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Medical Memoranda

Prevention of Industrial Dermatitis

The admittedly high incidence of industrial dermatoses in many of our war factories is a serious matter, and doubtless the present increase is attributable to several factors, among which the difficulty of selecting personnel for hazardous jobs, the introduction of new hazards and inexperienced workers, and inadequate facilities for proper cleansing of the skin all play a part. To these must be added the difficulty in getting certain types of work-people to use thoroughly such preventive measures as are provided against well-known skin hazards. Constant supervision by the foremen and charge-hands is essential to deal with this, and, in addition, the works doctor, by paying frequent visits to each department, must see that such supervision is exercised. Barrier creams, for which so much is often claimed, have their uses, but in my experience they are disappointing, and necessarily depend too much on the intelligent co-operation of the workman.

Two of the most common and most troublesome varieties of industrial dermatitis met with in aircraft and other machine factories are undoubtedly oil acne from close and long contact with brown machine-cutting oils, and paraffin dermatitis due to degreasing and cleaning engine parts in paraffin baths and bench troughs. These two hazards may give rise to a high incidence of skin trouble and to a very large amount of compensatable absence from work, and, of course, interruption of production and constant replacement of skilled personnel, who dislike the jobs. Faced with this problem in several of the factories in my medical charge, I sought in vain for some new, easily applied, and efficient means of meeting it, until my attention was arrested by a leading article on skin hazards in aeroplane manufacture (*B.M.J.*, 1942, 1, 188), reviewing a report by L. Schwartz and J. P. Russell (*Publ. Hlth. Rep.*, Wash., 1941, 56, 1581) on the subject, in which reference was made to the use of neutral sulphonated castor oil in 2% wetting agent as a substitute for soap after work. This suggested to me the possible value of such an emulsion as a skin cleanser after hazardous work instead of using, before work, barrier creams or lanolin mixtures, which invariably were dissolved off by the oil or paraffin.

With the assistance of my pharmaceutical suppliers various experiments were made and several mixtures were tried, including three of a different nature kindly sent me for trial by Dr. M. W. Goldblatt, of Imperial Chemical Industries. Ultimately a comparatively cheap source of supply of the neutral sulphonated castor oil was found; this was obtained in bulk and the wetting agent was added. It is distributed, where indicated throughout our factories, in gallon tins or bottles to the departments concerned, which dispense it to each wash-place in a round "elastoplast" tin, the lid of which is pierced with two opposing 1/4-in. holes. Directions for use are put over the wash-place, and consist of the simple instruction to wash the hands in water (hot or cold), then, while still wet, to pour a tablespoonful of the "hand cleanser" into one palm and rub well into both hands and forearms. It is then rinsed off in cold water. This procedure has proved an immediate and popular success, the skin being left clean, supple, and quite comfortable, both after long soiling with machine-oil or engine-grease, and after immersion in paraffin.

The use of this cleanser has since been extended with equally good results to various other jobs the chemical agents of which remove the normal sebaceous matter of the skin and cause a dry fissured dermatitis so prone to secondary infection; and to the stores, where the handling and cleaning of rust-proofed

and greased bar and sheet metal is a frequent cause of skin eruptions. The rubbing down of plaster castings, causing traumatic dermatitis, had also given trouble, and this, too, is obviated by the use of the "hand cleanser." The method was first put into use in our main factory in Nov., 1942, and the following table shows the marked reduction already achieved both in the incidence of all forms of dermatitis in the factory and in the incidence of oil acne and paraffin dermatitis in the machine-shops alone:

	Dermatitis Incidence			
	Factory		Machine Shops Only	
	1942	1943	1942	1943
Average operative personnel	3,300	3,350	500	505
Cases not losing working time	375	162	67	17
Cases losing time beyond shift	39	23	5	1
Total Cases	414	185	72	18
Percentage	12.5%	5.7%	14.2%	3.5%

Oil acne affecting the front of the thighs due to oil-saturated aprons has been prevented by waist-high metal guards on the automatic cutting machines.

I have to thank the Senior Medical Inspector of Factories for his interest in and sympathetic attitude towards this experiment and its results, and it is with his approval that this preliminary report is published. His department of the Ministry of Labour has sent a member of its Dermatological Advisory Panel to investigate my method and dermatitis statistics, and doubtless will consider the question of its general adoption. This, however, must depend upon the Ministry of Food's making a higher allocation of the oil to supplement the present very limited supply of the raw material.

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Skin Eruption due to Luminal

In the course of psychiatric practice one occasionally meets with instances of the intentional swallowing of a large quantity of luminal (gr. 50 to 100), but recovery usually ensues with energetic treatment. On the other hand, from time to time instances of cutaneous eruptions after the ordinary use of luminal have been recorded, though these cases must be very rare. The following recent case gave rise to much interest.

