Cases treated with Sodium Bicarbonate, Copper Sulphate, Picric Acid, and Boric Ointment

Age	Date of Burn	No. of Burns	Area Affected	Degree	Total Size (sq. in.)	Days Absent from Work	Days taken to Heal	Comments
35	10/11/33	1	Foot	2	1	Nil	8	Sepsis
36	13/11/33	1	Eyelid	3	1	"	17	
37	14/11/33	1	Thumb	2	1	"	7	
47	15/11/33	1	Forearm	3	1	"	12	
35	20/11/33	2	Fingers	3	1	"	13	
42	25/11/33	1	Finger	3	1	"	12	
34	28/11/33	3	Hand, fingers	2	1	"	5	
33	30/11/33	2	Fingers	2	1	"	7	
37	1/12/33	1	Hand	3	2	"	21	
35	4/12/33	1	Wrist	3	1	"	10	
—	25/8/35	2	Fingers	3	1	"	18	Sepsis
—	28/8/35	3	"	3	1	"	15	
34	2/9/37	1	Hand	3	1	"	42	

*Cases treated with Sodium Bicarbonate, Copper Sulphate, and Burnogel**

Age	Date of Burn	No. of Burns	Area Affected	Degree	Total Size (sq. in.)	Days Absent from Work	Days taken to Heal	Comments
28	20/2/37	2	Hand, thumb	3	3	Nil	19	Sepsis—ichthyol substituted
41	1/3/37	1	Hand	3	5	27	31	
45	28/5/37	1	Forearm	3	1	Nil	19	Pain ichthyol substituted
43	3/9/37	4	Arm	3	2½	"	29	
38	12/11/37	1	Knee	3	30	12	28	Ichthyol used when healing
36	17/11/37	1	Calf, leg	3	5	Nil	43	"
29	12/2/38	1	Thumb	3	½	"	15	"
36	5/5/38	1	L ft heel	3	2½	32	35	Thin scar. Sepsis—ichthyol substituted
40	17/5/38	6	Fingers, thumb, cheek	3	6	Hosp.	43	Thin scar. Off work 60 days
35	17/10/38	1	Finger	3	1	Nil	18	Pain after 2 days—ichthyol substituted
34	15/11/38	1	Hand	3	12	51	59	
38	10/6/39	1	"	2	1½	Nil	10	Ichthyol required
39	20/8/39	1	Ankle	3	6	36	48	

* Copper guaiacol sulphonate, 0.2%; acriflavine, 0.05%; benzamine borate, 0.1%; perfume and jelly base, ad 100%.

Cases treated with Sodium Bicarbonate, Copper Sulphate, and Tannic Acid

Age	Date of Burn	No. of Burns	Area Affected	Degree	Total Size (sq. in.)	Days Absent from Work	Days taken to Heal	Comments
40	18/1/37	2	Two fingers	3	1½	Nil	32	Painful
21	3/2/37	1	Hand	2	½	24	5	"

of treatment have been tried, and as a result of the experience gained the following procedure is advised:

- (1) Immediately flood the affected area with water.
 - (2) Thoroughly flood and wash with warm sodium bicarbonate solution (roughly two tablespoonfuls to a pint of water). Pick off with forceps any obvious particles of phosphorus disclosed by examination in the dark.
 - (3) Swab the affected area with 1% solution of copper sulphate and make a further exploration for phosphorus particles so revealed. Soak the affected area (immerse if possible) in warm sodium bicarbonate solution for a prolonged period. The duration of this soaking depends upon the size and depth of the burn—i.e., small burns 1/2 hour, large burns 1 to 2 hours.
 - (4) Dress daily with acriflavine emulsion 1/1000. Burns near the eyes are best treated by a mask of lint soaked in sodium bicarbonate solution renewed four-hourly.
 - (5) Immediately healing begins (7 to 10 days) boroseptic ointment (P. D. & Co.) provides a very satisfactory dressing, and its use can be continued until the scar produced is sound.
- Tannic acid and other coagulants do not give satisfactory results, as is also the case in the treatment of all chemical burns. Acriflavine emulsion has the disadvantage that in some

individuals local and generalized skin eruptions may be produced. A daily inspection will detect such lesions at an early stage, when boroseptic ointment should be substituted.

As a result of such treatment results are obtained which compare favourably with a similar series of burns caused by caustic soda and sulphuric acid. Healing is slower and scars are thinner in burns caused by phosphorus.

RELATION OF PYOGENIC SKIN INFECTIONS TO THE SKIN-CARRIER RATE

BY

N. H. MARTIN, B.M., M.R.C.P., F.I.C.

Major, R.A.M.C.

Bacteriological investigations have demonstrated that a fraction of the presumed healthy population carry potentially pathogenic staphylococci on their wrists. The actual proportion of carriers varies from 5% found by Nimmo-Smith (1941), examining R.A.M.C. personnel, to 19.5% found by Gillespie, Devenish, and Cowan (1939), examining students. Devenish and Miles (1939) appeared to show that a previous history of pyogenic skin infection was not given by a significantly higher percentage of skin carriers than normal.

