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CONTRIBUTIONS will be accepted with the understanding that they are made solely to this publication. Articles should be of practical value to students and medical practitioners. Original research work is most welcome. Articles should not be longer than 3,000 words, and we will more readily accept those of shorter length. Introduction and summary of conclusions, should be included. Drawings and photographs will be accepted, the former to be in black ink and drawn clearly on white cardboard.

All articles submitted must be typewritten, on one side of paper only, with double spacing and two inch margins on each side. Canadian Press (American) spelling must be adhered to. The format for references is as follows: For books: Author(s): title of book, publisher, place, year. For Journais: Author(s): title of article, name of Journal (abbreviated as in the World List of Scientific Periodicals), volume: page, year.

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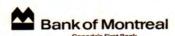
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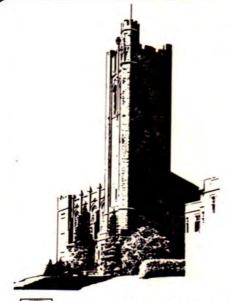
Contents

31 Editorial-H. R. Wexler

- 32 Drugs
 A Brief submitted to the Commission of Inquiry into the Non-Medical Use of Drugs—
 J. Craig Paterson
 Drug Use Among London's Youth. A Brief Report—Jock McKeen '70—Cathryn Barbour
- 41 Congenital Dislocation of the Hip-Peter Nichol '70
- 44 Prostaglandins-Ted Ralph '70
- 48 Elective Escapades—Peter Nichol '70

 Eight Weeks at a Mission Hospital in Thailand—Harry Bergen '70

 Outpost Medicine in Alexandria, Jamaica—Jock McKeen '70
- 55 Alumni-Jim Hicks '71
- 56 News and Views-Bryson Rogers '71



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Editorial

It's one o'clock in the morning and I'm sitting here listening to a drippy tap and trying to think of something to write in this editorial that will excite, inspire or just plain inform. The rest of the Journal has been put together, and once again I am amazed at how much work our contributors put into it. I honestly feel that this will be one of the best issues yet; there is excitement, inspiration, information and a little fun as well.

I was pleased to learn that the University Student's Council and the Medical School have come to a satisfactory arrangement. Third and fourth year students will be assessed only seven dollars a year with the remaining eleven dollars going to Hippocratic Council. This will allow us to keep publishing and third and fourth year students will be able to maintain their affiliation with the rest of the University to as great or as little degree as each individual may desire, just like the real graduate students. Kudos to Rick McLachlan, lan McLeod and John Evans for accomplishing a task requiring financial wizardry, psychiatric insight and political acumen.

My fellow colleagues in this dear and glorious profession of ours, we may be heading for various amounts of trouble in all directions at once. To begin with, here we are in the midst of a new final year clerkship which most people feel (at least those I've talked to) ranges anywhere from inadequate to useless as an efficient learning system. We spend much of our time fighting with the junior internes who, quite rightly, want to get as much experience as they can before moving on. And in the middle of all this, before the system can be properly evaluated and the goals of a newly-graduated M.D. can be stated, we are handed the burden of the straight internship which will make it quite likely that a doctor could be licenced in this country and have never delivered a baby, to give just one example. If there is someone who knows what we're trying to prove or even just what all the big rush is to 'get through' I wish he would step forward and clue me in. Otherwise, maybe we had best pause, catch our breath and make some decisions before we turn out generations of doctors who know little academic medicine and are incompetent as well. The only saving factor that I can see is that it usually doesn't matter what type of educational system you use, some people will be good, some mediocre and some bloody awful.

Turning to a more pragmatic problem, it has become painfully obvious to everyone that the doctor's personal affairs are fair game for

discussion in the streets, in the House and in the doctor's lounge. We have been backed against the wall; we are not fighting for our livelihood—we are fighting for our integrity. I fear we are losing most of the battles as well as the war. Somehow very soon we are going to have to convince the people who have grown to distrust us that the majority of us are in medicine because as a way of life there just isn't anything quite so intellectually, emotionally and lastly materially rewarding. One of my classmates has a suggestion worth listening to, even though it sounds very painful the first time over. Since we are in the process of revising the internship and the fourth year, why not do away with the internship altogether. Instead, the College itself would arrange to send each new graduate out to do general practice for two years in an area sorely in need of physicians. (Now wait until I'm through before you tear up the book). The object of the exercise would be to have at least two doctors in any one area, one in his first year after graduation and the other in his second. Thus there would never be a perfectly green physician on his own, and they would probably learn more than any family practice program presently could teach them. It would be financially attractive if on a fee for service basis, and I feel certain that if doctors were going to be in an area the facilities would be improved; no one likes to spend money when it is not being used, but this would encourage expansion and development. Those wishing to specialize would return not only with an idea of medicine away from a university centre but with a nest egg to live on during the lean years of residency. Who knows, some people might even stay in these areas.

Before you join a group to lynch me, let me make one last point. The government has shown us that it can totally control our incomes, even to the degree of preventing patients purchasing insurance for the ill-famed '10%'. The next step will be to provide care for everyone covered by Medicare, and we all know what that can mean. I would suggest that the Profession give a little ground to take a firmer grip on our own futures. Things are still pretty good for a doctor practicing in this country and they may not change for some years to come, but if we don't start doing something now, once again it will be too late.

HRonald Wexles

DRUGS!

At a meeting of the Hippocratic Council earlier this year J. Craig Paterson, a law student at Western, presented the following brief for approval by the members and *ipso facto* the undergraduate medical student body. Much discussion evolved around Mr. Paterson's brief, the majority of it concerning his refusal to accept endorsement of the second portion of his submission concerning marijuana while rejecting his initial contentions that all drugs be made freely available to the general public. It must be noted here that the eleven present voting members of council voted six to five to support the brief in its entirety. The editor will go only so far as to state that this paper which was so industriously compiled by Mr. Paterson is open to strong criticism in some areas and support in others. It is our wish that the ideas of Mr. Paterson be considered by the graduate and undergraduate members of the Medical and allied professions and that replies for and against be sent in the form of letter or article for publication in forthcoming issues of the Journal. Copies will also be sent by the Journal staff to The Commission of Inquiry into the Non-medical Use of Drugs with the permission of the authors.

At the same time we are presenting, for your enlightenment, informative insight into the world of the young drug user by Jock McKeen and Cathryn Barbour who have worked with them through the Addiction Research Foundation and Victoria Hospital.

All italics are those of the individual authors.

HRW

A Brief Submitted to: The Commission of Inquiry into the Non-Medical Use of Drugs

OCTOBER, 17, 1969 TORONTO, ONTARIO

J. Craig Paterson Faculty of Law University of Western Ontario

While the responsibilities of this Commission of Inquiry range quite widely, this brief is restricted to a presentation pertaining to two aspects of the non-medical use of drugs in the Canadian society.

Our general concern lies with "mechanisms of control", principally the Narcotic Control Act, Stats. Can. 1960-61, c.35; as amended by 1968-69, c.41 and the Food and Drugs Act, Stats. Can. 1952-53, c.38 as amended, which presently operate to restrict the possession, use and traffic of all drugs in Canada. More specifically, representations will be made which call for a re-evaluation of the control mechanisms now exterted over the drug, CANNABIS SATIVA L., or as it is more commonly known, MARIHUANA.

INTRODUCTION . . .
THE PHILOSOPHY OF DRUG CONTROL

Before proceeding to an enunciation of our views concerning general control mechanisms and the specific regulation of Marihuana use, some preliminary statements of philosophy may serve usefully to establish the frame of reference for our following proposals.

In the first instance, the use for non-medical purposes of stimulants, sedatives, hallucinogenics, tranquillizers and other psychotropic drugs and substances must be seen primarily as a question of personal morality. It follows from this statement that while a knowledge of the motivational factors which influence drug use may be necessary for accurate clinical analysis of medical and

sociological phenomena, for the purposes of control by society, the indicia of personal motivation should be irrelevant to the formulation of legislative policy.

As with sexual, artistic, intellectual and other tactile gratification, use and abuse should be viewed fundamentally as an individual prerogative. This is especially so when the society may reasonably be considered as educated, responsible and progressive. Society should only exert such controls as will guarantee the freedom of that individual determination. Control mechanisms should not be promulgated on the basis of some particular conception of individual moral and ethical well-being. Consequently, the moral and ethical well-being of the society, a collection of individuals, should as well be freed from determinative controls. We contend that the parliamentary, democratic system of government structure has been adopted and continues to thrive in Canada, not because it bears an intrinsic moral or ethical desirability, but because practically, it is most capable of guaranteeing to the individual and the group that ability to freely formulate moral and ethical standards of their own choice.

On this basis then, regulation of the nonmedical use of drugs should flow from a practical philosophy that recognizes that use and abuse of drugs is an individual matter of morality.

Present legislation, which began with the enactment in 1933 of the Opium and Narcotic Drug Control Act, may be defended on the assumption that certain drugs of an addictive nature would lead to widespread physical and mental impairment if left to the discretion of individual use. The situation would in turn result in the destruction of a healthy and vigorous society. While this rationale seems consistent with the inclusion of the majority of drugs in the Schedules to the Narcotic Control Act and the Food and Drugs Act, present medical and psychological knowledge of CANNABIS SATIVA L., would indicate that the philosophy of Marihuana regulation is based upon some particular conception of moral and ethical well-being. Indeed the response of our judical system to situations of Marihuana use unfortunately tends to confirm this analysis.

What is thus necessary, in our opinion, is some definitive rationalization of the present structure of control mechanisms. What is the rationale for control of the possession, use and traffic in drugs? If that rationale relates to some theory of the protection of the physical and mental well-being (in the purely organic sense) of every Canadian, do all of the drugs in the present Schedules demand

regulation? Who shall determine what drugs should be included within this category? What are the appropriate regulatory sanctions? By whom should they be applied?

It is proposed that this Commission of Inquiry into the Non-Medical Use of Drugs recommend a policy of drug regulation to the Government of Canada which reflects the philosophy enunciated above and thus affords a clearer conception of the purpose and utility of such regulation.

In the second instance, and this relates closely to what has already been said, we feel strongly that the non-medical use of drugs be viewed as a medical, and not a legal problem. While illicit traffic in prohibited, drugs is clearly a criminal action since it encourages individual physical and mental impairment, the possession and use of drugs may lead to abuses which can only be viewed as a medical and psychological problem. A medical and psychological programme of healing should be the focus of control mechanisms. Retribution by society, in the form of financial and/or corporal punishment, is destructive of the individual concerned and prevents the possibility of meaningful rehabilitation.

It is proposed that the Commission of Inquiry into the Non-Medical Use of Drugs recommend that a humane programme of medical, psychological, social and educational rehabilitation should represent the only curative prescriptions applicable in cases of the possession of prohibited drugs.

THE NON-MEDICAL USE OF DRUGS . . . CONTROL MECHANISMS

The proposals which follow in this section reflect the two statements of philosophy contained in the introduction to this brief: the non-medical use of drugs is a problem of personal morality and a problem which can only be adequately cured through medical, psychological, social and educational rehabilitation.

As per the jurisdiction of this Commission, no comments will be addressed to the regulation of the medical use of drugs, although the present legislative enactments tend to mesh both medical and non-medical use.

It is proposed that this Commission recommend to the Government of Canada repeal, amendment and enactment of appropriate legislation consistent with the following;

- A.) A permanent body be established to undertake research and review of the problems of the medical and non-medical use of stimulants, sedatives, hallucinogenics, tranquilizers and other psychotropic drugs and substances . . . that this body, a Drug Control Board, function in a manner anolagous to or complementary to the Federal Food and Drug Directorate ... that the Drug Control Board be charged with the continuing appraisal and evaluation of drug legislation not of a criminal nature . . . that it recommend from time to time additions to or deletions from the Schedules of prohibited drugs ... that it be responsible to the Government of Canada through the Minister of National Health and Welfare ... that it be composed of persons possessing particular expertise in the medical, psychological, social and legal problems of drug use.
- B.) While it is recognized that analytical and definitional difficulties prevent a control mechanism from being devised which will satisfactorily reflect medical criteria, it is proposed that the present legal-medico hiatus which exists within the Narcotic Control Act be resolved partially at least, through the adaptation of more rational definitions for the terms, "narcotic", "addiction" and "narcotic addict".

NARCOTIC

... a drug or substance which causes organic physical or mental impairment or which causes acute psychic (psychological) dependence and/or physical dependence.

ADDICTION

... an overpowering desire or need (compulsion) to continue taking a drug or substance; a tendency to increase the dose; and a psychic (psychological) and generally a physical dependence on the effects of a drug or substance.

