If the term "attempted suicide" were just meaningless it could be tolerated, but it is positively wrong and should be discarded. The motives of our patients clearly proclaim this. In the first place the majority of acts were impulsive. Then, too, they were stupid and senseless, and the patients themselves acknowledge this. Not thus does a man drive himself to suicide. Also they demonstrated some purposefulness ; but this purpose was to alter their life situation, not to die.

These patients were not attempting suicide. That term leads to errors of judgment. The chief of these is to measure the need for psychiatric treatment by the yardstick of the physical state of the patient. If he has taken only a small quantity of drugs then he was not really attempting suicide, so the argument time and again runs, he was just making a suicidal gesture which need not be taken seriously. Whether or not the patient receives psychiatric help must not depend upon whether the doctor in the out-patient department thinks the patient is *physically* ill enough to need admission. This doctor will be more impressed by the dozen tablets that the patient has taken than by the threescore that he was prevented from swallowing. The extent of physical damage is no criterion either of the seriousness of psychiatric illness or of the need for psychiatric care (Table XIV). The index of endangering life—our measure of the seriousness of the act—is *not* correlated with the need for psychiatric treatment.

TABLE XIV.—*Index of Endangering Life, and Disposal*

	Predictable Outcome			
	Death	Death Probable	Death Unlikely	Certain to Survive
In-patient psychiatric care (131)	40%	23%	22%	23%
Out-patient psychiatric care (190)	30%	45%	40%	39%
No further psychiatric care (179)	30%	32%	38%	38%

$\chi^2 = 12{\cdot}05$. 6 degrees of freedom. $P > 0{\cdot}05$.

Mistakes occur and result in many tragedies because doctors cling to the notion of attempted suicide. Attempted suicide is not a diagnosis. It is not even a description of behaviour. It is an interpretation of the motives for the act of self-poisoning —an unnecessary and usually a wrong interpretation. The alternative is simple. Everybody who has poisoned himself warrants psychiatric examination. The fact of self-poisoning should be a sufficient criterion for the doctor who sees the patient to decide to obtain a psychiatric assessment. This is much easier for him than to have to try to estimate whether or not the patient positively meant to die. It is easier and more correct, better medicine, and more simple. We should discard the specious concept of attempted suicide. The pattern of clinical practice will then be to ascertain whether self-poisoning has taken place, and, if it has, to arrange, irrespective of the physical state of the patient, that a psychiatric examination is performed before the patient is discharged.

The fashion of self-poisoning will almost certainly be with us and continue to grow for years to come. We cannot afford to miss the point of it by calling it something else.

Conclusion

Deliberate self-poisoning is becoming more and more common and a matter of public health concern. Its management, other than resuscitation, is best achieved by psychiatric methods. The means of self-poisoning are usually provided by physicians, and it is as a general medical problem that the poisoned patient first presents.

I have attempted to illuminate each of these aspects by a clinical and epidemiological study of one year's cases in Edinburgh. This has led to an explanation of the recent rapid rise in incidence and to suggestions for prevention and for management. An understanding of all aspects is necessary to the proper appreciation both of individual patients and, collectively, of an important medical problem.

I would like to thank Dr. J. K. Slater, who was until his retirement physician-in-charge of ward 3 of the Royal Infirmary of Edinburgh, for his encouragement. Dr. Henry Matthew, his successor, has given me a great deal of advice and help as we have thought through problems together. These lectures would be the poorer without the stimulus of his ideas, and I am deeply grateful. I must also thank the medical and nursing staff of the ward for all their assistance. To Mr. W. McCulloch, my psychiatric social work colleague in the Medical Research Council Unit for Research on the Epidemiology of Psychiatric Illness, I owe more than thanks. He has partnered me in this work.

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Diagnosis of Industrial Dermatitis*

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The diagnosis of industrial dermatitis may be very easy, particularly when the lesion produced is characteristic, as, for example, the chrome holes which result from exposure to strong solutions of chromic acid. Most cases of industrial dermatitis, however, present an eczematous eruption on the hands or forearms, and in these the diagnosis of industrial dermatitis may be very difficult. It is widely recognized that several different factors—for example, chemical, physical, psychosomatic—may operate together to produce an eczematous eruption, and this is perhaps more true of hand eczema than it is of eczemas affecting other parts of the body.