REPORT OF CASE

The patient, an unmarried woman aged 55, has been resident in this mental hospital since Oct., 1932, when her case was diagnosed as acute mania. She has been mentally deranged for 23 years, but showed no evidence of organic disorder until Dec., 1942, when she had two spontaneous epileptic convulsions. The Kahn test was negative, but the pupils were unequal and cerebral arteriosclerosis was suggested. In July, 1943, she again had epileptic fits, and was given luminal (phenobarbitone) 2 gr. twice daily, starting on July 19.

On Aug. 8 a morbilliform rash was noticed on various parts of the face, trunk, and limbs. It extended rapidly, and became especially thick and confluent on the back and on the extensor surfaces of the arms and legs, leaving the flexures comparatively free. The temperature on the first day was 103.2°, and a mild pyrexia persisted for two weeks, varying from 99 to 101°. On the seventh day of the rash the cervical glands were enlarged, but there was no abnormality of the mouth or pharynx. At the end of two weeks the rash began to fade. On the tenth day of the rash a blood count showed a slight leucocytosis: red cells, 4,530,000 per c.mm.; Hb, 90%; C.I., 1; white cells, 10,500 per c.mm.—polymorphs 78%, eosinophils 1%, basophils nil, lymphocytes 17%, monocytes 4%. The luminal was discontinued on Aug. 8. There was considerable desquamation when the rash had faded, and it was not until about five weeks after the drug had been stopped that the skin recovered its normal appearance.

On Dec. 14 the patient was again put on luminal. This time 3 gr. was given twice daily. After a week an eruption appeared on the limbs; but it was much less intense, and disappeared in two or three days in spite of continuing with the drug. There was no pyrexia. The blood calcium on Dec. 22 was within normal limits. She is still taking the drug daily without any further skin trouble.

COMMENT

Diagnosis was at first in some doubt, but the possibility of specific fever was excluded and a drug eruption suspected. This was confirmed by reference to the literature. Menninger (*J. Amer. med. Ass.*, 1928, 91, 14) recorded 3 cases of his own and collected records of 41 others. He found that a luminal eruption may arise in one of two forms—either an early one with urticarial wheals occurring soon after administration of the drug, or a later maculo-papular eruption sometimes like scarlet fever and at other times like measles. The latter type of rash is accompanied by pyrexia in more than 50% of cases, the eruption

tion usually not appearing until some days after the drug is first administered, and it may recur when the drug is renewed. There is no constancy in the dose giving rise to the eruption, which usually lasts a few days after the drug is stopped or may take some weeks to disappear, when there may be heavy scaling or peeling. The cervical glands are sometimes enlarged and occasionally there is a leucocytosis with an increase in eosinophils. Gastro-intestinal symptoms, headaches, dizziness, stomatitis, pharyngitis, and conjunctivitis have also occurred.

The immediate withdrawal of the drug is the only effective way to give relief. Apart from that, only simple local applications to relieve discomfort are necessary. Intravenous injection of 5 c.cm. of a 10% solution of sodium thiosulphate daily for 5 or 6 days has been recommended for obstinate and severe rashes.

The rarity of luminal rashes suggests that there is some personal idiosyncrasy to the drug. It has also been suggested that it is due to calcium or alkali deficiency. Menninger states that all we can say about it is that it is probably a selective tissue reaction to the drug dependent upon constitutional factors about which we are still ignorant.

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Neoarsphenamine and Infective Hepatitis

In an article published in the *Journal* for Aug. 28, 1943 (p. 261), Dr. D. R. Macdonald refers to the view that jaundice occurring during the treatment of syphilis with neoarsphenamine may be due to the synergic action of neoarsphenamine with the causal agent of infective hepatitis, probably a virus. Cases of jaundice that have recently been occurring in the unit to which I am the regimental medical officer seem to illustrate this view.

I have been with the unit for two and a half years, during which time we have been stationed in Northern Ireland, England, Gibraltar, and, now from March, 1943, in a "Plains" station in India. Two sporadic cases of infective hepatitis occurred in the unit in Aug., 1941, and March, 1943, and one case of transient jaundice in a man receiving neoarsphenamine appeared in November, 1942. During this time there were always some men in the unit receiving weekly injections of neoarsphenamine, the numbers varying, and averaging from four to five under treatment at any one time.

A RECENT SERIES OF CASES

During the five months from Aug. 1 to Dec. 31, 1943, a series of cases of jaundice appeared. Excluding cases in patients receiving neoarsphenamine, 12 cases occurred and were admitted to hospital with a diagnosis of infective hepatitis. The onset of jaundice was usually preceded for about four or five days by symptoms of nausea and epigastric discomfort and sometimes vomiting. The cases occurred singly, and were evenly spread over the period. At this time seven men of the unit were receiving regular injections of neoarsphenamine, and out of these six developed jaundice and showed symptoms similar to the cases of infective hepatitis. Again the cases occurred singly and were spread evenly over the four months. The strength of the unit during the period was about 900. The men were receiving courses of neoarsphenamine identical to that given to other cases during the long period when jaundice was not seen. Each had finished one course of ten weekly injections; in one case jaundice developed at the end of a rest period of four weeks, and in another after the first injection of a second course at the end of four weeks' rest. These facts seem to indicate that the jaundice was not a simple intolerance to arsenic.

