we should be loath to believe that the reading of either English or American pathologists was limited to works of that character: besides Dr. Arthur Jacob's original and in many respects still unsurpassed paper (which by some oversight is not even mentioned by Dr. Warren) in the fourth volume of the Dublin Hospital Reports, more or less full accounts of the affection have been published in our own language by such well-known writers as Caesar Hawkins, Lawrence, Mackenzie, Moore, M. H. Collis, Paget, Hutchinson, J. Mason Warren, Durham, Holmes, Hulke, Arnott, and Soelberg Wells, so that, if the ignorance to which Dr. Warren alludes actually prevails, it is certainly inexcusable.

J. A., JR.

ART. XXXIII.—*Contribution à l'Étude des Tumeurs du Testicule*, par le Dr. G. NEPVEU, Ancien Interne des Hôpitaux de Paris, Membre de la Société Anatomique. Avec deux planches chromolithographiées, in 8vo. pp. 60, Paris: Adrien Delahaye, 1872.

Contribution to the Study of Tumours of the Testicle. By Dr. G. NEPVEU.

IN this slender volume the author, who is rapidly becoming well known as a frequent and able contributor to the *Archives Générales de Médecine*, gives an account of nine cases of tumour of the testicle, and adds full descriptions of the naked-eye and microscopic appearances in each case, the whole being accompanied by judicious remarks upon the morbid anatomy and pathology of the various growths described. Dr. Nepveu's nine cases are distributed as follows: one of "pearly tumour" (classed by Paget and others as a variety of the sebaceous cyst), one of epithelioma, three of encephaloid cancer, one of scirrhus, two of tuberculous disease, and one of fibroid alteration of the corpus Highmorianum. In his general summary, the author maintains that—

"1. 'Testicular pearls' originate from the testicular epithelium.

"2. Canalicular and cystic pavement-like epithelioma may coexist with fasciculate sarcoma and cartilaginous nodules.

"3. In spite of Rindfleisch's assertion, scirrhus may occur in the testicle.

"4. Cancer of the testicle attacks the testicular epithelium; at first and especially that of the canaliculi, then that of the lymphatics, and ultimately that of the bloodvessels.

"5. Tubercle of the testicle occurs under the three forms of *gray granulation*, which is rare, admitted by Virchow, but rejected by Rindfleisch, *fibrous tubercle*, and *disseminated tuberculosis*. The two first forms may be isolated, or may be joined together in large tuberculous masses."

The plates which accompany Dr. Nepveu's cases are well executed, and doubtless afford accurate representations of the morbid appearances described.

J. A., JR.

ART. XXXIV.—*The Influence of Vaccination, Age, Sex, and Occupation on the Mortality in Smallpox.* By ROBERT GRIEVE, M.D., Medical Superintendent of the Hampstead Hospital. (Read before the Epidemiological Society, 10th April, 1872.) 12mo. pp. 12. London: J. & A. Churchill, 1872.

IN this little pamphlet Dr. Grieve gives the statistics of a large number of cases of smallpox treated in the Hampstead Hospital during the recent epidemic;

"*Principles and Practice of Surgery*," we have given a short account of the affection in question, and have referred to the various views entertained as to its pathology.

confining himself to the results of his own experience. From these statistics, his object is to show the influence exercised by vaccination, age, sex, and occupation, on the rate of mortality in smallpox.

That the mortality amongst those suffering from smallpox, who have been previously subjected to *vaccination*, is very much less than it is amongst those who are not so protected, is, at the present, probably sufficiently established; still, additional figures are not without their value. Of 6221 patients admitted, 1248 were without any marks of vaccination; of these, 638, or 51.12 per cent., died; whilst among the 4973 who showed proofs of being vaccinated, in only 567 instances did death occur, a mortality of 11.40. "The general percentage of mortality is 19.36, which is above the average of late epidemics. This has been ascribed by Mr. Marson, whose lengthened experience entitles him to speak on this point with authority—not only to the form of the disease generally, being more severe, but also to the large proportion of cases of the malignant and hemorrhagic type which have come under treatment." It is possible for individuals to be vaccinated, and yet not to obtain all the protection anticipated. The vaccination may be inefficiently performed, the matter employed may be inefficient in quality or in the quantity inserted. As to quality, when there are different observers with possibly different standards, it is very difficult to express the results by figures. Thus, while Dr. G. believes firmly that the character of vaccine virus exercises an immense influence over the amount of protection it imparts, he has been unable to bring statistics to confirm his belief. With quantity there is not the same difficulty: there are the marks, they may be looked for and counted.

