. J. S. McFadzean, D. Todd, and K. C. Tsang: "Observations on the Anaemia of Cryptogenetic Splenomegaly. 11. Expansion of the Plasma Volume". *Blood* 1958, 13, 524.

A. J. S. McFadzean and K. C. Tsang: "Chronic Leg Ulcers in Cryptogenetic Splenomegaly", *Trans. Roy. Soc. Trop. Med. & Hyg.* 52: 354 (1958).

R. Lo and A. J. S. McFadzean: "Further Observations on the Production of Fibrinolytic Activity within Veins: Response to Various Stimuli", *Clinical Science* 17:499 (1958).

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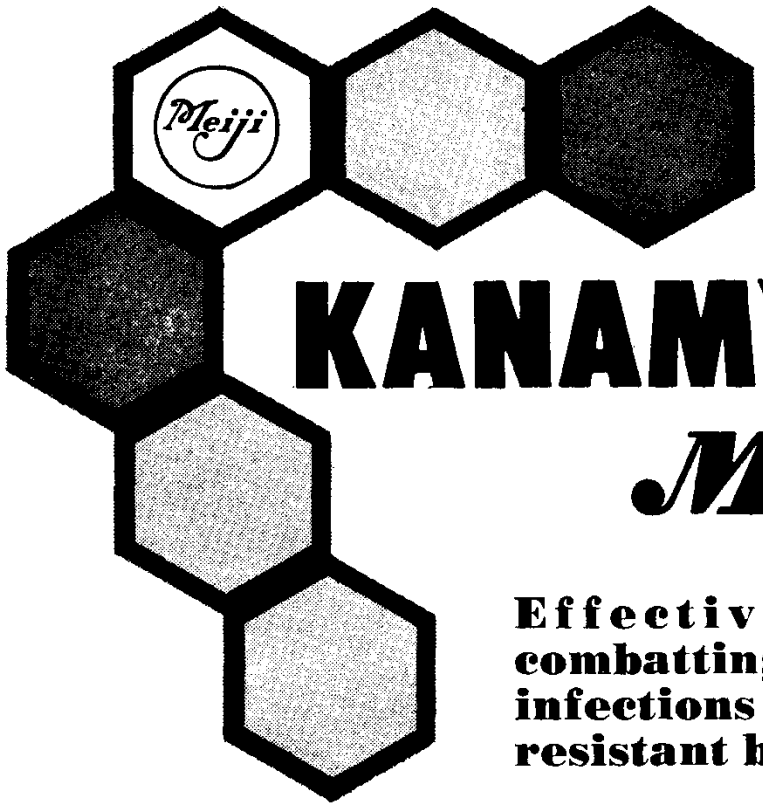

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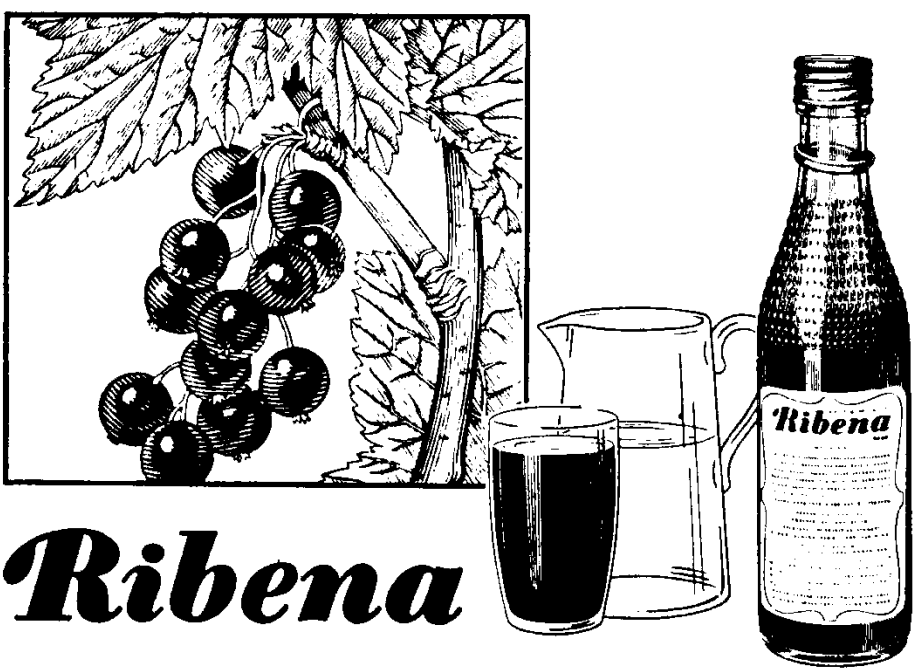

