THE DOCTOR AS A CITIZEN

The concept of professional secrecy has been a source of ethical contention ever since Hippocrates propounded it. Is a doctor bound to remain silent about things of which he is aware as the result of his attendance on a patient, if silence will, for instance, imperil the lives of others or the proper functioning of the machinery of State? Frequently his duty as a doctor conflicts with his duty as a citizen.

The Hippocratic Oath runs: 'I will keep silence regarding that which, within or without my practice, I shall see or hear in the lives of men which should not be made public, holding such things unfit to be spoken.' This leaves the decision a matter of interpretation or of opinion. The World Medical Association's International Code of Ethics has it: 'A doctor owes to his patient absolute secrecy on all which has been confided to him or which he knows because of the confidence entrusted to him.' This is more explicit.

The British Medical Association's official view is much more rigid: 'A practitioner shall not disclose voluntarily, without the consent of the patient, preferably written, information which he has obtained in the course of his professional relationship with the patient. This includes information concerning criminal abortion, venereal disease, attempted suicide (a crime in Great Britain), and concealed birth. The State has no right to demand information except where notification is required by statute, such as in infectious disease.'

In order to form an idea of the average man's outlook on the point, a British doctor recently sent the following questions to about 100 doctors and 100 laymen, chosen at random but according to vocation, and analysed the replies he received:

**Question 1.** A doctor diagnoses epilepsy in the driver of a main-line passenger train. The patient refuses all advice, and says that he will continue to drive trains. Is it the doctor's duty to ignore his patient and report the matter to the police?

**Question 2.** A doctor attending a woman for abortion finds that it was criminally induced, and is told the name and address of the criminal abortionist. The patient forbids the doctor to report the matter to the police. Is it his duty to ignore this and report it anyway?

**Question 3.** A doctor treats a worker for hernia. Later the man is injured at work, and fraudulently and success-
In a naturally-occurring substance.

rather betray my country

fraud; the confidence of the doctor must presume good faith; the patient who acts immorally forfeits his doctor's confidence.'

The sanctity of private trust overrides that of public trust. I would rather betray my country than my friends.'


5-HYDROXYTRYPTAMINE

This substance, also referred to in the literature as serotonin and enteramine, is an indole derivative. It has long been known as a naturally-occurring substance. In recent years it has been isolated, identified and synthesized, and has recently been shown to be of clinical significance.

It is almost a hundred years since it was demonstrated that the vasoconstrictor action of blood increases when it clots. However, it is only in recent years, in the investigations of the humoral factors involved in arterial hypertension, that the fraction called serotonin was isolated from blood serum.\(^1\)

Enteramine, shown to be identical with serotonin, was first discovered by relatively crude methods as an active substance in the mucosa of

<table>
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<th>Question</th>
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<th>No</th>
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<td>(epilepsy) Laymen</td>
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<td>15</td>
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<tr>
<td>(abortion) Laymen</td>
<td>55</td>
<td>39</td>
</tr>
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<td>(hermia) Laymen</td>
<td>47</td>
<td>48</td>
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<td>(jewellery) Laymen</td>
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<tr>
<th>Vraag 1 Geneeshere</th>
<th>Ja</th>
<th>Nee</th>
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<td>(vallende siekte)</td>
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<td>12</td>
</tr>
<tr>
<td>(vruisdrywing)</td>
<td>82</td>
<td>15</td>
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<td>(juweliersware)</td>
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Ontleding van die antwoorde toon 'n interessante meningsverskille, dieselfde waarvan 'n morele vertolking en nie 'n beroep is nie. (Die regsamek word nie hier oorweeg nie). Dus is die bevinding dat:

Meer as 80\% van die geneesheer die mening toegaan dat die drywer se vallende siekte gerapporteer moet word, selfs teen sy wense; 50\% was ten gunste daarvan om die afdrywer te rapporteer en slegs een-derde was van mening dat stappe teen die bedrieglike arbeider en die dief geneem moet word.

Hierdie syfers skep die indruk dat geneesheer oor die algemene slegs hul plig om die swye te bewaar sal veronagsaam as die lewes of gesondheid van ander op die spel is, maar as dit net 'n kwessie van burgerlike plig is, is hy nie bereid om te praat nie. Sommige kritici sal waarskynlik dit vertolk dat die plig van geheimhouding net soos die MCaghten regels, net toegepas moet word as dit nodig is.