NARCOTIC ADDICT

- ... a person who, through the use of a drug or substance known as a narcotic, has become addicted to the effects of that narcotic.
- C.) That the present control mechanisms result in unresponsive and irresponsible reaction to the problems of non-medical drug use and that this be resolved by . . . removing all financial and/or corporal punishments from legislation which prohibits the possession of narcotic drugs

- . . . replacing these sanctions with a discretion vested within the authority of the reviewing tribunal to order medical, psychological, social and educational rehabilitation to persons who have been found to be in the possession of narcotic drugs . . . that consideration be given to the desirability of replacing or supplementing the present judical structure in cases of narcotic drug possession with an alternative reviewing tribunal . . . that consideration be given to structuring a review tribunal consistent with the proposed Drug Control Board i.e. composed almost entirely of medical personnel . . . that the criminal offences for trafficking and possession for the purpose of trafficking in narcotic drugs be maintained and be reviewable by the present judicial structure . . . that narcotic addicts found to have trafficked or to have been in possession of narcotic drugs for the purposes of trafficking be subject in the first instance to the same rehabilitation as cited for those in possession of narcotic drugs and that it be suggested that corporal and/or financial punishment only be invoked when rehabilitation from addiction and the accompanying criminal activity appears unlikely . . . that medical, psychological, social and educational rehabilitation be offered through out-patient and in-patient medical clinics.
- D.) That all persons who have been convicted in the past of the indictable offence of possession of a narcotic drug have that conviction removed from their criminal records . . . that persons subject to corporal and/or financial sanction for the offence of possession of a narcotic drug at the time that the above proposals might be introduced, have their cases reviewed in the manner suggested in proposal C.

THE NON-MEDICAL USE OF DRUGS . . . MARIHUANA

The proposals which follow in this section reflect the two statements of philosophy contained in the introduction to this brief . . . the non-medical use of drugs is a problem of personal morality and a problem which can only be adequately cured through medical, psychological, social and educational rehabilitation.

In addition, the proposals are based upon the following medical, psychological and legal reports concerning the drug CANNABIS SATIVA L.;

- —Report of the Indian Hemp Drug Commission, 1894.
- —Mayor's Committee (La Guardia) on Marihuana, New York City, 1944.
- —The Marihuana Papers, Solomon, New American Library, 1966.
- —Report to the National Council for Civil Liberties, (U.K.), Nov. 1967.
- —"The Cannabis Habit: A Review of Recent Psychiatric Literature", Murphy, Addiction Research Foundation of Ontario, Spring, 1966.
- —The Boston Study: "Clinical and Psychological Effects of Marihuana in Mann", Weil, Zinberg and Nelson, Science, Vol. 162, Dec. 13, 1968.
- —New York Times Survey, "Scientists Seeking Mysteries of Marihuana", February, 1969.
- A. Report of the Indian Hemp Drug Commission, 1894

Summary of Findings

- ... There is no evidence of any weight regarding mental and moral injuries from the moderate use of these drugs.
- ... Large numbers of practitioners of long experience have seen no evidence of any connection between the moderate use of hemp drugs and disease.
- ... Moderation does not lead to excess in hemp any more than it does in alcohol. Regular, moderate use of ganja or bhang produces the same effects as moderate and regular doses of whisky. Excess is confined to the idle and dissipated."
- B. Mayor's Committee (La Guardia) on Marihuana, New York City, 1944

Summary of Findings

- ... smoking marijuana does not lead directly to mental or physical deterioration.
- ... the habitual smoker knows when to stop, as excessive doses reverse its usually pleasant effects.
- ... Marijuana does not lead to addiction (in the medical sense), and while it is naturally habit forming, its withdrawal does not lead to the horrible withdrawal symptoms of the opiates.
- ... No deaths have ever been recorded that can be ascribed to marijuana.
- . . . Marijuana is not a direct casual factor in sexual or criminal misconduct.
- ... Juveline delinquency is not caused by marjuana smoking, although they are sometimes associated.

- ... The publicity concerning the catastrophic effects of marijuana smoking in New York is unfounded.
- ... It is more of a nuisance than a menance.
- C. Report to the National Council for Civil Liberties, (U.K.), Nov. 1967

While the physical motor activity of experienced users generally is minimally impaired, use by novices may result in different effects.

The threat of impaired drivers on the highways, if marihuana were open to public consumption, would be adequately dealt with through existing provincial highway legislation and the Canadian Criminal Code.

The report cited above proposed a rational solution to the question of determining impairment through marihuana use.

- ... "if the supply of cannabis was controlled by the Government, it would be theoretically possible to add another substance which could be detected in the urine."
- D. "The Cannabis Habit: A Review of Recent Psychiatric Literature", Murphy, Addiction Research Foundation of Ontario, Spring, 1966

Summary of Findings

- ... Both in the complexity of its effects and in more specific characteristics, cannabis sativa is much closer to alcohol than to the opiates or cocaine.
- . . . Cannabis sativa has a highly complex influence, dependent on personality and culture as well as on the drug itself.
- ... There is no revealing incidence of extraordinarily high levels of psychosis.
- ... while it seems established that the use of cannabis sativa attracts the mentally unstable, the prevelance of *major* mental disorder among cannabis users appears to be little, if any, higher than that in the general population.
- ... There are noticeable effects where the drug is consumed regularly in considerable amounts ... insomnia or reduction in normal sleeping time; minor impairments of judgment and memory; limited lethargic effect leading in some cases to limited self neglect.
- ... It is very difficult to distinguish a psychosis due to cannabis from other acute or chronic psychoses, ... cannabis likely is only a relatively unimportant precipitating agent. All responsible research seems to be compatible with the consensus that ... "a characteristic cannabis psychosis does not exist.

Marihuana will not produce a psychosis de nova in a well integrated, stable person."

- ... Cannabis sativa has neither a significant addiction-producing effect, nor is it a serious channel to other addictions
- ... the drug by itself does not induce dependency or "addiction" in the user ... it offers an escape from the world, and for individuals whose personal inadequacy or social misery are great enough the desire for such escape may lead to a rejection of life without the drug, which is distinguishable from addiction.
- ... Cannabis sativa is "habit forming".
 ... Aggressiveness or antisocial behaviour is agreed to be less common with cannabis sativa than with alcohol.
- ... There are few physical effects and there is no physical dependence.
- ... Cannabis does not, per se, induce agressiveness or criminal activity, and that the reduction of work drive leads to a negative correlation with criminality rather than a positive one.
- ... The short-term psychological effects are not in any sense serious:
- (a) dulling of attention
- (b) loquaciousness and/or euphoria of variable duration
- (c) usually some psychomotor activity (restlessness and excessive movement) and affective liability (emotional instability) coloured by the underlying personality.
- (d) perhaps some distortion of perception and time sense, depending on the dose.
- (e) perhaps some lassitude culminating in deep sleep if the dose is sufficient.
- ... There is enough empirical information to conclude that the short-term effects of marihuana use are relatively harmless.
- ... "Like alcohol, it (marihuana) appears to have no deleterious effect on the moderate user, who knows the correct amount for obtaining realization or euphoria without additional effects." "In this light it is clear that the free availability of cannabis can be harmful, but it is not so clear that this is more harmful than the free availability of alcohol."

"It may be that we can ban cannabis simply because the people who use it, or would do so, carry little weight in social matters and are relatively easy to control, whereas the alcohol user often carries plenty of weight in social matters and is difficult to control, as the U.S.

- prohibition era showed. It has yet to be shown, however, that the one is more socially or personally disruptive than the other."
- E. "The Boston Study: Clinical and Psychological Effects of Marihuana in Man", Weil, Zinberg and Nelsen, Science, Vol. 162, Dec. 13, 1968

Summary of Findings

- ... It is feasible and safe to study the effects of marijuana on human volunteers who smoke it in a laboratory.
- ... In a neutral setting persons who are naive to marijuana do not have strong subjective experiences after smoking low or high doses of the drug, and the effects they do report are not the same as those described by regular users of marijuana who take the drug in the same neutral setting.
- ... Marijuana-naive persons do demonstrate impaired performance on simple intellectual and psychomotor tests after smoking marijuana; the impairment is dose related in some cases.
- ... Regular users of marijuana do get high after smoking marijuana in a neutral setting but do not show the same degree of impairment of performance on the tests as do naive subjects. In some cases, their performance even appears to improve slightly after smoking marijuana.
- ... Marijuana increases heart rate moderately.
- ... No change in respiratory rate follows administration of marijuana by inhalation.
- ... No change in pupil size occurs in short term exposure to marijuana.
- . . . Marijuana administration causes dilation of conjunctival blood vessels.
- . . . Marijuana treatment produces no change in blood sugar levels.
- ... In a neutral setting the physiological and psychological effects of a single, inhaled dose of marijuana appear to reach maximum intensity within one-half hour of inhalation, to be diminished after 1 hour, and to be completely dissipated by 3 hours."
- F. New York Times Survey, February, 1969
 The February 4, 1969 issue of the Globe and Mail at p. 43 carried a survey conducted by the New York Times entitled "Scientists Seeking Mysteries of Marijuana". Scientists doing research at the present time throughout the United States were interviewed. The Division of Narcotic Addiction and Drug Abuse of the National Institute of Mental Health, in Bethesda, Md., is supporting 24 projects on marihuana alone and 32 others that include marihuana among several drugs being studied.

About one million dollars have been allocated by the Institute for marihuana research.

These are some of the observations that emerge from the interviews:

- ... "The long term physiological and psychological effects of smoking marijuana are not vet known. Scientists are just beginning to study such possible effects as genetic damage, permanent personality alteration and the correlation between marijuana smoke-like cigarette smoke-and cancer.
- ... "There is some evidence that marijuana smoking reduces motivation in youngsters, causing them to lose interest in schoolwork and to grow more passive and less ambitious.
- ... "Otherwise there is virtually no scientific evidence that mildy potent marihuana normally available in the United States is physically harmful when smoked occasionally and over a short period of time. Indeed, many scientists contend that, based on the short term evidence, marihuana is probably less damaging than two other widely used drugs: alcohol and the nicotine in cigarettes."
- ... "Thus far, there is little evidence to support the popular myths, often fostered by law enforcement agencies, that marihuana, which appears to be capable of causing a psychological dependence but not a physiological one leads to a craving for such addicting drugs as heroin or that marihuana stirs criminal tendencies in its users."
- ... "Like most other scientists working with marihuana. Dr. Freedman opposes legalization of the drug until, as one researcher put, 'the full story is told.' Dr. Freedman also joined virtually every scientist interviewed in denouncing existing laws that punish not only distributors of the drug but also those who possess it."
- ... "A cautious middle position between the advocates of legalization and the law-enforcement foes of marihuana characterizes much of the thinking about the drug in the scientific community."

As a result of the above reports, it is proposed that this Commission of Inquiry on the Non-Medical Use of Drugs recommend that the drug Cannabis Sativa L., or Marihuana, be removed from the list of prohibited drugs contained in the Schedule to the Narcotic Control Act.

As is indicated above, it is reasonable to assert that the short-term medical and psychological affects of the regular use of marihuana are relatively harmless.

While the regular use of alcohol may produce decreased appetite, liver cirrhosis, gastritis and profound brain damage, the regular use of marihuana generally produces only moderate to insignificant psychic (psychological) dependence, only moderate to insignificant physical effects and no physical dependence.

It is true that the long-term medical and psychological effects are somewhat uncertain, but it also is a truism that they will always largely remain uncertain if marihuana continues to be subject to the now prevailing control mechanisms.

Because it induces less psychic (psychological) dependence than alcohol, with no physical dependence, it has been suggested that there would be medical and social value in converting alcoholics to the use of marihuana.

In order to affect rational control over public consumption of Marihuana, it is proposed . . . that consistent with the legalization of marihuana use in Canada that, under Article 46 of the 1961 United Nations Single Convention of Narcotic Drugs, Canada either propose an amendment to affect a change in the classification of marihuana or renounce unilaterally after six month's notice. its status under the Convention:

- ... that the Federal and Provincial governments provide appropriate control mechanisms to ensure the public distribution of marihuana:
- ... that marihuana be made available in much the same manner as is alcohol;
- ... that the importation or domestic production of marihuana be closely controlled through strict licensing provisions which ensure high standards of production and
- ... that appropriate Federal or Provincial bodies undertake a broad educational programme which will assist in guaranteeing responsible public consumption.

REFERENCES:

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Drug Use Among London's Youth— A Brief Report

Jock McKeen '70

I

Gradually, the medical profession is learning that the use of drugs by young people is an established problem. But, are we aware of the extent of this problem? What drugs are being used? What percentage of young people are experimenting with drugs? What complications are arising from widespread drug use? Are we as medical people providing adequate care and support for drug users with emotional and physical problems? Are the emotional disorders seen among drug users caused by drugs, or merely unmasked by them? Is drug usage only a symptom of profound sociological problems?

Certainly, the drug scene involves a significant proportion of London's young people. A survey released by the addiction Research Foundation in March 1969 indicated that 16% of London high school students had tried drugs; other studies across the country have produced similar results. Already, the figures from these studies are really over a year old. The drug scene is certainly not declining; if anything, it is gaining momentum. Youths who sell drugs in this city estimate that in certain high schools in London, over 50% of the school population have used drugs.