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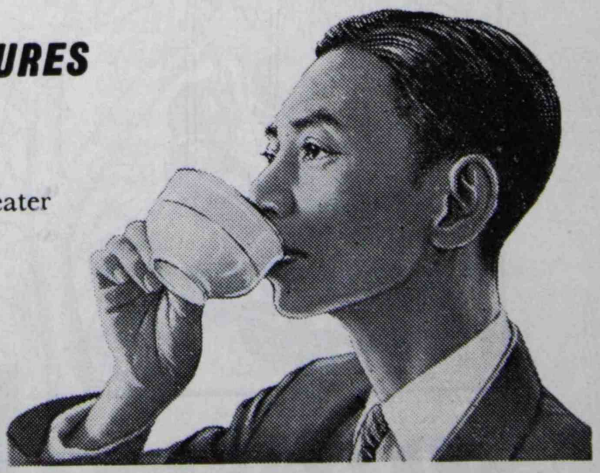

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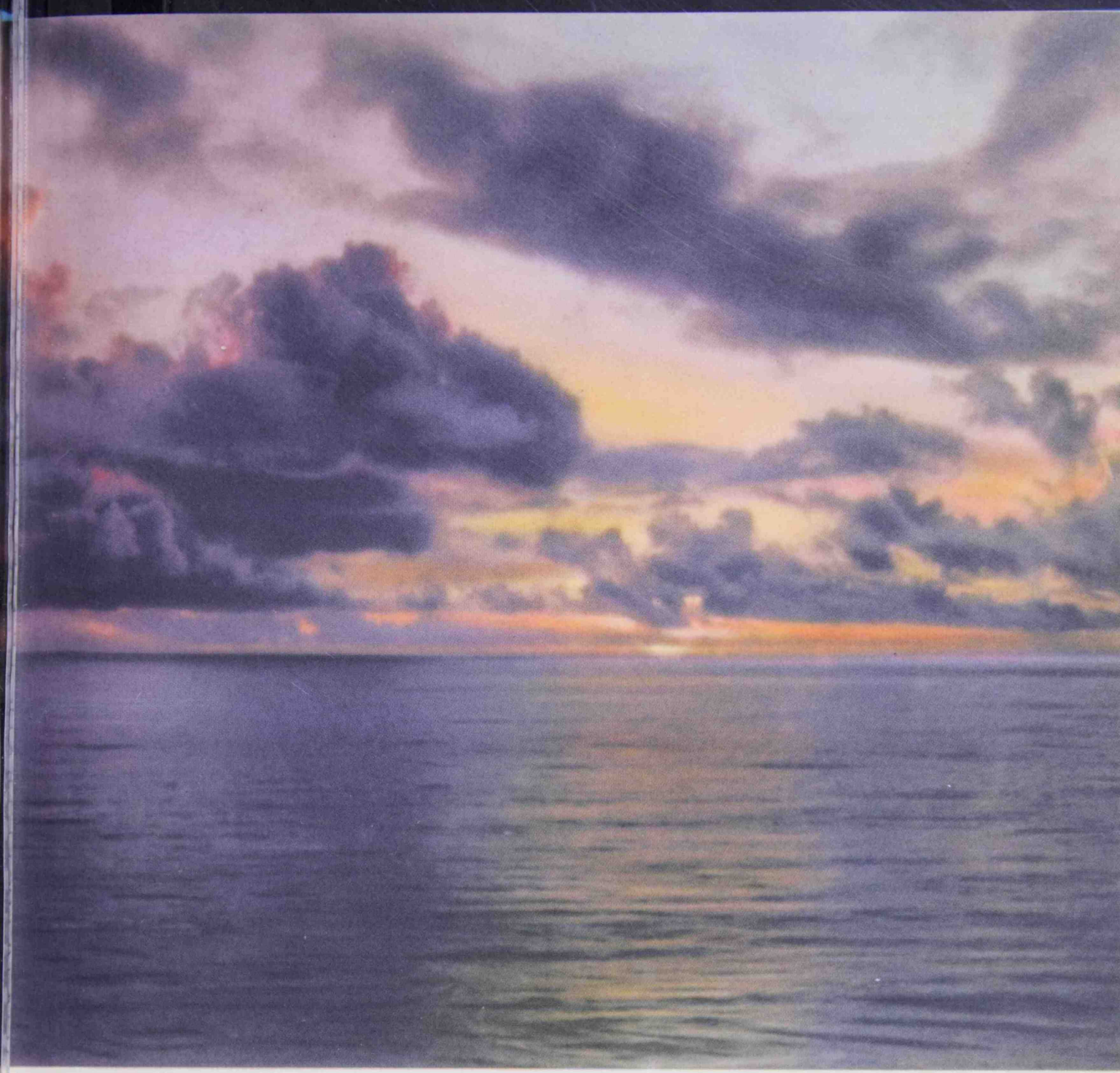