The diagnosis of industrial dermatitis has such implications that when the physician is confronted with a case of hand eczema the doctor's decision often has more a social, financial, and possibly even political significance than a purely medical one. By the administrator, industrial dermatitis has been defined as dermatitis "due to" this or that industrial factor, but the meaning of the words "due to" is not precisely defined. To us, presumably, industrial dermatitis is a lesion in the complex causation of which the industrial factor constitutes an important or major ingredient, without which the disease would not have occurred. But in many cases the actual extent of the industrial factor can be assessed only by surmise, and whether the eruption would or would not have developed without that factor could only be declared by a clairvoyant.

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Diagnostic Criteria

If we consider briefly the accepted diagnostic criteria we find that they are listed somewhat as follows:

1. The onset of the eruption is while the patient is at work.
2. The site of onset is the site of maximum contact with the causative substance.
3. The distribution of the eruption conforms with the areas of exposure in work.
4. The precise cause, whether allergic or primary irritant, should be identified and the mechanism understood.
5. Other workers may be similarly affected.
6. There may be some identifiable reason for the onset—for example, change of work involving fresh contacts.
7. Fluctuations in severity of the eruption; recovery and relapse should conform with avoidance of and re-exposure to the putative cause.

In examining these criteria we should bear in mind that of all cases of hand eczema an industrial origin is by no means the most common; in my own series (Bettley, 1964) only 17% of cases were thought to originate in this way. Clearly the diagnosis of industrial dermatitis needs proof, not the simple presumption that a hand eczema in a manual worker is industrial until proved otherwise.

The first two criteria mentioned above are accepted, but are not our concern, since the problem of diagnosis mainly relates to eczematous eruptions on the hands and forearms which arise during work. The third criterion introduces the problematic significance of eczematous eruptions which start on the hands and are presumably industrial, but which are later followed by spread to other parts of the body which have never been exposed to the industrial irritant. By some this is supposed to result by a process akin to autoimmunity, but this mechanism has never been satisfactorily understood, and remains a purely clinical conception; by others, such an event is taken as an indication that the disorder was not produced by industrial exposure at all.

The demonstration of allergic sensitivity to a substance encountered at work provides strong and usually acceptable evidence in favour of the industrial cause, but it is only in a minority of cases of industrial dermatitis that a specific allergic mechanism can be recognized. In most cases primary irritants are in question, and here the relation between the exposure and the eruption is at best of the *post hoc, ergo propter hoc* type; patch tests are no help. In estimating the importance of exposure to a primary irritant, it is essential to obtain some idea of the concentration of the irritant, ann of the degree and duration of exposure. This may be done with some difficulty by history alone, and a direct observation of working conditions is often desirable. Expert knowledge and advice may be obtained from the works doctor, if one exists, but in so many cases there is not one; many employers are only too ready to help in this way.

There are some circumstances in which it is possible, especially for the industrial medical officer, to observe that several workers develop identical eruptions when engaged on the same work. General practitioners and dermatologists less often have this opportunity, and this kind of history obtained from a patient may be very misleading.

The sixth point mentioned above also contains its fallacies, depending as it does so often on a *post hoc, ergo propter hoc* argument.

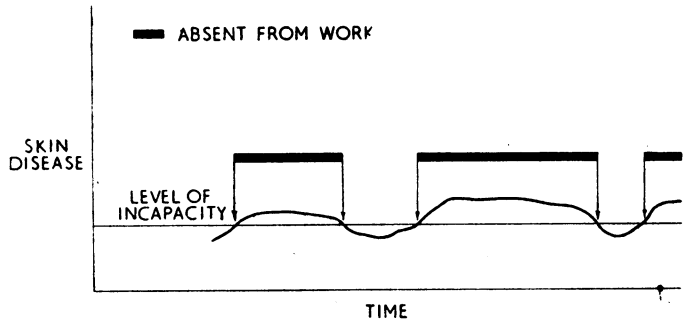
Finally, it is the last point which more often produces the definite crucial answer, but this also may present formidable difficulties. It depends, of course, upon the conception that when the prime cause of an eruption is removed the effects will speedily disappear, and also that re-exposure and resumption of work will reproduce, in a sufficient fashion, the conditions which existed before. It is not certain that these assumptions are always justified. In genuinely industrial cases delay in recovery in spite of stopping work is presumed sometimes to result from a variety of possible factors. Morris (1954), for example, has listed no fewer than 24 different factors which may delay recovery, the most important being secondary infection, particularly bacterial; injudicious and unsuitable treatment; exposure to other irritant contacts—for example, in the home; psychosomatic factors; and a constitutional eczematous tendency. Perhaps above all, however, much delay in recovery indicates wrong diagnosis—that the industrial factor was not, after all, the important causative one.