The Present Investigation

The object of the investigation was to discover whether or not the carrier rate varies with the part of the body sampled, and if there was a significantly higher carrier rate in people suffering from pyogenic skin infections as judged by multiple swabbing. The series investigated consists of group A, 140 patients suffering from pyogenic infections of the face or neck, and group B, 100 individuals having no demonstrable pyogenic lesions. An effort was made at first to ascertain whether or not individuals of group B had at any time suffered from pyogenic skin infections. This was abandoned because it was clear that they were not equally reliable as witnesses. So far as the inquiry went there seemed to be no evidence of a significantly higher carrier rate among those giving a previous history of skin infection.

Technique.—Three swabs were taken from each person. The first swab was from the upper lip in group B and from the upper lip where possible in group A, but in every instance at least one inch from the nearest demonstrable lesion. The second swab was taken from the right wrist in right-handed people and from the left wrist in left-handed people. The third swab was taken from the chest in the midline opposite the second rib. At each site an area of 2 sq. cm. was sampled with a broth-impregnated swab which was stroked over that area 30 times in 30 seconds. The swabs were immediately plated out on blood agar and on gentian-violet agar at 37° C. for 24 hours. The plates were then examined, and selected colonies of staphylococci were subcultured and tested for their ability to form coagulase. At the same time their ability to form pigment was noted. The coagulase test was chosen as a basis for assessing pathogenicity; and it was observed that 5 out of 151 strains isolated from group A failed to produce any pigment though they were coagulase-positive. McFarlan (1938) showed that a number of non-pathogenic strains of the staphylococcus would ferment mannitol, and this test was not carried out. The plates containing gentian violet were used for the isolation of streptococci.

Discussion

The results are shown in tabular form. There is in the series under review a significant increase in the "complete carriers" of potentially pathogenic staphylococci in group A. Though this may be, and probably is, a transient phenomenon, the carrier rate appears to be extensive. A comparison of the carrier rate for the face, wrist, and chest in each group shows that in group B it varies, being highest, as might be expected, on the face. In group A the variation though present is not so marked, the difference between face-carrier rate and chest-carrier rate being 13.2%, compared with 24% in group B.

There appears to be a significant rise in the incidence of β -haemolytic streptococci on the face in group A, but not elsewhere. Here again recovery of the organism varies with the area sampled. The figures seem to demonstrate that the presence of a localized skin lesion produces a wide-spread increase in pathogens on the normal skin. If this be so it must materially alter our conception of the results to be expected from localized forms of treatment for pyogenic skin infections.

Table of Skin Carriers

	Carrying Coag. + Staphs.		Carrying β -haemolytic Streps.	
	Group A	Group B	Group A	Group B
Face only ..	13.1%	15.0%	6.5%	3.0%
Wrist only ..	8.0%	3.0%	1.4%	1.0%
Chest only ..	3.6%	1.0%	Nil	Nil
Face and chest ..	5.1%	4.0%	Nil	Nil
Face and wrist ..	8.0%	12.0%	0.7%	1.0%
Chest and wrist ..	4.3%	2.0%	Nil	Nil
Face, wrist, and chest ..	30.7%	7.0%	1.4%	1.0%
Total face ..	56.9%	38.0%	8.6%	5.0%
Total wrist ..	51.0%	24.0%	3.5%	3.0%
Total chest ..	43.7%	14.0%	1.4%	1.0%

My thanks are due to Col. R. Rees for permission to publish this paper.

REFERENCES

- Devenish, E. A., and Miles, A. A. (1939). *Lancet*, 1, 1088.
 Gillespie, E. H., Devenish, E. A., and Cowan, S. T. (1939). *Ibid.*, 2, 870.
 McFarlan, A. M. (1938). *British Medical Journal*, 2, 939.
 Nimmo-Smith, A. (1941). *J. R.A.M.C.*, 76, 341.

Medical Memoranda

A New Diagnostic Sign in Sciatica

Sciatica in form of neuritis or neuralgia presents a problem of grave importance on account of its frequency and chronicity. The loss of working days due to the condition is considerable.

Very often sciatica reveals itself only as a pain along the course of the sciatic nerve, without objective symptoms, such as alterations in knee- or Achilles jerks, trophic changes, etc. The surest indication of the existence and intensity of sciatica is the sign of Lasègue. This consists in an increase of pain when an attempt is made to extend the leg with the thigh flexed. The intensity may be measured by the angle at which the pain arises. Putti terms this L+++ if the pain is felt before the leg reaches 45 degrees with the axis of the thigh, L++ at 45 to 90 degrees, and L+ at 90 degrees and complete extension. The Lasègue sign is the result of stretching of the affected nerve. Several other signs depend on the same cause—i.e., the sign of Neri (flexion of the head, producing sciatic pain), and that of Goldthwait (flexing the thigh to a point of tolerance with the knee flexed, and then forced extension of the knee). To these we must add the contralateral sign of Lasègue, described by Montard-Martin and Parturier, and by Bechterew.