The drugs in current use are varied in the effects they produce. The following is a list of drugs currently available and in use in London:—

Lysergic Acid Diethylamide (L.S.D., Acid)
Sold in tablets or on a blotter.

Taken orally, one tablet producing a trip, with disorientation and hallucinations.

Cost-about \$4.00 per tablet.

Methedrine (Crystal, Speed)

Sold as a white powder.

Intravenous injection, producing a trip of hyperactivity, garrulousness, nervousness, and ultimately (see below) paranoia.

Cost-about \$3.00-\$5.00 per injection.

M.D.A.—a mixture of Mescaline, Dexedrine and Acid.

Sold in capsules, Oral administration, producing a "love trip".

Cost—about \$4.00 per capsule.

Marijuana (Cannabis)

- (a) Grass—the flowering tops and upper leaves of the female hemp plant. Smoked or ingested. Sold in \$5.00, \$10.00 or \$25.00 quantities.
- (b) Hashish—the resins exuded by the tops and leaves of the female hemp plant. Solid cakes or blocks, ranging in colour from gold to dark brown. Sold in \$10.00, \$25.00 quantities. Smoked or ingested—a "heavier" high than grass.
- (c) T.H.C. (Tetrahydrocannabinol) Synthetic grass. Injectable. Not readily available.

Mescaline

- —either organic (extracted from Peyote) or Synthetic.
- tablets or capsules, taken orally.
 Hallucinogenic, primarily of a visual nature.
- —Cost—about \$4.00 per tablet.

Psilocybin

- —derived from Mexican mushrooms.
- —an indole related to serotonin. Hallucinogenic.

Stramonium

- —a parasympathetic blocking agent.
- —considered by users to be one the most hallucinogenic drugs.
- —Overdose can lead to death.

S.T.P.

-an injectible of uncertain composition.

P.C.P.

-purported to be a horse tranquilizer.

Cocaine (Snow)

-injected intravenously.

Opiates

- —very rare in London, but available. Expensive.
- Opium is smoked; Demerol, heroin and morphine are injected intravenously.

Solvents-rarely used (e.g.-glue sniffing)

In terms of frequency, hashish and L.S.D. are the most commonly used drugs in London at the moment. High school student users are spending \$7.00 to \$15.00 per week on drugs. Many don't stick to one drug; but rather, they experiment with several drugs at a time, achieving the combined effects of the drugs simultaneously by "variety pack" administration. And the above drugs are not the only injectable substances in use; one user I spoke with told of one experience with intravenous ether (sic!) and several experiences with intravenous Lemon Koolaid (apparently the citric acid gives one a pleasurable sensation, known to users as a "rush").

The purity of the drugs is usually questionable. Although most marijuana is pure, the majority of L.S.D. capsules contain contaminants in the form of belladonna, strychnine, benzedrine and dexedrine.

Methedrine is an increasing problem. At the moment, there are approximately fifteen dealers for Speed in London. Although most users of all drugs are weekend trippers, there is a hard core of about twenty known as "Speed Freaks' who inject Methedrine regularly to attain a continuous high, lasting for several days to weeks to months. I spoke with one such person, who had been high on speed for eight months before finally "coming down" into an indescribably profound depression a month ago; he still is recuperating from the physical and emotional

disorientation that he experienced, Large doses of speed taken regularly induce a state of tolerance, so that progressively larger doses are required. Although hallucinations from speed are rare, paranoia is a common side effect: the individual who had taken the eightmonth trip actually took to carrying a handgun at one point. Overdoses of speed can produce immediate death-a ghastly end, with bleeding from eyes, ears, nose and mouth. Most of the hard core users also deal in drugs to gain enough money to support their own habit. These Speed Freaks are highly respected by many in the hippie subculture; many youths take drugs only to achieve a sense of identity with the rest of the group and to emulate the Speed Freaks whom they admire.

The drug problem is a real one. As inappropriate and objectionable as some of the drug users that the medical profession encounters may seem to be, this group is undeniably a significant proportion of our present day society. In dealing with these people, we must endeavour to afford them the same courtesies and compassion that we do to anyone else who is ill; rejection will do nothing to solve the problems that form the basis for this group's wide experimentation with drugs. The drugs are not the real problem; rather, drug usage is only symptomatic of the inability of this group to adapt to the society that they are living among. As medical people, we are responsible to help reorient them, not reject them,

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Hospital admission of anyone because of drug abuse leads to various problems; These problems are heightened when the person belongs to the so called "hippie" subculture. Public opinion does not appear to have evolved to the stage where we can see these adolescents as having a problem worthy of help.

Long term alcoholics or menopausal women habituated to barbiturates are given medical help without question; yet, there is still resistance to offering medical and emotional support to the kids with long hair and "spider tracks" on their arms, (needle injection sites).

There is no one reason why the drug abuse rate is rising so rapidly except perhaps ready availability. I feel it is this availability, coupled with an adolsecent's normal curiosity that

Cathryn Barbour, Reg.N.

- -Recreational Therapist, Victoria Hospital,
- -Volunteer at A.R.F. Trailer Unit

prompts him to take his first puff of marijhuana, swallow his first tablet of L.S.D., and inject his first "hit" of speed. However, those persons who continue to use drugs usually have an underlying emotional problem with which they need help.

What should we expect from, and what do we hope to offer these people? They are appearing at the hospitals more and more frequently. In my experience, we are usually confronted with an individual on a "downer", following extended intravenous doses of methedrine. This "downer" has been described as a period of severe depression, paranoid psychosis with delusions of persecution, and drug dependence. Although methedrine is not supposed to result in physical withdrawal symptoms, most users complain of stomach cramps, headache and other physical

complaints. Thus, we find our patient agitated, unhappy, frightened of the rigid hospital atmosphere, and owing to the paranoid ideas, very suspicious of the staff. With medication we can get him through this crisis stage, but what do we do next? After providing a period of adequate rest and nourishment, are we justified in throwing them out into the street again? Looking individually, we usually find an adolescent who has somehow severed ties with family, school, and the rest of the community that is not part of his drug orientated group. Discharged without further support and care, he has no where to go but

back to the situation that led to his admission.

Rehabilitation must be offered, and should involve many of the various community services. Going back to school, or getting a job sounds relatively simple. Yet, it is more and more evident that massive doses of methedrine leads to a serious inability to concentrate. Therefore, extra help is necessary. In addition to school rehabilitation, they often need financial and emotional support to carry them through this period of readjustment. It is these areas of rehabilitation to which we must attend.

* * *

A new pharmaceutical combines The Pill with LSD. At last the gals can take a trip without worrying about the kids!—OMA Review

The classics student ran jubilantly from the doctor's office after being informed that his Wassermann test was negative. "Vene, V.D. vici!" he shouted to his waiting friends. "Come, I have conquered V.D.!"

The question of how much dosage to administer of anything is a critical one. The wind will blow out a candle but it feeds a bigger fire.

The ideal gift for a man you can't stand is a jigsaw puzzle called Frustration. On the cover of the box is a small illustration of a nude; inside are hundreds of pieces that don't fit together.

* * *

In a homeopathic periodical of recent date appears the following professional card:

JOHN JONES, M.D. Oculist and Orificialist Wayback, Massachusetts

Whatever else may be said about our homeopathic colleagues, certainly no one can deny their progressive spirit in their commendable search for medical novelties. The modest but noticeable card of Dr. Jones is a new evidence of this undaunted professional determination, for he launches upon the field of medicine an entirely new specialty, one it must be conceded never even dreamed of by less talented members of the regular school. His spirit is evidently too bold, and his knowledge too extensive to be circumscribed in the narrow field of merely one orifice; he treats them all; he is equally at home in the mouth (figuratively speaking, of course), nose, ear, vagina, urethra or rectum, to say nothing about the eye, which is evidently his leading card, as it were, for he mentions the eye specifically, while the other orifices he simply refers to in a general classification. We do not know at the present time whether he also includes the orifices of the sweat glands or not, but we presume he would not allow several million of these little orifices to pass unnoticed. It would appear that in a specialty as boundless as that of orificialism, extending, as it were, at a jump from the eye to to the rectum, there should be no difficulty whatever in making both ends meet, and we certainly congratulate Dr. Jones on his wonderful innovation into modern methods of medical practice.—From the News Items, The Opthalmic Record, May, 1900.

Congenital Dislocation of the Hip

Peter Nichol '70

Congenital dislocation of the hip (CDH) refers to the intracapsular antero-superior dislocation of the femoral head from the acetabulum which occurs during birth or the neonatal period. This includes not only complete dislocations but also subluxations and some people even include potentially dislocatable or unstable hips as well. The terms "typical" means and "teratological" are also applied to CDH, "Teratological" means that the CDH is one of a number of congenital abnormalities whereas a "typical" CDH is an isolated anomaly. The typical type is the one that is going to be discussed here. "Congenital Dysplasia of the Hip" is often used synonymously with "Congenital Dislocation of the Hip" but in almost all cases this refers to the pathological changes that occur in the hip joint secondary to the hip being dislocated over a long period of time.

Congenital dislocation of the hip is a relatively common anomaly occurring in 1 to 1.5 per 1000 live births. 20% of cases are familial, 1/3 of cases are bilateral, and 80-90% occur in females.

The etiology of CDH at the present time is poorly understood and as so often occurs in such a situation many theories have been put forth. The consensus of opinion is (1) that the hip joint is anatomically normal at the time of birth except for excess laxity of the joint capsule and ligamentum teres and (2) that the positition of extension and adduction of the hip applied suddenly and violently or over a prolonged time dislocates the joint at birth or in the neonatal period.

In 1962 Lars Andren showed radiologically that there is a significant amount of instability of the pelvic and hip joint in neonates with CDH by measuring the change in distance between symmetrical skeletal structures on push and pull of the abducted femora. Carter and Wilkinson found abnormal joint mobility on physical examination of a group of newborns with dislocated hips.

A genetic cause for the excess laxity seems to be present in some cases. 20% of cases overall show a familial incidence but when considering the males with CDH alone this familial incidence may be as high as 80%. Therefore a genetic predisposition or cause probably plays a major role in males.

In females, who compose 80-90% of all cases, there seems to be a hormonal

implication. The hormones involved are thought to be estrogens and relaxin. Relaxin is a polypeptide with molecular weight 7,500-9,000 which is produced in the ovary and probably in the uterus and placenta. It acts on the pelvic and hip joint tissues to produce relaxation of fibrous structures and resorption of cartilage and bone. These effects are not generalized through the body and it has been suggested that tissues in the pelvic area may produce an enzyme which when activated by relaxin or estrogens resorbs collagen, cartilage or bone. Estrogens alone, if in sufficiently large dose, produce the same effect as relaxin but not as rapidly and so it is thought that relaxation occurs due to the action of relaxin after the tissue has been primed by estrogens.

Andren and Borglin (1961) found an abnormality in estrogen metabolism in patients with congenital dislocation of the hip. Normally a fetus converts estradiol and estrone, more potent forms of estrogens, which it receives transplacentally into the least biologically active form, estriol, which is excreted in the urine. In newborns with CDH the urinary excretion of estriol was low and it was high for estradiol and estrone. Thus there may be an inborn error in metabolism in the breakdown of estrogens resulting in a higher circulating blood level of the more potent estrogens which may act as a form of estrogen priming.

An observation frequently made is that females with CDH are strikingly feminine, as adults having wider pelves and more attractive figures than normal and as children being cute and coquettish. Some feel that this may reflect an increased susceptibility to estrogens in these people.

Another factor which may play a mechanical role in causing joint capsule laxity or the dislocation itself is the intrauterine position of the hip joint. Wilkinson (1963) showed the maintenance of the rabbit hip joint in external rotation could produce spontaneous dislocation of the hip and from this work he theorized that maintained external rotation in utero in humans could have the same effect. The presentation that would allow this to occur most often would be the breech presentation and 23% of CDH patients are born as breeches compared to less than 5% in the normal population.

So far only in utero influences, genetic, hormonal and mechanical, have been mentioned which predispose the hip to dislocation. To this congenitally unstable hip, passive sudden or prolonged extension and adduction must be added to produce a congenitally dislocated hip.

There is a significantly higher incidence of CDH in Northern Italians, North American Indians, West Germans and Laplanders among whom it is common practice either to swaddle newborns or to lash them to cradleboards with their hips in extension and adduction. At the other extreme there is a lower incidence in Negroes in Central and South Africa, Chinese in Hong Kong, and Eskimos who carry their babies in abduction and flexion which is the position used to treat CDH.

An increased incidence in the winter time in some European countries is thought to be due to bundling babies up tightly with their hips extended and adducted.

Some stillborns with normal hips have had their joint capsules and ligamenta teres incised to stimulate hip joint laxity. On manipulation the only position in which the hips would dislocate was extension and adduction.