On the other hand, it is understandable that a resumption of work may lead to no relapse, perhaps because the work process is modified so as to exclude or lessen the irritant cause, perhaps because the man himself manages to reduce his degree of exposure by his own care or by the use of protective devices such as gloves. In this connexion it seems to me important also that, after the dermatitis has recovered, there should be no relapse provided that exposure to the original cause is not repeated. Some dermatologists, however, believe that an attack of genuine industrial dermatitis may alter the reactivity of the skin in some way and lead to a recurrent eczema for the persistence of which fresh exposure to the irritant is not necessary.

Long Observation Period

It will be seen from this that the diagnosis of industrial dermatitis is a lengthy and often uncertain process. It is necessary that we should know about previous allergic illness, particularly previous eczema. We should have a detailed understanding of the work, of the nature and concentration of all substances coming into contact with the skin, and the degree and duration of that exposure. We should observe also the progress and healing of the first attack after work has stopped, and for this a period of two to three months' observation is necessary. In verifying that the man afterwards remains free from future attacks we require an observation period of many months, perhaps even a few years, before we can say that he has not relapsed spontaneously. The behaviour of the skin on subsequent work exposure also may need to be followed over several months, since this too may give a fallacious impression.

Let us suppose, for example, that a man has a remitting eczema of entirely natural origin which occurs in attacks which build up either quickly or slowly to disablement and thereafter recover under treatment for a uniform or a variable period. Over the months the degree of disablement could be charted as in the Diagram with periods of absence from work marked by the arrows. This sequence could easily be interpreted as evidence that the eruption was due to work, whereas, in fact, the periods of work alternating with idleness are entirely the result of (natural) disablement and not the cause. This spontaneous remitting and relapsing course of hand eczema is, in fact, very commonly observed in cases where no industrial factor is identified.



Periods of absence from work, shown by arrows.

From these considerations it is clear that the accurate diagnosis of industrial dermatitis may require a long period of observation, and even then must depend upon the assessment of factors which completely defy any precise measurement.

Prompt Certification

In practice this leisurely diagnosis, though sometimes allowed to dermatologists, is unacceptable for the patient and is not permitted to his general practitioner or to the appointed factory doctor because of the present legal and social implications of industrial dermatitis. Under the National Insurance (Industrial Injuries) Acts disablement from industrial dermatitis attracts Industrial Diseases Benefit (" injury benefit "), whereas a natural eczema causing a comparable disablement attracts Sickness Benefit, which is paid under different arrangements and at a lower rate. Because of this, it is a practical necęssity for the certification of industrial dermatitis to be made promptly, and considerable inconvenience results if it is not made within a week or two of the onset of disablement. The inevitable result is that the diagnosis is often made long before the essential information is available. On what grounds, then, is the diagnosis usually made ? It has to depend most often upon the circumstance that an eczematous hand eruption has arisen in a man who claims that he is exposed to an industrial irritant ; and often enough there is no more information than this available at the time when the diagnosis is first made. Any assessment of the actual industrial risk may be nothing more than a guess.

There is a general impresion that, because a disabled man is paid more for industrial disease than he is for natural sickness, he is being given the benefit of the doubt and is better off when the diagnosis of industrial dermatitis is made. This is, however, far from the truth. It is true that he immediately receives a higher rate of benefit, but indirectly he suffers far more by being branded thereafter as an industrial leper whom future employers will be loath to accept. The man with industrial dermatitis, or with a history of that disorder, is often relegated to unskilled work, or to the Disabled Persons Register, where this remains his lot for many years after his original illness has cleared up. If the diagnosis of industrial dermatitis has been mistaken he has by no means received the benefit of the doubt. Yet the Ministry of National Insurance, in its advisory " Notes for Medical Practitioners Examining Claimants to Benefit in Respect of Prescribed Diseases " (1950), says that a claimant should receive the benefit of a presumption that the disorder is due to the nature of his employment if he has recently been employed in an appropriate occupation—a clear invitation to make the diagnosis of industrial dermatitis on inadequate grounds.