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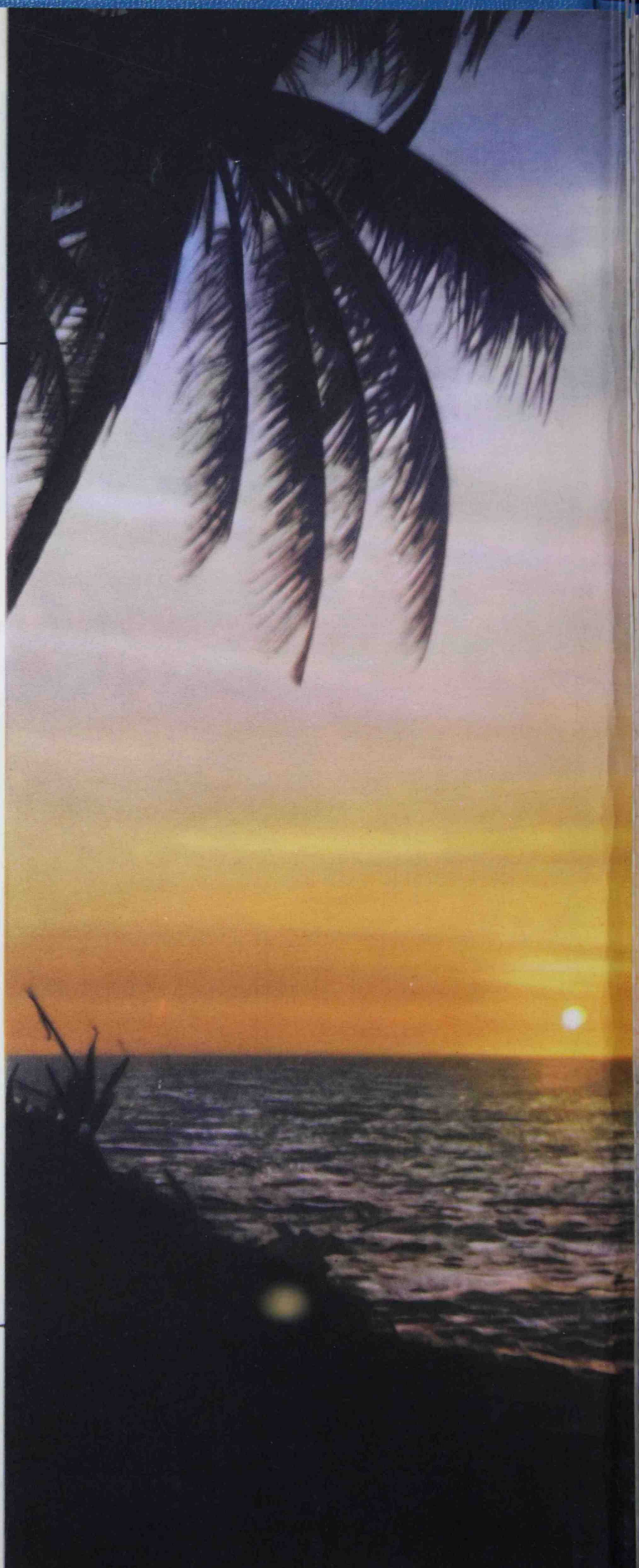