The pathological changes which occur if the hip joint is dislocated and not reduced can be briefly summarized as follows:

- The femoral head becomes hypoplastic and is dislocated antero-supero-laterally.
- The femoral neck becomes anteverted greater than the normal 25° present at birth.
- The joint capsule and ligamentum teres becomes elongated.
- The roof of the acetabulum becomes dysplastic and sloping.
- The fibrocartilagenous labrum or limbus may be folded into the acetabulum.
- A false acetabulum may form where the femoral head articulates on the ileum.
- Contracture of the adductors of the hip occurs.

The changes which may be seen radiographically will start to be seen on x-ray at about 4 months of age if the hip has been out from birth.

The diagnosis of CDH is the most important aspect of this disease. Ortolani developed a technique in 1937 to diagnose dislocation in the newborn but it wasn't until 1962 when Van Rosen published his results after using Ortolani's method that it became popular. The Ortolani Sign is detected by the examiner facing the newborn's perineum, flexing the

hips 90°, abducting them 90°, and flexing the knees. Using both hands the thumbs are placed on the inner aspects of the thighs and fingers on the greater trochanters and the heads of the femora are moved in an anteroposterior direction. If the joint is abnormally lax then increased mobility will be felt and a click may be heard or felt as the head passes over the rim of the acetabulum. This is a positive Ortolani's sign. X-rays at this time may or many not show a dislocation. These are the only findings in the usual case of CDH shortly after birth and the Ortolani sign is diagnostic in almost all cases of CDH.

If a dislocated hip goes undiagnosed and is discovered when the child is becoming mobile at 4 months or even later when he is walking then the diagnosis is easy. There will be a delayed start in walking, and the child will walk with a limp. Examination will show shortening of the limb, asymmetrical gluteal folds, limitation of abduction, telescoping of the femur, and a positive Trendelenburg test in unilateral cases. Bilateral cases also show a widened perineum, marked lumbar lordosis, waddling gait and bilaterally positive Trendelenburg test, X-rays reveal hypoplasia of femoral head and the roof of the acetabulum, superolateral dislocation, and disruption of Shenton's line. Arthrograms with the injection of contrast medium into the joint show whether the limbus is in the joint or not.

If the diagnosis is made at birth or less than 6 months the treatment is simple and 100% effective. The hips are held in 90° flexion and 90° abduction with splints or plaster for up to 3 months.

If the diagnosis is made between 6 months and 2 years of age conservative treatment may be attempted. Traction is applied to the hips for two weeks with gradual abduction out to 90° in order to overcome soft tissue contracture and to bring the femoral head inferiorly to the level of the acetabulum. Closed manipulation under anaesthesia is used to put the head in the acetabulum and the hips are maintained in 90° abduction and 90° flexion in a plaster spica cast for 1 year to 11/2 years. Initially they are internally rotated as well (the Lorenz position) and after the anterior capsule has tightened enough to hold the head in the acetabulum the hips are externally rotated (the Frog position) to decrease the amount of femoral anteversion.

Surgical intervention however is often needed in this age group. The limbus must be removed from the acetabulum if it is impeding reduction. A rotational osteotomy may be necessary for excess femoral anteversion. If recurrent dislocation or subluxation occurs when the plaster is removed then a Salter innominate osteotomy is probably necessary.

The complication rate is high in this diagnostic age group. 30-40% of cases undergo avascular necrosis of the femoral head in childhood and early osteoarthritis in adulthood. Difficult reductions and failure of reduction are frequent. A limping gait is common.

When the diagnosis is made after 2 years old then surgery is almost always necessary and this usually means an extensive procedure such as an innominate osteotomy or acetabuloplasty. The results are almost always poor.

So in summary it should be repeated that congenital dislocation of the hip is a fairly

common congenital abnormality which can be diagnosed shortly after birth and treated with excellent results. But if the diagnosis is missed and it is discovered later on, then the treatment is extensive, prolonged and very trying for all concerned, patient, parents and surgeon, and the results are often disappointing.

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* * *

The crime of Procrustes is a prevalent one in clinical medicine. According to Greek legend the robber, Procrustes, after feigned hospitality, tied travellers to a bed and if their length exceeded that of the bed, he amoutated their ilmbs, but, if they were shorter, he stretched them to the exact length of the bed. In clinical medicine the crime is often repeated by those who make a diagnosis, often after a snap decision, and without good evidence, and then make the physical signs fit the possibly erroneous diagnosis. For example, the clinician may diagnose aortic regurgitation correctly or otherwise, but in either case then deludes himself that the pulse is collapsing when in fact it is not. Or he may see a patient with an unilateral parkinsonism, and immediately jump to the conclusion that he has an upper motor neurone hemiplegia and persuade himself that the deep reflexes are brisker on that side and the plantar reflex is extensor. Or, in a patient with a pneumothorax, the clinician misguided by the apparent impairment of percusion note on the opposite side, makes up his mind that the patient has an upper lobe fibrosis on the sound side, and supports his illusion by convincing himself that the trachea is deviated. The crime of Procrustes is perpetrated far, far more often in clinical medicine than is generally realized or admitted, and nowhere more so than in cardiology.—Pappworth M.H. A Primer of Medicine, Butterworths 1963.

* * *

Definitions

Bush: What a bird in the hand is worth two in the of.

Armour: Knight gown.

Deficit: What you have when you don't have as much as if you had nothing.

Small town: A place where there isn't much to see, but what you hear makes up for it.

Baldness: Top not.

Politician: A person interested in wordy causes.

-OMA Review

The meek little fellow with the bulky history walked into the doctor's office.

"What's your problem today?" the doctor asked.

"I haven't got a problem today," the patient replied. "I've got a sore throat."

-OMA Review

Back in the days when charts were written, the only complaint that could be registered about doctors' notes was that they were not legible. Now the typists who have to decipher the doctors' words from voice-recording machines are having fun with dictated bloopers, like the following which have been preserved for posterity by the records department of a hospital in Ontario:

"Under general anaesthesia given by Dr.
—— in the lithotomy position . . ."

"Dr. ——— and I have been following this girl for six years now."

"Final diagnosis: obesity with overweight."

"This boy of 93 . . ."

"This middle-aged man of 36 . . ."

"This girl or Female . . ."

"Symptomatology: Chest-no ankle edema."

-OMA Review

During the past decade much investigation has been centred on the group of cyclic polyansaturated fatty acids known collectively as prostaglandins. Every branch of medicine has taken part in this research and the results of such have been equally as diverse. It was this great diversity in postulated physiological roles that prompted this brief review of the subject to date.

HISTORY^{1 2 3}

Despite the rather recent interest in these substances they were indirectly studied as early as 1913 when two investigators Battez and Boulet noted a depressor effect of extracts of human prostate on the blood pressure of dogs. However, it was not until 1933 when Kurzrok and Lieb studied the effect of human seminal fluid on isolated strips of human uterus that research in this field really began. At this early date these investigators already noted a characteristic effect of prostaglandins. This was the differential effect these compounds had on the previously gravid and non-gravid uterus. In 1934, Von Euler using extracts from sheep vesicular glands and human seminal fluid discovered that the active compounds were fatty acids to which he gave the name "prostaglandins" believing they were largely derived from the prostate gland.

During these early years purification and isolation techniques were much less spohisticated than those available to the biochemist today. Consequently although the biochemical structure of prostaglandins was deduced before 1960, it was not until then that an active compound in its crystalline form was isolated by Bergstrom and Sjoval. This was named Prostaglandin F or PGF. Since then at least 13 substances with prostaglandin activity have been isolated using mainly chromatographic techniques—thin plate, silicic acid column or gas-liquid.

CHEMICAL STRUCTURE 23

The parent compound has been designated "Prostanoic acid", a cyclic saturated fatty acid with 20 carbons. This compound has not been isolated from natural sources but provides the basic model for the prostaglandins found naturally. (Figure I).

There are three compounds designated according to the number of double bonds they possess known as Prostaglandin E₁, E₂, E₃. (PGE₁, PGE₂, PGE₃).

The structural formula of PGE₁ is shown in Figure "2". Each of PGE₁, PGE₂ and PGE₃ can result in 2 stereoisomers by reduction. These are designated at PGF₁ α , PGF₁₈ etc. Only the alpha stereoisomers are found naturally occurring. The Prostaglandin F compounds are therefore alcohols resulting from reduction of the ketone group in PGE. They have 3 hydroxyl groups as compared to 2 in the PGE compounds.

In addition to PGE and PGF compounds, two other groups have been isolated. These are designated PGA and PGB and appear to be formed by hydrolysis of PGE.

BIOSYNTHESIS AND METABOLISM^{1 2 3}

Without delving into the intricacies, the biosynthesis of prostaglandins can be summarized by saying that they are formed from long chain unsaturated fatty acids. Conversion of these into prostaglandins have been noted in tetraenoic fatty acids of chain length 19, 20 or 21. An example of such a fatty acid is arachidonic.

The metabolism of these compounds does not appear to be unique and follows recognized pathways, e.g. reduction of the double bonds and oxidation of the alcoholic groupings. Most of the metabolites appear to be excreted in the urine. The lung has been shown to be an important organ in metabolizing circulating prostaglandins.

PHYSIOLOGICAL ROLES OF PROSTAGLANDINS

I Reproduction 4.5

For many years it has been known that most, if not all of the pharmacological activity of seminal fluid in the human being was due to prostaglandins. By using the split ejaculation technique* it was discovered that despite their name, prostaglandins are produced mainly in the seminal vesicles rather than in the prostate. The highest concentration of prostaglandins in the body

Figure 1-Prostanoic Acid

occur in the seminal fluid and hence a role in reproduction has been inferred from this.

Initial studies tended to show that there was generally a lower concentration of prostaglandins in infertile men as compared to those of proven fertility although the difference was not striking. However, "in vitro" studies have shown that prostaglandin extract did not cause any measurable metabolic changes in spermatozoa. The role of prostaglandins in male reproductive processes is still open to question. It is interesting to note that prostaglandins are not present in the seminal fluid of all mammals.

Prostaglandins have been isolated from the ovary, endometrium, menstrual fluid and umbilical cord. Interest has focused particularly on the role of prostaglandins on the uterus since as mentioned the pioneers in this research noted a differential effect of prostaglandins on the previously gravid or non-gravid uterus. Since this time there has been a great accumulation of data, often contradictory, concerning the physiological

effects of these compounds in the female reproductive tract. For the sake of simplicity but at the expense of being dogmatic the following statements can be made. PGE decreases the motility of the non-pregnant and pregnant uterus in high doses. However, in low doses it stimulates the pregnant uterus and constant intravenous infusion can induce myometrial activity resembling true labour. PGF generally stimulates and contracts the myometrium and this is seen particularly late in the menstrual period. This implies the ovarian steroids influence the end organ response to protaglandins. Along these same lines, it has been postulated that prostaglandins may play an etiological role in dysmenorrhoea. Their production is increased by progresterone and hence more prostaglandins are isolated from an ovulating than from a non-ovulating endometrium. Experiments involving the direct instillation of semen into the uterus enhances activity in the uterine corpus and decreases it in the cervix. This effect has been attributed to PGF and may aid sperm transport.

Figure 2-PGE

Despite the wealth of experimental results the actual role of prostaglandins in reproduction is still in doubt. Their importance is inferred however because of the large amount of prostaglandins in the semen, their effect on uterine motility and the effect of ovarian steroids on their production and actions. There still awaits a cohesive theory to explain their role(s).

2) Gastrointestinal Physiology 2 3

Generally one can say that both PGF and PGE have a stimulating effect on G.I. musculature. This has been used as an assay tool, the degree of gut motility directly proportional to the amount of prostaglandin activity present. One hypothesis concerning the mode of action of prostaglandins is that they facilitate calcium influx or work in association with a metabolic aerobic reaction to release bound calcium, Common antagonists such as atropine, antihistamines, curaree, cocaine, LSD do not affect this response. Only one antagonist has been found to date. This is "patulin" a bacteriostatic compound isolated from Penicillium patulum. Despite the preceding data no specific physiological role of prostaglandins on the gut has been discovered.

3) Cardiovascular System^{4 5}

Prostaglandins generally have a vaso-depressor effect in the cardiovascular system. Intravenous injections of PGE, cause intra-arterial vasodilation with a decrease in systolic and diastolic pressures. Both PGE and PGA can counteract renoprival deprivation in dogs. The role of prostaglandins in renal hemodynamics has been postulated by J. B. Lee. Because of their origin in the renal medulla they have been designated renomedullary prostaglandins and are made up of PGE₂, PGF₂ and PGA. PGA was formerly called "medullin". It appears to have mainly vasodepressor effects and hence is more selective in action than the other two.