Factors Involved

In all branches of medicine difficulties in clinical diagnosis arise, and the differences between one diagnostician and another depend, no doubt, partly upon their individual professional experiences. But in the diagnosis of industrial dermatitis one may suspect the presence of other perhaps less obvious personal factors in the diagnostician himself which may influence his decision. The diagnosis of industrial disease is one which carries far-reaching social and financial implications. It is affected by the conflict which so often exists between employer and worker, and the psychological attitude of the doctor may considerably influence his assessment of these unmeasurable diagnostic factors. It is tempting to suppose that when so few precise data are available to the diagnostician his verdict may be influenced by his attitude to social and political problems in general, and particularly by those qualities to which Eysenck (1954) refers in the production of political views. I refer to the factors of toughmindedness and tendermindedness which themselves depend upon various psychological factors, some innate, others acquired, and often springing from educational and other experiences in the early life of the individual. If this is so, and I believe there is a good deal of truth in this, it is alarming to conclude that the diagnosis of industrial dermatitis, and with it the whole future of a workman's life, depends in part, perhaps in considerable part, upon the personality and attitudes of the doctor he happens to consult rather than upon the objective features of his case.

An additional consideration is the motivation of the diagnostician. I do not mean to suggest, and I do not for one moment believe, that the doctor consciously and deliberately allows personal considerations to influence his diagnosis, but it is sometimes difficult not to take sides. It is not often that the industrial medical officer is found insisting upon a diagnosis of industrial dermatitis when the worker and his family doctor claim that the disease is a natural one, and it seems that an unconscious motivation is sometimes impossible to avoid.

Nor do I mean to imply that dermatologists are free from these sources of bias. We have the same variety of attitudes to medico-social problems, and patients are often presented to us in circumstances where unconscious motivation is by no means unlikely to arise. We have, however, the advantage of some specialist experience in skin diseases and usually the greater advantage of seeing the patient at a later stage in the illness when more factual information is available. One may hope that these advantages have the effect of counteracting in some measure the occult forces of unreason.

The official policy of the Ministry tends to lead to the diagnosis of industrial dermatitis being made whenever there is a doubt. For this reason and for other reasons it is relatively rare for this diagnosis to be rejected when it is in fact the right one ; in addition it is probable that the diagnosis of industrial dermatitis is made far too often in circumstances in which the facts themselves do not justify it. The consequences of this massive misdiagnosis are mainly social injustice, incorrect treatment and management, especially in relation to future work, the undeserved stigma, and the demoralization which often follows industrial dermatitis, particularly if litigation is undertaken.

A Thorny Problem

A complete remedy for this unfortunate situation is very difficult to conceive. A great improvement would clearly be brought about if the diagnosis could be made without haste and be deferred until adequate information were available—a period, as I have shown, of at least many months. Some dermatologists would like to see the diagnosis put into their hands more often, but the most experienced dermatologist cannot be expected to reach a right decision on inadequate evidence. It is far more important that whoever has to make the decision should be allowed time for adequate observation of the illness. Second, some of the emotional bias would disappear if the benefit paid were not affected by the diagnosis but were made to depend only upon the fact or degree of disablement. This would seem a reasonable arrangement (Marsh, 1964), but it contains a thorny political problem which is beyond the scope of the present discussion. I have approached the Minister of Pensions in a previous Government, the T.U.C., the I.L.O., and various other politicians, all without success. One can see, however, that if this equalization of benefit were to be made (as it is in some countries), a good deal of the passion would be drained and all the immediacy would go out of the diagnosis of industrial dermatitis. As a result, certification would become very much more accurate. We could advise our patients better, and the study of industrial dermatitis as a subject could be put on a better basis.