DISCUSSION

Though the series of cases is a small one there does seem a clear connexion between the appearance of jaundice in six out of seven men receiving neoarsphenamine and the simultaneous appearance of cases of infective hepatitis in the rest of the unit. It supports the view that jaundice occurring during the course of such treatment may be due to infection with the virus responsible for infective hepatitis and that patients receiving neoarsphenamine are in fact much more susceptible to this infection than normal people. Further, if it is accepted that these six cases in the neoarsphenamine patients were really cases of infective hepatitis it suggests that the proportion of the unit actually exposed to infection by the virus must have been high (since in this group with increased susceptibility to the disease six out of seven go down). However, in the rest of the unit 12 cases were all that occurred among 900 men, indicating that in normal people only a small proportion (about 1%) among those exposed to infection by the virus of infective hepatitis actually contract the disease.

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Reviews

ENDOCRINOLOGY

The Diseases of the Endocrine Glands. By Hermann Zondek, M.D. Fourth (second English) edition. Translated by Carl Pransintz, M.D. (Pp. 496; illustrated. 40s.) London: Edward Arnold and Co. 1944.

Prof. Zondek's book originally appeared in Germany in 1926. After he left Berlin he was first at the Jewish Hospital in Manchester and is now director of the medical section of a hospital in Jerusalem. Two English editions of this book have now appeared—in 1935 and 1944. The general scheme remains the same, but there have been extensive revisions and additions called for by fresh discoveries. He is rightly insistent that endocrinology cannot be comprehended apart from general internal medicine. A number of fundamental hypotheses, largely based on the author's personal experiences, give this book its special outlook. He is clear that not only is hormonal influence a variable quantity but that the receptivity of the tissues plays an important part in such variations. When we see a patient with general hyperthyroidism and yet with myxoedematous legs, obviously the capacity for reception of circulating thyroxin has, in that instance, varied greatly in different parts of the body. Again, functional and anatomical changes in endocrine glands should not always be regarded as the cause of disease, but in many cases as the reaction of the glands to morbid processes primarily located in other organs; as an effect rather than a cause. Hormones intensify new cellular functions which appear as evolution and differentiation proceed, but even in the most highly developed beings, however, not all of them are indispensable to life. Moreover, the endocrine system is but one link in the chain of vegetative functions of the organism. Failure to realize this leads to a dangerous over-estimation of the importance of the hormonal factors.

From such a sane and balanced foundation a sounder superstructure can be safely built rather than on the airy speculations too rife in the recent past. It is noteworthy, in view of the present interest taken in disturbance of the water-salt balance as a cause of obesity, that the author has for years called attention to this type under the title of cerebro-pituitary-peripheral obesity. The book is copiously illustrated and is practical in form throughout. We can repeat the cordial welcome which we extended to the former English edition.

TRANSURETHRAL PROSTATECTOMY

Transurethral Prostatectomy. By Reed M. Nesbit, M.D., F.A.C.S. A Chapter on the Vascular Supply of the Prostate Gland. By Rubin H. Flocks, M.D. (Pp. 192; illustrated. \$7.50 or 41s.) Springfield and Baltimore: Charles C. Thomas; London: Baillière, Tindall and Cox.

There is no operation in surgery the success of which is more determined by the skill and the experience of the operator than that of transurethral prostatectomy. Formerly there were few reliable descriptions in urological literature of the technique to be employed in carrying out this difficult procedure, and the beginner was compelled to acquire his own technique by the painful process of trial and error. Fortunately this defect is now being remedied, and the operator with little personal experience of transurethral resection is able to obtain guidance from those who are experts. Dr. Nesbit gives a detailed and very clear description of the particular technique which he employs in the Michigan School of Urology. He does not claim that this is the only method of performing this operation, for he believes that the existence of different methods is both logical and desirable. All that he claims is that it is the method which in his hands has proved the most serviceable.

The material in this book is arranged in four sections. The first lays down the principles and various techniques of prostatic resection, the second contains the author's appraisal of the place of resection in prostatic surgery, the third provides a history of the operation, and the fourth gives an excellent bibliography of the subject. One of the distinguishing features of the author's own technique is that instead of beginning his resection in the mid-posterior line, as do many resectionists, he starts work anteriorly at eleven and one o'clock on the lateral lobes. He does so for two reasons: first, because in