Two modes of action have been postulated for "renomedullary prostaglandins":-

- hormonal action with generalized vasodilating effects,
- 2) local action in the kidney adjusting renal flow. This action is explained as follows. The prostglandins which are present in the outer medulla reduce the blood flow in this area. This reduces the resorptive capacity of the tubule cells of the loop of Henle and collecting ducts for solute and water and hence this leads to a naturesis and free water clearance. If the prostaglandins are decreased in this area, there is an increase in renomedullary blood flow with resulting greater resorption of salt and water by the tubule cells—an

hypertensive effect. Because more blood goes to the renal medulla with a reduced prostaglandin content, there is a reduction in renocorticol blood flow. This is sensed by the juxta-glomerular apparatus which activates the renin-angiotensin-aldosterone hypertensive mechanism. Prostaglandins, therefore, have been implicated as anti-hypertensive agents with their activity confined to the kidney and/or as general vasodepressor hormones.

4. Nervous System

Prostaglandins are distributed throughout the nervous system fairly uniformly except for decreased activity in the white matter and medulla. There appears to be generally more PGF than PGE in the nervous system. Experiments using intravenous or intraventricular perfusions of PGE into cats or chicks have produced sedation that may progress to catatonia, revealing another interesting but as yet inadequately explained action of these compounds.

An interrelationship with catecholamines has been postulated for the prostaglandins but no specific theory has been put forward to explain it. Both have synergistic actions as shown by their effect on smooth muscle contraction of the seminal vesicles and also antagonistic actions as shown by their effects on the CNS and CVS. Moreover, Prostaglandins are released by sympathetic nerve stimulation of the spleen.¹

Skin³

PGE has been shown to be a potent vasodilator after dermal injection whose effect can be blocked by nor-epinephrine and epinephrine. It has vasodilating effects in patients with atopic dermatitis in contrast to other known vasodilators such as histamine which have a paradoxical or no effect.

Nasal Mucosa[®]

PGE₁ and PGE₂ were demonstrated to relieve nasal congestion as effectively as Napthazoline, a well known vasoconstrictor. This effect was attributed to the vasoconstricting actions of these compounds on the nasal blood vessels.

5. Metabolism 9 10

Prostaglandins have been shown to affect primarily lipid metabolism. PGE₁ counteracts the effects of norepinephrine, epinephrine TSH, ACTH, and glucagon on lipolysis. It probably acts by inhibiting the formation of cyclic AMP (by its action on adenyl cyclase). PGF has a similar but smaller effect. In this respect, therefore prostaglandins have an insulin-like activity. This is also shown by their effect on carbohydrate metabolism where they decrease phosphorylase activity, and increase

glucose uptake and incorporation into triglycerides. Their effect on carbohydrate activity is quantitatively less important than their anti-lipolytic action.

6. Platelets

PGE, has been shown to decrease platelet aggregation induced by ADP whereas PGE, appears to enhance platelet aggregation. This significance of these findings with respect to clot formation, thrombosis is not yet understood.

7. Iris

Smooth muscle stimulating activity in the irides of some animals including man has been attributed to a compound resembling prostaglandin and has been called "irin". The importance of this compound for normal visual function is not known.

From the preceding brief discussion of the occurrence, effects and postulated physiological notes of prostaglandins, it is quite evident that they are ubiquitous compounds with activities seemingly more diverse than probably any other group of compounds. This has led some investigators to believe that they represent a new hormonal system in the body whose study will result in a far greater understanding of the basic mechanisms of body homeostasis. Others

however, have been somewhat disillusioned by the fact that prostaglandins are so ubiquitous and no one gland can be associated with them or no deficiency syndrome definitely shown, as is the usual case with the other known hormones, in the body. From the results to date the latter attitude toward the significance of these compounds is probably justified. And probably as Lee says, "The true role of the prostaglandins in biology will lie somewhere between the extremes of the revolutionary and the inconsequential".

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- *fascinating-can't imagine-ed.

* * *

GEMS FROM THE FACULTY

Dr. D. B---y: The qualitative aspect of stools has a wide standard deviation; much work is left to be done with an eyeball and a ruler. There is no standard weight, length texture of a b.m. To prove efficacy of a low residue diet would require a "shitocrit".

Hospital conspiracy—everytime an intern enters a bathroom, someone pages him.

- Dr. H. B--r: Nobody over 65 should have an aneurysm operated on, and noone over 65 should do the surgery.
- Dr. J----n: The patient was on a low-salt, low-calorie diet which she ate between meals.
- Dr. H. V-----e: Many therapies do no more than allow the passage of time. Medicine is being divided into 2 groups—those who sit in the Busby room and those who treat the patients.

When experts disagree the matter is usually of no importance.

Dr. L. R---e: Severe urgency is when you meet yourself coming back from the bathroom.

Elective Escapades

Pete Nichol '70

Due to the proliferation of the fourth year program, the editors now have an enlarged and esoteric fund of peripatetic medical happenings at home and abroad.

Eight Weeks at a Mission Hospital in Thailand

Harry Bergen '70

MANOROM, THAILAND

My interest in going to Thailand was to use my elective in fourth year to see what it is like to live and to work in a tropical developing area. I discovered that the Association of Canadian Medical Colleges administers a Fellowship sponsored by the Smith, Kline and French Drug Company designed to give medical students an opportunity to become familiar with the medical problems of a developing area. The applicant is required to choose the country and the hospital he wants to visit and to submit a description of his proposed visit for his application.

The place I chose was the Manorom Christian Hospital in the rice plains of Central Thailand, 150 miles north of the capital city, Bangkok. The hospital has been built by a Christian mission which had been in China until the Communists took power and had refocused their resources a short time after elsewhere in South East Asia. Manorom is a small town of 1,500 people strategically located a good 30 miles from 3 provincial capitals where there is a definite medical need and yet where there is a minimal possibility of misunderstanding of competition with provincial hospitals.

Thailand is the ancient kingdom of Siam. She differs from most South East Asian nations in that she has never been colonized by a Western power. As a result she has a history and culture very much her own: the

language spoken is Thai; the script and alphabet are unique; the arts have a very distinctive flavour. The Thai are very proud of their distinctiveness. The government is a constitutional monarchy and the Thai revere their king and queen very highly. Their portraits are seen hanging in most homes and businesses. The other face seen everywhere is that of Miss Thailand who several years ago won the Miss Universe title.

But the influence of modern technology is gradually pervading everything and in large measure this implies an adoption of ways of the West. Thailand is one of the countries of South East Asia most open to the West and as a result she is one of the fastest developing countries of South East Asia. One gains the impression that the distinctiveness of Thailand is inevitably being relegated to the background as Japanese and American (largely) technological ways are adopted.

Thailand identifies with the West in yet another way. She is one of the allies who has forces in South Viet Nam—only 80 miles away—fighting against the Viet Cong. As part of her role as an ally she has permitted the American military to establish a large number of bases in Thailand. The presence of American soldiers has given the Thai a first-hand impression of the "American way of life"; a large number of Thai are employed by the Americans and others are actively involved in business with them selling their bodies, booze, souvenirs, etc.

STANDARD OF HEALTH IN THAILAND

Statistics of the standard of health in Thailand are typical of a developing area; here several parameters are compared with those in Canada:

	Canada	Thailand
Population	20,015,000	30,475,000
Birth Rate (per 1,000 population)	19.3	34.2
Death Rate (per 100,000 population) all ages	748.8	775.2
0-1 (of those live born)	2311.0	3350.4
1-4	98.1	927.6
5-14	47.5	228.9
15-24	103.2	225.4
25-34	120.1	307.0
35-44	225.7	558.6
45-54	588.2	837.1
55-64	1448.9	1594.1
65-74	3360.9	3578.3
Deaths from causes related to childbirth (absolute numbers)	125	3237

The birth rate is almost twice that of Canada. The greatest contrasts in death rates are in the age groups below 15 years, and this can be attributed to the large prevalence of infectious disease—the most common affliction and killer of infants is diarrhea; T.B. is another major killer; malaria is endemic. To have children involves a great risk of morbidity and mortality.

There is little starvation in Thailand but it is estimated that 80% of the population suffers from vitamin B complex deficiency. The root of the problem is the Thai preference for polishing their rice. The outer layers of the rice are rich in B vitamins and these are lost in the polishing process. Since there are few other sources of B vitamins in their diet, deficiency results. Campaigns by Manorom Christian Hospital and others to have the Thai eat unpolished rice have been colossal failures (little wonder when you consider that all the rice sold in our own food stores is polished).

Inefficiencies are often associated with the adoption of new ways, and this is evidenced in medical care in Thailand. For a population of 31 million there are 6,200 doctors. However, more than 5,000 of these practice in the capital city, Bangkok, with a population of 5 million. The doctor-patient ratio at Monorom is estimated to be one doctor to 15 to 20 thousand people. Outside of Bangkok one can see other examples of inefficient extravagance in the midst of epidemiological backwardness. 30 miles from Manorom is an ultra-modern 350 bed provincial hospital that is only partially utilized due to the fact that there are

only 6 doctors and a serious shortage of nurses. Some of their patients might well have to travel 50 miles over rough roads in appalling conditions to reach this, their nearest source of medical aid—there would be no doctor stationed closer to their own district.

THE PRACTICE OF MEDICINE AT MANOROM

Of the 7 doctors at Manorom during my visit, one is an F.R.C.S. from Edinburgh and the other 6 are general practitioners, 5 from England and one from Australia. Most of the general practitioners have had some extra experience in a particular area to meet the total needs of the hospital. Together they manage 1,300 new out-patients a month (not including return visits) and a 150 bed hospital.

The hospital's financing originally came entirely from the mission but more recently the Netherlands government has contributed 75% of the cost of 2 new buildings. The day to day operation of the hospital is maintained partially by fees charged the patients—250 'baht' or \$12.50 for an appendectomy, for instance—which pay the 150 Thai staff. The 30 to 40 foreign staff are supported by the mission's own funds.

One of the most expensive items for patients is IV therapy. Blood is difficult to obtain; the relatives of patients needing blood are first urged to donate their own, but a great deal of the blood still has to be bought from other donors. To keep costs to a minimum most of the IV fluids are bottled by the hospital itself with the aid of a still.

Daily the hospital receives requests from patients for exemptions from fees because of an inability to pay. All these requests are reviewed by a Thai business manager who would be better able to detect insincerity than the foreign staff. A common problem is patients leaving the hopsital in the middle of the night (and in the middle of their treatment) without paying for their care.

One of the most interesting aspects of the hospital is that relatives assist in the care of the patient. Actually, all care outside of the dispensing of medications and the care of dressings is done by relatives. As a result they are constantly on the wards; at night at least one relative sleeps on a mat under the bed (or occasionally the patient is under the bed and the relative on top). All meals are supplied by the family, and these are usually obtained from any of the private restaurants doing business on hospital property.

Surgery is perhaps one of the most helpful and appreciated medical skills to practice in a developing area. The commonest surgical case is peptic ulceration, probably due in large part to the very spicy diet of the Thai. The commonest abscess seen is secondary to the use of hypodermic needles with poor sterile technique by self-styled dispensers in the neighbouring villages. Gunshot wounds comprise a very large percentage of emergency cases; actually, their use of guns reminds one of the Wild West of our own past history.

On the medical ward one sees an even wider variety of disease than would be seen here in Canada, Anemia is very common, due to hookworm, malaria or dietary iron deficiency. Almost every conceivable type of parasite is to be found in Thailand with malaria at the top of the list in incidence. Thailand has 6 varieties of poisonous snakes; type-specific venom is available as a service of the Red Cross. Cirrhosis is more common than in Canada due to chronic dietary insufficiency or parasitic infestation (mostly amebic hepatitis). Diabetes is a dread disease since it is very difficult to regulate with the meager and unpredictable diet of the country people.

Obstetrics is a rising service at Manorom. It has been very difficult to persuade the grannies, the traditional wardens of childbearing, to allow the delivery into the hospital. As a result standard practices continued to be carried on at home such as standing on an abdomen to expel the fetus or heating the post-partum abdomen in front of an open fire until the skin is burned. The hospital is gradually winning the confidence of the people as they see the odd

cephalopelvic disproportion or the ruptured uterus saved.

A good working knowledge of fluid balance is essential in pediatrics since so much diarrhea is seen secondary to poor hygiene. In one's immediate differential diagnosis of altered consciousness in children is cerebral malaria where infected corpuscles clog cerebral vessels. An entity first described largely in Thailand and common in children is hemmorrhagic fever, a hypersensitivity phenomenon to the dengue virus which will produce a state of shock associated with multiple petechiae.

Leprosy is such a big problem in Thailand that patients have to be managed on an outpatient basis; Manorom Christian Hospital manages 2,800 cases in 22 rural clinics around Manorom. The one doctor at Manorom working with leprosy manages to visit at least one of these clinics a week, but more frequent supervision of the clinics has to be done by nurses. Most of the doctor's time is taken with rehabiliative surgery and care of inpatients in severe reaction in a 20 bed wing of the hospital.

Leprosy carries the dread stigma in Thailand it has had throughout history. One day I accompanied the doctor and nurse to an outpatient clinic and was amazed to discover that it was set in the center of a cluster of trees and a good half-mile walk from the road and several miles from the nearest town. This had been the second relocation for this clinic. Both of the previous locations had been nearer the towns but popular fears would gradually mount and force the eventual closing of the clinic; one farmer whose field was next to the clinic was afraid that his crops might be contaminated. This outpost was the only place left the hospital could find for this particular clinic.