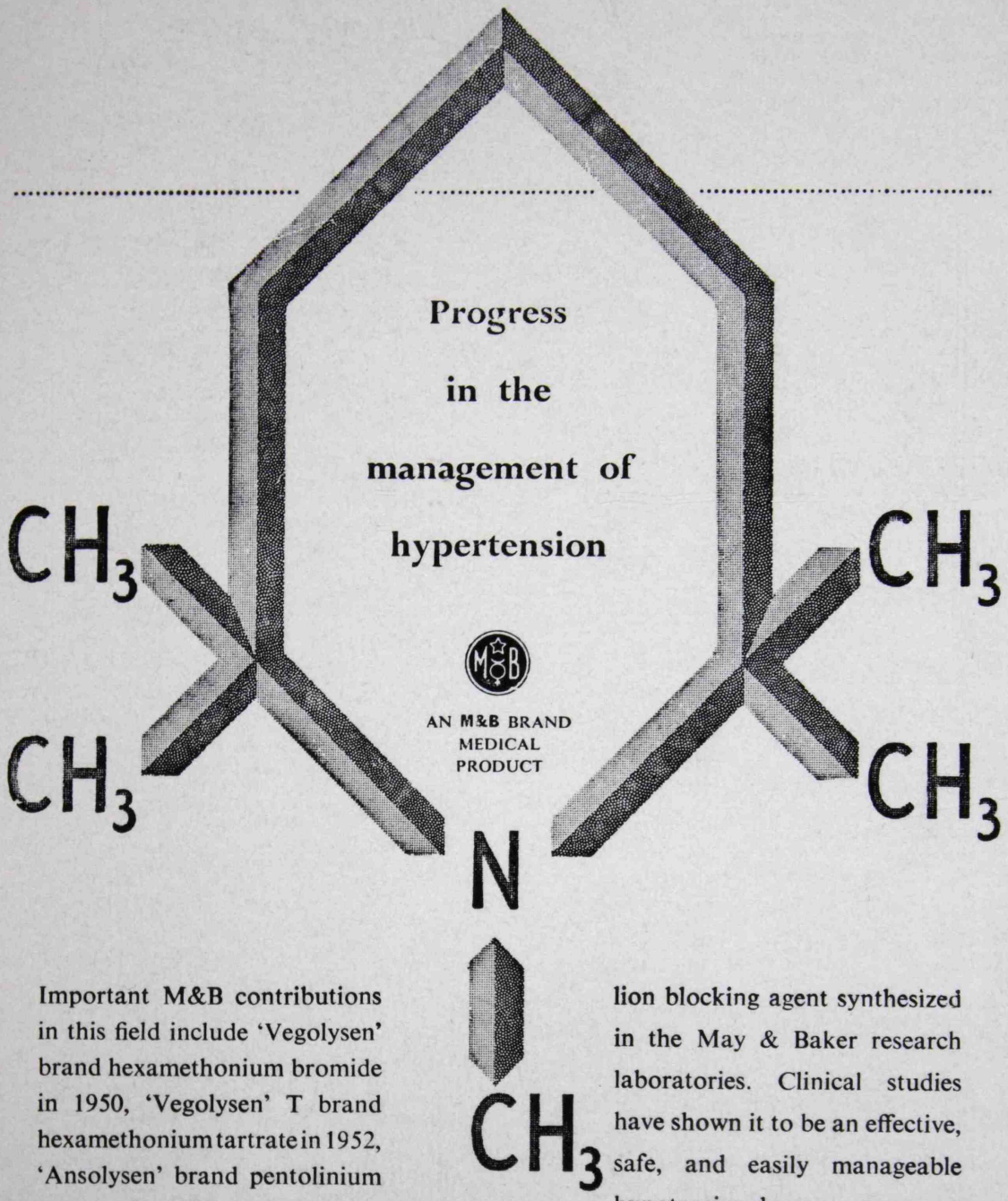

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