There is reason to suppose that many dermatologists are far from satisfied with the working of the National Insurance Acts in relation to industrial dermatitis. The Ministry of Pensions,

whose point of view is, of course, entirely different, seems to be satisfied with the Act and to find it administratively workable. A suggestion made to the Minister in 1961 that the working of the Act should be reviewed and scrutinized was not acceptable. But I have, I think, given reasons why under the present arrangements the diagnosis of industrial dermatitis is commonly made on inadequate data and may depend materially upon the personality of the doctor and upon unconscious motivation deriving, for example, from the circumstances of the examination and from political expediency. Not surprisingly, there is a great deal of wrong certification with often deplorable results, leading to unnecessary hardship and obstructing the progress of our understanding of industrial disease.

Summary

The points which are of importance in the diagnosis of industrial dermatitis are enumerated, and it is shown that each of these is open to differences of interpretation. The most important information is to be obtained by prolonged observation of the case continued over a period of several or many months during change or interruption of work, and if these occur during successive attacks.

It is unfortunate that, for the purposes of National Health Insurance, certification needs to be made without delay before any substantial period of observation. Because of this the diagnosis has to be made prematurely and on inadequate evidence. In these circumstances the personal bias of the doctor may play an important part, and it seems that in practice the diagnosis of industrial dermatitis is made far too often. It is suggested that the situation would be remedied if Industrial Disease Benefit were paid at the same rate as Sickness Benefit. The diagnosis could then be made without hurry and after due observation and consideration. The result would be more accurate certification and a more just distribution of the financial benefits paid for incapacity.

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Effect of Antibiotic Treatment on Duration of Excretion of *Salmonella typhimurium* by Children

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Salmonellae may be present in the faeces for some weeks or months after patients have clinically recovered from gastro-enteritis. Treatment with antibiotics to which the organism has been shown to be sensitive *in vitro* often fails to eradicate the organism from these symptomless excreters. Furthermore, there has been a suggestion that antibiotic treatment may lengthen the period of excretion ; Szanton (1957), who studied infants infected with *Salmonella oranienburg,* reported that patients given antibacterial treatment excreted the organism for a longer period than those who were untreated. If similar observations are forthcoming, strong support would be given to the view that excreters of salmonellae, whether suffering from diarrhoea or not, should not be given specific antibiotic therapy (Taylor, 1963).

In this paper a comparison is made between the duration of excretion of *Salm. typhimurium* by schoolchildren in two outbreaks in which faeces specimens from every infected child were examined regularly until excretion ceased. In one incident, which occurred in Suffolk in 1964, 63 (94%) of the 67 infected children were treated with antibiotics to which the organism was sensitive *in vitro* ; in the other, which occurred in South Wales in 1954 and was reported by Lennox, Harvey, and Thomson (1954), most of the 64 children who were infected received no antibacterial treatment. Apart from the fact that the children in only one of the outbreaks were given specific treatment, the two incidents were remarkably similar. Advantage has been taken of this similarity to assess the effect of the antibiotic treatment on the duration of excretion of *Salm. typhimurium* by the Suffolk children.

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The Outbreaks

A. Suffolk, 1964 ; Most Children Given Antibiotics

In September 1964 an outbreak of food-poisoning caused by *Salm. typhimurium* phage-type 2a occurred at a school in Suffolk. It is believed that the vehicle of infection was a pork pie served at a school lunch ; 67 children ate the pie and all developed gastro-enteritis. The children, who were between 5 and 11 years of age, were attended by their own general practitioners. Faeces specimens from each child were examined at intervals of a week or less until three consecutive negative results had been reported.

The 14 general practitioners concerned kindly provided details of the treatment given to 65 (97%) of the infected children. A total of 103 courses of preparations containing antibacterial drugs were given to 63 children—29 children had one course, 28 had two courses, and 6 had three courses. Some of the preparations given had more than one antibacterial constituent, such as an antibiotic and a sulphonamide drug. Antibiotics to which the salmonella was sensitive *in vitro* were given to 63 children ; 41 had one course, 21 had two courses, and one had three. The numbers of children given each antibiotic were: neomycin, 39 ; streptomycin, 21 ; ampicillin, 14 ; tetracycline, 8 ; and chloramphenicol, 4. In addition, 48 children were given sulphonamide treatment, generally in combination with an antibiotic. The great variety of preparations that were used makes it impossible for more precise details to be given, but the dosages prescribed were those currently recommended for the treatment of bacterial gastro-enteritis. Courses of treatment were of at least five days' duration.