Folklore pervades all facets of health and disease. The Thai have their witchdoctors and many people take their advice in preference to Western medicine; in fact, one made the hospital his field of business and would sit outside the outpatient department where he would sell his opinion to persons who had found the hospital's advice unsatisfactory. Vendors of all types of home-brewed potions could be seen in railway stations and in market places with their displays of magical antelope hides and horns, recipes and rough sketches of human anatomy. A tale playfully passed on by parents but firmly believed by the children is that foreigners pickle little children and eat them; a remark not infrequently overheard in the waiting room would be, "Behave now, or we'll give you to the foreign doctor".

GENERAL IMPRESSIONS OF A DEVELOPING AREA

My impressions of what "developing" means as far as Thailand is concerned were altered by my visit, Before visiting the country I had the impression that the primary medical problems of Thailand had to do with public health and preventive medicine. I felt that the only type of doctor needed was a general practitioner with the versatility and courage to tackle almost anything with the minimum of facilities, and that a specialist other than in public health would be out of place. However, such jungle doctor impressions were modified by the discovery that Thailand has very up-to-date facilities within easy reach of many of the people but that many of these facilities are underutilized due to lack of personnel. Although there are still major epidemiological problems in Thailand, highly trained medical personnel are not entirely out of place. But a prime problem does exist in the distribution of medical care: there are still areas where conditions are so primitive that a "junge doctor" is needed.

Doctors from richer nations should step into the gaps of medical care in Thailand but this should not be considered sufficient. Because a patient relates best with a doctor close to his own culture and upbringing, the ideal in medical care for any country would be to have her own doctors ministering to her own people. Concurrent with Western aid at the doctor-patient level should be aid to train Thai doctors, aid in the form of finances to build the necessary schools, personnel to staff these schools where teachers are not available, and places for Thai students in our own schools.

Thailand, of all the countries in South East Asia, is one of the most open to the West. This was borne out by the enthusiastic reception she gave President Nixon whose visit I witnessed just before I left. But the threat of Communist subversion in Thailand and the extension of the Bamboo Curtain to her borders looms as ominously as ever, especially when pockets of poverty and suffering still exist. If in Thailand we can help to eliminate the breeding conditions for Communist activity we will be maintaining a strategic open door to South East Asia, And open doors through which interchanges of ideas and resources can take place are important in a world that is becoming smaller and smaller.

My impressions of foreign aid are further expressed by the following essay written at Manorom:

MAN ON THE MOON,

JULY 21, 11:00 A.M. BANGKOK TIME

An historic moment. We are sharing it with the rest of the world here at the village of Manorom in the rice plains of Central Thailand, one hundred and fifty miles north of Bangkok. This morning, by the modern miracles of television and satellite, we are watching two men at this instant the other side of our globe and a quarter of a million miles above it in the night sky. What a privilege it is for me to be able to identify with those men.

Watching with me here, is a crowd of Thai folk who likewise identify with that drama in the sky. But less closely than I. Perhaps the closest identification for them is with the Takhli Air Base, twenty miles from here. From there the same nation that put these men into the heavens is launching missions of "liberation" to neighbouring battlefields. At the air base the Thai can see other examples of the wealth and might of the West. They look, as they do at these moon-walkers, with the complimentary gaze of Thai curiosity, but they look also with envy.

A call has just been made for tranquility among men as together around the world and at one moment they share the drama taking place on the Sea of Tranquility. But tranquility will take far more than sharing a precious moment together. It will take more even than sharing other of our material blessings. With all our riches we are not tranquil ourselves. We have not yet learned to place our material blessings in their right perspective. We look on man as little more than a consumer of 'goods"; our highest concern in life is the stabilization of the economy. We have become gluttons desperately feeding to assuage an uneasy inner emptiness, yet never really satisfied. How can we expect to be at peace with others when we are not at peace with ourselves?

When the West first came to South East Asia we came all too commonly as thieves, taking as much as possible for as little price as we could. Sad to say this still goes on today, though in more refined ways. With the awaking of minds throughout these developing nations, we are paying for our sins. We attempt to atone for them with our long overdue programmes of foreign aid, but in so doing we only spread further the seeds of our own discontent. The allure of affluence tempts man the same way everywhere. And the allure is all the more dazzling when one has so little.

As much in Thailand as in the West man deserves to have his belly filled and his pains relieved. But this is not enough; man does not live by bread alone but by right relationships as well, with his Maker first, and with his fellow man. We in the West should be concerned with the per capita incomes and the doctor-patient ratios of lesser developed nations. But we should be concerned as much

with the disharmony man everywhere experiences with himself, here as in the West. The concern for mens' souls that brought the first missionaries to this part of the world has not grown obsolete; it is as contemporary now as then.

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Outpost Medicine in Alexandria, Jamaica

Jock McKeen '70

Nestled high in the mountains of Northern Jamaica lies a small sixty-bed hospital in the village of Alexandria where I spent the month of August 1969 working under the auspices of the CAMSI Jamaica Field Clinics. I was one of thirty-five Canadian medical students who were scattered over the island to learn about the practice of medicine in Jamaica. Alexandria Hospital serves a large portion of the Parish of St. Ann and is the medical centre for a great number of rural people. There are two thirty-bed wards, which are always filled-one for males and one for females. Geriatric cases lie next to paediatric problems; surgical cases are in the same room with medical and gynaecological complaints. In Alexandria, there are no x-ray facilities, no laboratory tests to aid in diagnosis, and no blood for transfusion. There is one medical officer, Dr. Paul Magnus, who is a native of Jamaica trained at the University of Michigan and who has practised medicine in Jamaica for twenty years. What Dr. Magnus lacks in facilities, he makes up for in skill, experience and clinical acumen. A staff of about fifteen very competent nurses makes up the rest of the medical team, under the direction of a very efficient head nurse known as the Matron. The Matron serves as head nurse, hospital administrator, operating room assistant, anaesthetist and director of the hospital in the doctor's absence. With only minimal facilities, very fine medical care is afforded the people from the area. Where facilities are not available, improvisation generally suffices-a wooden box with an electric light bulb serves as an incubator for the prematures in Alexandria, and seems to do the job well. The services of a large University hospital are three hours away in Kingston; patients requiring specialist consultations or diagnostic tests can be transported to Kingston for this purpose. The medical care offered at Alexandria is quite broad; common medical and surgical complaints, as well as

paediatrics, obstetrics and gynaecology and family planning are dealt with by the hospital team. There are facilities for dental care, but at the moment, there is no dentist. There is a well-equipped pharmacy with a certified dispenser.

The people coming to Alexandria Hospital are generally poor and uneducated, supporting themselves by working the soil themselves, or working on plantations. Their lives are founded on superstition, home remedies, folklore, and the teachings of the Obeah Man (the local equivalent of the witch doctor). Consequently, the medical officer must be familiar with all these factors opposing medical care, and must strive to gradually educate his patients in principles of preventive medicine and general health care—often an impossible task!

Paul Magnus is a highly respected man, not only by his patients, but also by his medical colleagues throughout the island: everywhere I went in Jamaica, someone had a good word to say about this very competent man who is working so far removed from facilities and who at the same time achieves such remarkable results. Paul is a master in his field; with his keen perception and skilled surgery, he more than makes up for the deficiencies in his hospital.

Many of the medical problems that I encountered were similar to what we see in Canada; the differential diagnosis of abdominal pain, cerebrovascular accidents, diabetes mellitus with all its complications and gastrointestinal disorders were common problems. In addition, I saw cases that are not likely to be present in Canada—sickle cell anaemia, syphilis, yaws, and leprosy.

Paediatrics also involved many of the same problems as we have, such as pneumonia, gastrointestinal disorders and minor fractures. But in addition, I saw disease entities uncommon in Canada—tetanus neonatorum

from an infected umbilical stump, roundworms, Kwashiorkor, and whooping cough. Kwashiorkor is a fascinating disease, and a very gratifying one to treat; in the period of one month, I watched a dull, listless, apathetic child with great jowls change into an alert. perky active youngster with only vitamin supplementation and a high protein diet. Whooping cough can be a frightening problem: after a severe paroxysm of coughing. a child can go flat before your eyes and suffer respiratory arrest. I learned of this phenomenon rather dramatically while examining a child at the Kayser Clinic at Discovery Bay; the child had a severe coughing spell, went into bradycardia and then had a cardiac arrest, falling limp in my arms. With external cardiac massage and administration of oxygen, the child came around, after teaching me a clinical point I'll never forget.

Dr. Magnus handles a wide variety of surgical problems in Alexandria too. Several cases of severe burns involving nearly 50% of the body surface were treated in August with fluid replacement and isolation of the patient in mosquito netting with very satisfactory results; by allowing the burns to dry in open air. Dr. Magnus achieves good results without either local or systemic antibiotics. Trauma also occupies a great part of the surgery. Fractures from car accidents and falls are very common; however, there is a traumatic wound not seen in Canada-the machete chop. Most men in the area carry great three-foot cane knives. honed to razor sharpness, which can produce very severe lacerations. Most days, I encountered at least one machete wound that required suturing. The most dramatic wound I saw was a 12 inch machete chop to the anterior abdominal wall, resulting in multiple perforations of the large bowel. exposure (but no damage) of the left kidney, and a suckling wound of the left hemidiaphragm; under chloroform anaesthesia, Paul and I sewed up the lacerations in the bowel, sutured the diaphragm and reapproximated the abdominal layers. With fluid replacement and antibiotics, the patient made a rapid recovery, and actually walked out of the hospital in six days! The majority of the surgery was for common problems such as appendectomies, hernia repair and hydrocoeles. Gynaecological surgery was common; most days included at least one tubal ligation, hysterectomy or dilation and curettage.

Anaesthesia is generally administered by a senior nurse. At Alexandria, most of the anaesthesia is by intravenous pentothal; however during my month, I gained experience with ether, ethyl chloride, chloroform and

spinal anaesthesia. There is no facility for intubation and assisted respiration.

Dr. Magnus' general surgical principles are to keep the anaesthetic as light as he can. and to operate as rapidly as possible. We were able to do our daily surgery by midmorning, a hysterectomy requiring about thirty-five minutes and a radical mastectomy about three-quarters of an hour. Early ambulation of postoperative patients is the rule: most patients were urged to get out of bed and walk the day after surgery with the admonition "I didn't operate on your foot, so get out of bed and walk!" I saw no postoperative pneumonias or atelectasis and no obvious pulmonary emboli. I saw only one postoperative wound infection during my entire month, and this occurred after discharge from hospital.

During my month's stay, there were about forty deliveries, mostly performed by the nurses without anaesthasia, forceps or episiotomy. The doctor is called only if there are problems with the delivery. The illegitimacy rate in Jamaica is 75%, and grand multiparity is common. It is not unusual for an 18 year old unwed girl to be giving birth to her fourth child! In August, I saw a multitude of spontaneous abortions, as well as eclampsia, abruptio placenta, a vaginal tumour and one case of placenta accreta. Pelvic inflammatory disease is rampant, giving rise to a great proportion of the abdominal pain in women of childbearing age.

The outpatient clinic, held three times per week is a fascinating circus. In a two hour period, from thirty to sixty patients are seen with a wide variety of complaints. With the pressure of time and the great number of patients, the history taken is brief and only the system pertinent to the complaint is usually examined. Common complaints are intestinal worms, pelvic inflammatory disease, abdominal pain, lacerations and ulcers of the lower leg (which are usually from infection of trivial wounds). Dr. Magnus is very adept at eliciting the problem quickly, assessing the situation and prescribing appropriate treatment. In addition, he offers advice and admonitions concerning health care, which usually are concerned with urging further use of soap and water, requesting earlier visits to the medical clinic for problems, and combating the superstitions that prevent people from appreciating the nature of good medical care. He has virtually no time for psychiatric care for his outpatients.

The month of August in Jamaica was a very full and rewarding one for me. I was

intimately involved in the practice of medicine in an entirely new environment. I learned the great value of careful history taking and precise physical examination. I learned what can be done with only minimal facilities. In

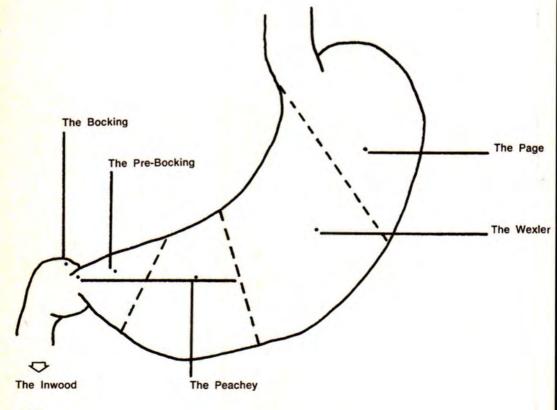
addition, I had a very enjoyable holiday living with very friendly fun-loving people. And above all, I had the opportunity to live with and learn from a great man of medicine, Dr. Paul Magnus.