Daar is egter net soveel van die stelling dat die plig as burger swaarmer moet weeg dan die plig as geneesheer as vir die British Medical Association se streng opvatting van die plig van geheimhouding. Die volgende aanhalings gee 'n bondige opsomming van die twee gesigspunte:

'Is it a moral responsibility not to condone crime or fraud; the confidence of the doctor must presume good faith; the patient who acts immorally forfeits his doctor's confidence'.
the rabbit's stomach; it was regarded as an amine originating from 'enterochromaffin or argentophile cells' in the gastro-intestinal tract of mammals—hence the name enteramine.

The serum vasoconstrictor has long been regarded as originating from platelets, but this is apparently not correct. It is held that the substance aids in haemostasis, but this problem needs more study. Now that anti-serotoninics and synthetic serotoninics are available investigations are proceeding in many laboratories, and the role of the substance in myocardial infarction, vascular injury and embolism is being studied.

The finding of the similar substance (enteramine) in the intestine has suggested that it controls gastrointestinal activity. It seems that 5-hydroxytryptamine is secreted by the argentaffin cells in the intestine and has a stimulating effect on intestinal movements.

The platelets, whose high content of 5-hydroxytryptamine led to isolation of the substance, do not elaborate the hormone but take it up as they do histamine and other substances; these are presumably released under certain conditions, such as at the site of an injury. The syndrome which includes argentaffinoma, pulmonary stenosis and transient macular cyanosis seems to appear to be established as an entity. The vascular lesions seem to develop from hypersecretion of 5-hydroxytryptamine—a 'new' hormone secreted in excess by an endocrine tumour, the argentaffinoma.

The pharmacology of this newly-discovered hormone is being investigated in many centres. It has a constricting action on smooth muscle generally and in some species it produces systemic hypertension. Not enough is known regarding its action on the pulmonary circulation, and difficulty is encountered in explaining the production of pulmonary valvular stenosis so definitely present in the syndrome. In man local congestion and venous spasm follow intradermal injection of the hormone.

The hydroxytryptamine content of the serum of many animal species has been investigated and it seems justifiable to postulate its identity with a stable non-pituitary antidiuretic substance. It apparently originates in serum during coagulation. Work is in progress to determine what changes occur in the content of 5-hydroxytryptamine under various experimental and pathological conditions.

The estimation of hydroxytryptamine can be carried out by biological assay, but more precise chromatographic methods are available. The development of a suitable procedure for estimating the breakdown products such as 5-hydroxy-indole-acetic acid, which is excreted in the urine, will provide another method of investigation. With such tests it may become easily possible to diagnose hyperactivity or tumours of the argentaffin cells biochemically before advanced clinical signs appear.

**THE EFFECT OF MELADININ IN THE TREATMENT OF VITILIGO***

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Vitiligo or primary acquired leucoderma is a condition which has been recognized for centuries, although probably in the past there has been considerable confusion between it and the various forms of secondary leucoderma. There is no need in this paper to give a detailed clinical description of the disease nor is it intended to go into the biochemistry of melanogenesis beyond to state briefly that melanin is formed by the enzymatic oxidation of tyrosine by tyrosinase, and the site of this reaction is the dendritic-shaped melanocytes lying at the epidermo-dermal junction. It has been suggested by Lerner and Fitzpatrick that pigmentation formation is controlled by adrenal hormones which through the pituitary-adrenal axis are secreted to inhibit the release of a pigment-hormone from the pituitary.

This melanocyte-stimulating hormone (M.S.H.) has been shown in experimental work to cause temporary hyperpigmentation in normal human beings. It has not as yet been possible to relate these findings to vitiligo, and microhistological studies of the skin in this condition reveal no organic change in the melanocytes.

Although numerous hypotheses have been suggested to explain the aetiology of vitiligo, there has as yet been no supporting evidence to confirm these. As a result of clinical observations many workers have attributed the condition to some nervous shock in the form of a stress syndrome, and this might be supported by the suggestion of a pituitary-adrenal axis, but it is difficult to explain the patchy yet clear-cut distribution of the depigmented lesions.

In the past numerous treatments have been advocated, from the various forms of light therapy in use 50 years ago to the more recent use of gold sodium thiosulphate.