Lasègue's sign is very reliable, but in my opinion is too often positive. There are two reasons for this. First, as Bragard has shown, often purely muscular changes of the thigh in form of thickening (*Muskelhaerten*) give a positive Lasègue sign (*Pseudolasègue*) in the absence of nerve involvement; secondly, certain individuals, for purposes of malingering, try to deceive the physician by false statements—many of them being acquainted with the Lasègue sign.

In many years' experience I have always controlled the Lasègue sign by the sign of Bragard, which I regard as of great diagnostic value. It consists in considerable increase of pain when a sudden dorsal flexion of the ankle is performed at the point where pain begins. Personally I employ the classical sign of Bragard plus this modification: at the point where pain disappears on lowering the leg, a sudden dorsiflexion of the ankle produces pain in the formerly painless leg.

My new phenomenon is as follows. The leg, flexed at the hip-joint and extended at the knee, with the foot in dorsiflexion, is slowly raised. In the case of sciatica a point is reached at which pain arises (first stage); a sudden extension of the foot now causes the pain to disappear instantly (second stage). This is a reversed Bragard sign.

I hope the new sign here described will be of help to physicians not only for the diagnosis of sciatica but also for revealing cases of malingering.

A. J. MESTER, M.D.

BIBLIOGRAPHY

- Bragard, K. (1928). *Münch. med. Wschr.*, 75, 387.
 Ellis, J. D. (1940). *The Injured Back and its Treatment*, Springfield, Ill.
 Putti, V. (1936). *Lomboartrie e Sciatica Vertebrale*, Bologna.

Reviews

MEDICINE AND SOCIOLOGY

Society and Medical Progress. By Bernhard J. Stern. (Pp. 264. \$3.00 or 18s. 6d.) Princeton: Princeton University Press; London: Oxford University Press. 1942.

Mr. Bernhard Stern, although a social scientist working outside the medical profession, proves in his *Society and Medical Progress* that he has paid close attention to the interactions between medicine and sociology. His first chapter on the slow emancipation of medicine from magic and its congeners does, however, give rather too depressing a view of that delay. Thus an epoch which produced Heberden's *Commentaries* can hardly have lacked clinical observation and scientific reasoning so much as is here suggested: on the other hand the reasons for the decline of medicine between Galen and the Renaissance are clearly stated in the quotation from Vesalius. As the author points out, medicine cannot develop and never has developed in isolation, for its progress is circumscribed by that of ancillary sciences and by the environment of the age. Urbanization has introduced new problems, as has the increasing proportion of elderly people. "Grave challenges are inherent in the new situation which medical science has helped to produce by its increasing efficacy. Medicine has not been able to provide economic security for the aged whose lives it has prolonged; that is not its province; but as he goes on to say, it has alleviated the mental suffering of populations in other ways than by the control of epidemics and the lowering of death and disability rates. One striking example is the new knowledge of nutrition, which is enabling this country to stand up to the strain of war to an unexpected degree. Yet as a rule the humanitarianism of the medical man has been mainly directed towards individuals; he has often ignored the larger social implications of his work. That, however, is tending to alter in the face of the present dangers to civilization.

The book closes with an interesting analysis of the factors that offer resistance to medical change; some internal, others external to the profession. Thus medical education has not really made up its mind whether it wishes to develop specialists or students whose training will enable them to develop competence to evaluate and use new methods as they arise. Obviously, we might urge that both are needed. Of ancient internal causes of delayed progress none was stronger than the contempt for the use of the hands, as Allbutt so vigorously insisted. More permanent causes are the reliance on authority and the dislike, by no means confined to medicine, of new ideas which challenge that authority. The external causes are antisocial, romantic approaches to life and thought, which are not isolated phenomena but reflect the temper of intellectual life prevailing at the time. This in the last analysis he regards as related to the social and economic developments of the day.

NEURO-ANATOMY

Neuroanatomy. By Fred A. Mettler, M.D., Ph.D. (Pp. 476; illustrated. 37s. 6d.) London: Henry Kimpton. 1942.

This is a superbly illustrated volume, which Prof. Mettler states "has been written to meet the needs of the medical student beginning instruction in neuro-anatomy and to prepare him for the demands which will later be laid upon him in his clinical training." The text is divided into two parts: (1) dealing with the topography and morphology of the central nervous system; (2) the microscopic anatomy of the nervous system. Although the author declares that no pretence of originality is made for any of the material presented, there is much which will be new to readers who have not made a special study of particular sections of the subject, such as that on the diencephalon and the structures related to it. This section is chiefly based upon data from Papez and Aronson, and is illustrated by schemata redrawn from these authors' work on the diencephalon of *Macaca mulatta*.

An enormous amount of material appears to have been used in the production of *Neuroanatomy*, as is indicated by the literature cited in a very full list of selected references. The outstanding feature of this work is, however, the production and illustration of a large number of specially planned dissections