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The Anatomist's Prayer Answered

Surprising as it may seem, there is no universally acceptable terminology for the regional divisions of the stomach. That is to say, the words "fundus, body, antrum, and pylorus" are not recognized throughout the world. The editorial staff of this journal finds this situation quite appalling, unnecessary, and impractical. As a result, medical educators and practioners around the world can now emit a massive sigh of relief. We have taken it upon us to calm this international dilemma and propose a satisfactory terminology. There is little doubt that it will be adopted in all countries, so we advise our readers to learn it well.

CUT ALONG DOTTED LINE AND GLUE INTO YOUR ANATOMY TEXTBOOK



Alumni

Jim Hicks '71

The ninth Annual Homecoming Medical Conference was held again this year in Room 147 of the Medical Sciences Building. The morning session was chaired by Dr. Murray Boyce and an introductory welcome was delivered by Dean Bocking. The teaching sessions consisted of informal talks delivered by guest lecturers who came from places as far apart as Kamloops, B.C. and El Paso, Texas.

The opening lecture was entitled "Primary Hyperparathyroidism—Changing Patterns in Diagnosis and Therapy". The lecture was delivered by Dr. David State. Dr. State is presently Chairman of the Department of Surgery, Albert Einstein College of Medicine, Bronx, New York. Dr. State graduated from Western in 1939 and since that time has distinguished himself with both his clinical appointments and no less than one hundred and twenty-six published papers.

Next, Dr. H. Grauer '54, discussed the use of day hospitals in geriatric care. Since much of the present day medical discussion is concerned with health care delivery systems and maximizing the use of medical facilities, it was a most appropriate subject. Dr. Grauer is presently Assistant Professor, Department of Psychiatry, McGill University.

After a short break for coffee, Dr. E. M. Savage gave an address entitled "The Healing Art". Dr. Savage is well qualified to speak on such a subject. For the past twenty-eight years, she has worked as a medical missionary in Alberta, both in the Peace River District and for the past 25 years, at Cold Lake, Alberta.

Dr. J. M. Etworthy '44 discussed the use of "Blood Lavage in Accidental Poisoning". The importance of accidental poisoning in paediatric practice is well known and hopefully consequences of such mishaps will be lessened by parent education and use of appropriate medical methods of treatment.

After lunch, Dr. G. H. Jordan gave a speech entitled "And Then I Became a Urologist". Dr. Jordan's speech was particularly appreciated since he came from El Paso, Texas, to deliver it. He was followed by Dr. L. J. Loeb '54, who has had much clinical experience in the treatment of allergy. Dr. Loeb, whi is presently Assistant Professor of Medicine at the University of Ottawa, spoke on "Drug Treatment of Allergy".

After a short break for coffee and renewal of old acquaintances, Dr. J. E. Mullens '49, Assistant Professor of Medicine at the University of Toronto discussed the use of "The Short Term Voluntary Consultant in Care Medico". Dr. Mullens has devoted a good part of his career to the work of Care Medico and between 1964-68 served as Chairman of the Medical Advisory Board of Care Medico of Canada.

The final topic of the day was concerned with the possibilities inherent in organ transplants. Dr. W. G. Manax enlightened all with his talk on "Current Aspects of Transplantation".

The Conference this year was both entertaining and informative. Also, for those interested, the Conference was approved for 4 hours Category I Study Credits by the College of Family Physicians of Canada. Next year, perhaps, even more of our alumni will take advantage of an excellent opportunity to renew acquaintances and keep up-to-date in a relatively painless way.

* * *

"Specialization must be grafted on to a rubust stock of general medicine, for, like the hybrid rose, it will not thrive on its own roots. The narrow specialist whose field of vision is limited to his own branch of medicine is a menace both to the profession and to the patient; he sees disease through "tinted glasses". (Professor Brampwell, 1959) Clinical Introduction Heart Disease, London, Oxford University Press.—Pappworth M.H. A Primer of Medicine. Butterworths 1963.

Dean's Corner

DR. S. E. CARROLL of the Department of Surgery has been elected to the University Senate. Take your parking problems to him. DR. M. DARIA HAUST, of the Department of Pathology, was invited to participate in the Second International Symposium on Atherosclerosis, held in Chicago. She presented a paper on "Injury and Repair in the Pathogenosis of Atherosclerotic Lesions". The symposium was jointly sponsored by the International Society of Cardiology, European Atherosclerosis Group, American Heart Association and Chicago Heart Association.

Approxmiately 30 countries were represented. Dr. Haust was one of two Canadians invited to participate.

DR. MARGOT R. ROACH, of the Departments of Biophysics and Medicine, was in Bath, England, as an invited speaker at a meeting of the International Committee on Haemostasis and Thrombosis. Dr. Roach spoke on "Vascular Wall Elastic Tissue: Properties, Distribution and Function". While in England she was invited to lecture at several Universities.

Recent Appointments in Medicine and Dentistry

The following staff changes have taken place recently in the Faculties of Dentistry and Medicine.

In the Department of Bacteriology and Immunology, Dr. L. de Miranda, was appointed Visiting Investigator, effective July 24, 1969 to October 15, 1959. In the Department of Pathology, Dr. D. S. Jones was appointed Lecturer, effective July 1, and Dr. D. I. Turnbull appointed Instructor (part-time) in Pathology (Victoria Hospital), effective September 1. In the Department of Pharmacology, Dr. J. M. Parker, Professor was appointed Acting Head of the department, effective July 1, 1969 to June 30, 1970. In the Department of Physiology, Dr. G. R. Sellery, was appointed Lecturer (sessional), effective September 1, 1969 to June 30, 1970.

In the Department of Pharmacology, Dr. M. L. W. Hersey was promoted from Instructor to Assistant Professor (part-time), effective July 1.

Dr. C. Levene, Associate Professor of Anatomy and Dr. P. D. Lawley, Associate Professor of Biochemistry have resigned.

In the Factulty of Medicine: in the Department of Community Medicine, Dr. R. D. Appleford was appointed Clinical Lecturer in the Subdepartment of Epidemiology and Preventive Medicine, effective September 1, and Dr. B. Hennen was appointed Lecturer in the Subdepartment of Family Medicine, effective August 1. In the program of Continuing Education, Dr. J. P. Newell was

appointed Assistant to the Program, effective July 1, 1969 to June 30, 1970. In the program of Medical Rehabilitation, Mr. D. A. Egan was appointed Lecturer in Physical Therapy, effective June 1.

In the Department of Medicine, Dr. H. J. M. Barnett was appointed Professor of Medicine (Neurology) at Victoria Hospital, effective August 1, and Dr. E. J. M. Cholod was appointed Instructor (part-time) at Victoria Hospital, effective July 1. In the Department of Obstetrics and Gynaecology, Dr. H. N. Ramaprakash was appointed Lecturer, St. Joseph's Hospital, effective July 1, 1969 to June 30, 1970. In the Department of Paediatrics, Dr. E. R. Ecclestone was appointed Assistant Professor at Victoria Hospital, effective January 1, 1970. In the Department of Pathological Chemistry, Dr. D. S. Jones was appointed Lecturer, effective September 1.

In the Department of Psychiatry, Dr. R. C. Corrin was appointed Instructor (part-time) at C.P.R.I., effective June 1, Mr. R. L. Dingus, Instructor (part-time) at Westminster Hospital, effective June 1, Mrs. Ruth Marie Adams Dingus, Instructor (part-time) at Westminster Hospital, effective June 1, Dr. G. Gort, Lecturer at St. Joseph's Hospital, effective September 1, Dr. M. P. Hoover, Instructor (part-time), effective June 1, Dr. Diana Mary Morgan Johnson, Instructor (part-time) at C.P.R.I., effective June 1, Dr. F. A. McKenzie, Instructor (part-time) at C.P.R.I., effective June 1, and Dr. W. G. Tobin, Instructor (part-time) at C.P.R.I., effective June 1.

U.W.O. Medical School to Send Four Teachers to Pondicherry, India

The Canadian International Development Agency and Western, responding to a request from India, have agreed to send four teachers from the Faculty of Medicine to the Jawaharlal Institute of Postgraduate Medical Education and Research in Pondicherry, India, during a period between January 1970 and July 1971.

The initial specialties selected by the Indian Medical Centre are anaesthesia, radiotherapy, hematology and biochemistry. The purpose of the visiting professors will be to assist in the development of the highest standard of postgraduate medical education, technical skills and teaching techniques.

The announcement comes as a result of extensive planning and consultation by the Faculty Committee for Medical Education and Service for Foreign Countries. This committee was first established by Dr. O. H. Warwick in 1963 when he was Dean of the Medical School. The goal of the founding members of the committee was to establish an affiliation or "twinning" with a medical school in a developing country.

"A wide range of possibilities may be offered by a fraternal twinning arrangement, and it can be of equal benefit to both participating universities as well as to both countries they serve", Western's Executive Secretary of International Education, Mr. Don Simpson, said.

"For instance, the Western Professors will spend two months to a full academic year teaching, organizing and helping develop new departments of subdepartments as designated by the administrative staff at J.I.P.M.E.R. and carry out certain research studies on nutrition, primary medical care and colloborate in family planning programs while Indian Professors would perhaps spend several weeks as Visiting Professors to Western and undertake research studies on things such as radioisotopes which cannot be undertaken in India at the present time.

"Postgraduate students from Western would have the opportunity for range and volume of clinical experience that is not now available to them in Canada and Indian postgraduate students could also be trained at Western in areas not available to them in India. Undergraduates might undertake an exchange program or spend summer vacations in the opposite country.

"This exchange of talent and experience could be extended to technicians, nurses and

other University disciplines too." Mr. Simpson said.

After studying a number of U.S. and Commonwealth aid projects in medical education, it was decided that a field trip to India should be undertaken. Dr. John McKim. a paediatrician at C.P.R.I. who spent three years in India, and Dr. Peter Rechnitzer, an internist from Western's Faculty of Medicine. visited various medical institutions in India. during January of 1965. The one ultimately selected for an affiliation was a new college and hospital which was one of six centres designated by the Central Government of India as a special postgraduate institution. Such postgraduate centres are expected to produce the specialists and teachers so badly needed in the many new undergraduate colleges.

In April, 1966, Dr. N. K. Rao, then Director General of Health Services for India, visited Western, examined our facilities, met our Faculty and submitted a lengthy report favoring the affiliation. Dr. Rao has since retired as Director General and is now the Executive Secretary of the Indian Society for the Advancement of Medical Education.

In November, 1966, Dr. Warwick and Dr. McKim visited Delhi and Pondicherry to further explore the possibilities of a formal affiliation. A survey was made of the various departments of J.I.P.M.E.R. prior to a thorough on-site survey and report of the current status of the department of Radiology in J.I.P.M.E.R. undertaken by Dr. Lois Myers in July, 1967. A similar study and report of the department of Biochemistry and other basic sciences was made by Dr. J. A. McCarter in August, 1967. Dr. McKim met with various officials of the Government of India and the Canadian High Commission in Delhi concerning the U.W.O.-J.I.P.M.E.R. project in February, 1969. The Honorable James George. Canadian High Commissioner, lent valuable support to the negotiations.

The Tippett Foundation generously supported the field trips to India.

In the meantime, the Faculty of Medicine at U.W.O. has been sending tangible assistance to its "Twin" in India. The Western librarians collected hundreds of back journals for the J.I.P.M.E.R. library. These 1,250 lbs. of journals were sent to India by ship, with the entire cost covered by the Canadian Council for International Co-operation in Ottawa.

Last Thanksgiving weekend, the U.W.O. Medical School was the host for a historic conference highlighted by the demise of one medical student association and the birth of another. You are now all members of C.A.M.S., the Canadian Association of Medical Students, an association with a different structure and very different aims from beloved old C.A.M.S.I.

To accomplish this, about forty-five delegates, from medical schools all across the country met here at the Hotel London. The represented schools were Dalhousie, Laval, Sherbrooke, Montreal, McGill, Queens, Toronto, Ottawa, Western, Manitoba, Alberta and U.B.C. Saskatchewan was not present, and Montreal reverted to observer status as soon as the new C.A.M.S. was formed. The sessions lasted until 12:45 a.m. Sunday morning, until 2:00 a.m. Monday morning and finally the bleary-eyed group met later Monday morning for the conclusion of the proceedings.

The following article is an attempt to outline the new ideals of your association. In the past, C.A.M.S.I. was plagued by a lack of permanent direction because of a yearly change of executive personnel and location. In view of his excellent work in his first year, Jaques de Courville Nicol was rehired as executive director. The idea of a national executive from one school was disepensed with, so that Jaques will now act under the direction of policies decided by all the school council presidents. They will meet together in Ottawa at least twice yearly. Hence the new Organization has a permanent national secretariat; and yet is in full control of the students. To create a realistic budget, each school joining has agreed to pay \$2.00 per student. The referendum you voted in was held before the conference to ensure that the delegate had school support for this fee. All but Montreal agreed to join.

The aims of the new organization are challenging and will require student involvement and support. It was felt that C.A.M.S. has three important functions to fulfill, involvement in medical education, development of a medico-social awareness and distribution of information and services.

By medico-social awareness, the conference meant that C.A.M.S. should play some part in taking the student out of the 'Ivory-Tower' of the hospital and medical school and placing him in the midst of the society in which he must eventually partake. Five of the universities have already started student health

projects within their own communities which are running well. To accomplish this aim, a Health Committee was established to circulate information, to assist in the formation of clinics and electives, and to generally promote clinics, to set up Canadianized summer field clinics and electives, and to generally promote this aspect of student education among the schools.

Because of the rather wide-spread feeling that Canadian Medical Education is perhaps not all it could be, an Education Committee was established. This committee will concern itself with such things as new curriculum revisions, questionnaires and development of elective programmes. In short, it is hoped that through this committee, all schools may in some way benefit from each of the other schools discoveries or advances.

Information and services was the third major division of C.A.M.S. activity. It is clear that the Health Committee and the Education Committee cannot function adequately without vastly improved communications. Furthermore, it was felt that to have any hope of involving the students in C.A.M.S., they must be made aware of what it is and what it has to offer. For this reason it was strongly emphasized that a handbook describing the organization, its background, and its purposes must be made available to each student. In addition to this, a regular newsletter is to be printed which will be sent personally to each student. Other services which C.A.M.S. is to offer to the student are: Canadian Premier Life Insurance Policies, a foreign exchange programme, discounts on a national basis, the national drug appeal, elective programmes and clinics as well as charter flights.

Many U.W.O. students assisted in the preparations for this conference. Special recognition must go to John Reason ('71), for co-ordinating the fund raising campaign, to Lou Tusz ('71) for organizing the printing and translation services, to Dixie Esseltine ('70) and Marg Paul ('69) for manufacturing the signs and to Craig Paterson of the Law School for his very able chairmanship of the conference.

All the programmes mentioned are in embryonic stages of development, but with the solidarity assured by a permanent national secretariat and the support of the student body, the possibilities for development are unlimited.

Meds' Picnic

Saturday, September 27 was the date; Ski-Hi the place. The event, of course, the annual Meds Picnic. This year the picnic was not favoured with the best of weather conditions. The day was cloudy and rain threatened most of the day. A lively game of softball, 4th year vs. the rest, was held with doubtful results. Dinner consisting of hot dogs and/or hamburgers with salad was enjoyed by about 260 people. In the evening the

traditional (?) skit (?) was put on by Meds '73 to the disgust of most people present. This is the one part of the picnic that could be cancelled and result in a more enjoyable evening for all. The dance, to the music (?) of the East-West Project lasted until midnight by which time most people had departed for their own private parties.

Bob Page '71

Class News

MEDS '70

Well, the fall turkey has ceased to gobble and the squirrels have gathered their winter store of nuts but Meds '70 endures and accepts the onslaught of the winter as if there was only one season persisting all year until May, 1970.

Socially, at printing time, a period of relative quiescence prevails but the Victoria Hospital Board did entertain us with a reception and dinner late in October. The question of Internship arises and the names B.C. and Toronto are heard as often or more so than London—the final placement list which will probably become available in January may be very interesting particularly in light of the popularity of straight internship. Several students have already accepted placements.

Next issue will carry the full pornographic details of what really happened backstage at Tachy.

Don Parks '70

MEDS '71

Due to recent success '71 is still with heads in cloud.

MEDS '72

The impossible happened. After all the brains, ingenuity, and manual dexterity of Meds '72 had been combined to produce a super-duper homecoming float, it lost to— of all humiliations—Dentistry. Special thanks to John Bowman and Ted Clark for a great effort.

Undaunted by such a minor defeat, all efforts are now bent on defending our cherished record for titillating talent at Tachycardia. Masterminding the Script is Ted Quigley and in charge of production is Bob Hay. Tune in next month for all the juicy details.

Blair Marchuk, as Men's Athletic representative, has done a great job in fostering class participation in a variety of sports from track and field to football. As a member of the Meds football team, Blair shone in a '72 yard dash for a touchdown in the first of the two final games against Social Science. Unfortunately, the girls haven't been shining quite so brightly in their athletic endeavours, feeling happy merely to have survived to the end of the second basketball game on one evening on the Alumni Hall Court.

Missed in the last issue were the September engagements of Tim Turner and John Vallely. Congratulations to Christine and Conrad Cripps who arranged for the stork to arrive in time for Christmas.

Marilyn Hopp '72

MEDS '73

First day of classes found forty-eight Honours Bio. veterans keen and attentive, secretly fingering the daggers artfully sewn into the sleeves of their sports-jackets. By the end of a week of absorbing evenings at the frat, gone the keenness, knives and white collars; back to grubs, good times and bloodshot eyes.

AKK was the scene of the first boat race of the season in which the males of the class were sorely outgunned by '72. Ski-Hi was the scene of the second boat race, which despite dampened spirits left us higher and drier than we'd probably like to think.

Initially, there were minor hangups to be sorted out: married life, for those who tied the knot in time for student loans; mixing lunch with anatomy; learning to accept the fact that if your name is Jones you will be looking at people between K and M for the next four years. But eventually we settled down to the task at hand.

Currently, the class is dreading the end of Tachy and onset of December exams.

High points of the First Quarter include:

Ovulate: Birth of a Star, under the able direction of John (Lumbar Jack) Crosby.

Beating Social Sciences for the football championship.

Spaghetti at AKK on the House, especially

the floor.

Two hen parties, courtesy of Madettes '70 and '72.

Three hundred lbs. a go-go.

Those unforgettable Physiology lectures with Dr. Critz and his tales of pills and pianists.

Jane Luck '73

*

The Joys of Becoming a Doctor

According to Yngre Laeger (Denmark) the joys of becoming a doctor include that of writing one's first prescription for aspirin, of being addressed as "Doctor" on the pharmaceutical advertising, of being given the job of writing up case notes while the others go home, of having a wife that can stay home and tell the children what their father looks like in case they meet him one day, of being a junior doctor for many many years, and of telling younger doctors how nice it is to be a doctor.—World Medical Journal

In one of the "quality' morning dailies a doctor discussed the avoidance of cerebral thrombisis in middle-aged men. After a great deal of excellent advice, he made the astonishing assertion that making love, in terms of desirable energy expenditure, is the equivalent of a five-mile brisk walk. Quite apart from the fresh air aspect, I do not think this sort of information should be available to the public at large.—Letter in Manchester Evening News—Quoted in OMA Review

A mountaineer's wife said to the druggist: "Now, be sure an' write plain on them bottles which is fer the horse and 'which is fer my husband. I don't want nuthin 'to happen to that horse before spring plowin'!"—OMA Review

A patient of mine sent a painting to a young couple as a wedding present. In due time she received an acknowledgement. "Thank you for the beautiful picture," the bride wrote. "We like is so much we've hung it in the bedroom and often pause to admire it."—
Edward Lincoln Smith, M.D. in Medical Economics—OMA Review

The height of bad luck—seasickness with lockjaw.

The operation was being performed with spinal anesthesia. The surgeon noting the patient was getting restive, decided a sedative was indicated. So he said to the circulating nurse, a student on her first O.R. tour: "Give 15 milligrams of morphine to the anesthetist, please." The young nurse eagerly loaded the hypodermic, took it over to the preoccupied anesthetist, and gave it to him—in the upper arm. Soon the man became euphoric and had to be replaced. By then, the nurse already had been.—Robert J. Rutly, M.D. in Medical Economics

A neurotic builds air castles. A psychotic lives in them. A psychoanalyst collects the rent.

Did you hear about the wife who cured her husband of his "have to work late at the office' routine? She asked him if she could depend on it.

Two twin boys were walking to school one morning when one of them tripped and fell. The other lad went ahead to school, and was just seating himself in the classroom when the teacher asked, "Where's your brother?"

"Up the street, where he fell," Jimmy said.

The teacher ran out, found the injured boy and carried him into the schoolroom.

"Why, Jimmy your brother's ankle is broken!" she cried, "Why on earth did you leave him?"

"Well, gee-I thought he was dead.

The inquisitive old lady was bending over the bed of a wounded soldier whose head was swathed with cotton and linen.

"Are you wounded in the head, my boy?" said the old lady.

"No," replied a faint voice, "I was shot in the foot and the bandage has slipped up."

Rhymes of the Ancient Editor

An Intern's Lament

You make me sick

You brainless sons of Irresponsibility

Venting your hopeless helpless negativism in a blind burst of speed

Enslaved by an overwhelming surge of mock power fueled by that fatal mixture of alcoholic passion and gasoline

And I, half drugged by those noxious fumes of ethyl alcohol and gas—must spend precious hours between midnight and dawn

Reshaping your crumbled, bleeding limbs breathing my life's breath into your crushed torsos pouring my life's blood into your hungry, pleading veins.

The taunt of your semi-stuporous curses and obscenities my sole reward

That you may ride again.

Too often have I stood the deathwatch over your hapless victims

Powerless to prevent the inexorable ebb of life from those broken twisted frames

Who only hours before were members of humanity

Their only fault—Fate placed them in your erratic path.

And you-

By virtue of your ethalonic anesthesia

Your limp form coddled by the furious vectors of the holocause

Lie crumpled before me in a puddle of foul-odored spilt humors.

But I will reshape your crumbled, bleeding limbs give breath to your air-hungry lungs pour blood into your half-emptied veins.

That you may ride again.

—Anon

On The Average

The average tenure of a medical school dean is seven years; that of a college president is eight.—News item.

The college president's tenure is short, But shorter still, as a rule,

Is the term of a leader of different sort, The dean of a medical school.

Oh, the dean of a medical school, although He does nothing terribly wrong.

Shouldn't get too settled—he ought to know He's not staying very long.

Seven lean years, or seven fat, And he's looking for new employment.

His coming was hailed, but his going, at that, Very likely brings greater enjoyment.

Taking Up Slacks

A London surgeon has ordered tight slacks for nurses in operating rooms, saying that swishing skirts send up "swirls of dust".—
News item.

A doctor is a man you trust. When he says dust, he does mean dust. So we believe, as he affirms, That swirling skirts do stir up germs.

And yet a doctor is a man.

Deny that statement if you can.

(That is—to free me from this box—

Except, of course, for women docs.)

And as a man, this stern M.D. Is one who cannot fail to see That clad in slacks that fit them tight Most nurses are a pleasant sight.

*

I treated Mrs. Jones for an itching vaginitis, prescribing a cream to be applied locally. Three days later she came to my office saying she now felt a knot in the pit of her stomach. While examining her abdomen, I noticed a fresh scratch on her forearm. I ran my finger over it and asked, "Is your kitty cat scratchy?" She replied, "Yes, but it's much better since I've been using that ointment you gave me."

-Jack M. Batson, M.D. in Medical Economics

The suggestion has been made that medical insurance should cover the cost of contraceptive devices, the theory being that such cost would be less than the cost of obstetrical care.

Said the harassed surgeon to medical students watching him perform a delicate operation:

"Will the wise guy who keeps saying oops!' please leave.?"

Kissing and Infectious Monoucleosis

The mode of transmission is believed to be by direct contact with patients or droplet infection from the nose and throat of someone with the disease. The depressing suggestion has been made that it may be spread by kissing, but it is doubtful that this rather ubiquitous activity should be indicted as a special hazard with respect to this particular disease. Without attempting to pontificate regarding osculation, one may merely note that above every pair of lips is a nose.

J. G. Hughes, Synopsis of Pediatrics

The student must always remember that what is new is not necessarily true and what is true is not necessarily new. The latest theory is not always the most satisfactory. Over 50 years ago a great teacher, the late Sir Robert Hutchison, warned students against "Too much zeal for the new and contempt for what is old; for putting knowledge before wisdom, science before art; and cleverness before common sense".

And he warned teachers "Those of us who have the duty of teaching the rising generation of doctors must not inseminate the virgin mind with the tares of their own fads. It is for this reason that it is easily possible for teaching to be too up to date. It is always well before handling the cup of knowledge to the young to wait until the froth has settled".

Pappworth M.H. A Primer of Medicine, Butterworths 1963.

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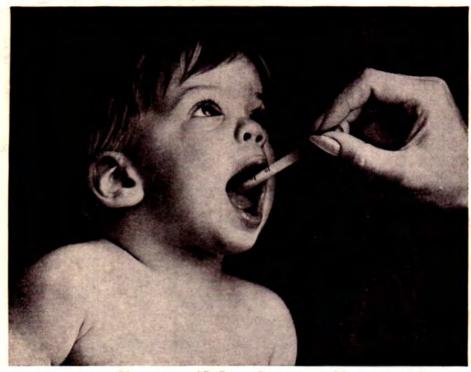
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