"In the 3555 cases in which the number of marks was noted, it was found that the percentage of mortality among patients showing *one* mark was 17.39; *two* marks, 12.17; *three* marks, 10.58; *four* marks, 8.38; *five and more* marks, 6.43: a scale in which the mortality is in inverse ratio to the number of vaccine scars present." "The practical deduction to be made from these numbers is, that the larger the number of places at which we vaccinate, the greater is the protection furnished." To obtain even a fair average of protection, Dr. G. believes, "that at least three cicatrices are required, but that something is gained by exceeding that number."

As the result of his investigations in respect to the period of incubation of smallpox, Dr. G. has arrived at the conclusion that in the great majority of cases, the variolous eruption shows itself on the 14th day after infection. Hence, vaccination, during the first three or four days of the period of incubation, will be useful—a reason for the vaccination of all the inmates of a house where smallpox has already appeared.

Of smallpox *after revaccination*, Dr. G. has not seen much, owing, he believes, to the rarity of its occurrence. Out of the 6221, in only 3 could any satisfactory proof of previous revaccination be discovered. Many of the patients said, on their admission, they had been, but on further investigation, it was found that while the operation had been performed, no after effects were produced, the operator assuring them that as they were thus not susceptible to revaccination, there was no fear of their taking smallpox.

"Our nurses and servants," remarks Dr. G., "in constant and close attendance on the smallpox patients, when protected by revaccination, do not take the disease, and in this respect the experience at the Hampstead Hospital coincides with that at the older Institution at Highgate." "I wish it were possible," he continues, "to bring home to the minds and belief of the general public my conviction regarding revaccination, namely, *that it is a sure protection against smallpox*. To insure this protection, revaccination, produc-

some local action, must have been performed after the individual had reached his 15th year."

The *extremes of age* are alike unfavourable in smallpox. Taking the unvaccinated class, amongst whom age is the chief modifying influence, we find the minimum mortality to be between the 10th and 20th years of age. Under 5, as many as 70.87 per cent. die, and 35.03 per cent. of those between 10 and 20. The percentage in those over 60, is so small as to possess but little value. Amongst the vaccinated the period of minimum mortality is also in those aged between 10 and 20 years, after that the increase in the percentage of deaths is proportionally greater than in the unvaccinated, thus rendering it probable that the protective power of vaccination becomes lessened by the efflux of time. Unvaccinated infants under one year of age rarely recovered. "It is worthy of note," says Dr. G., "that cases of smallpox of the hemorrhagic type, so common among adults during the recent epidemic, were seldom met with in children."

In respect to *sex*. More males than females were treated: namely, 3377 males, and 2844 females; of the former, 680, or 20.13 per cent., died, of the latter, 525, or 18.49 per cent.; showing thus a higher rate amongst males than females. This is the case both in the vaccinated and unvaccinated; but taking age in conjunction with sex, the lower rate of mortality is then, in females, limited, however, to adult life. Thus, of *males under 20*, and vaccinated, there were 1210, of whom 87, or 7.8 per cent., died. Of 491 unvaccinated males under 20, there died 251, or 51.12 per cent. Of 1103 vaccinated *females under 20* years, 79 died, or 7.16 per cent. Of 410 unvaccinated, 225, or 54.87 per cent., died. Amongst 1506 vaccinated *males over 20* years of age, 248, or 16.46 per cent., died; of 170 unvaccinated, 94, or 55.29 per cent., died. Of 1154 vaccinated *females aged over 20* years, 153, or 13.35 per cent., died. Of 177 unvaccinated, 68, or 38.41 per cent., died.

This difference is probably, in part, owing to the extra wear and tear the male undergoes in his capacity of bread winner. Dr. G. is inclined to ascribe it mainly to the greater prevalence of irregular and dissipated habits among men than women. Nothing lessens the power to cope with smallpox more surely than a life of dissipation. The likelihood of an unprotected or an imperfectly vaccinated hard drinker recovering from an attack of genuine or modified smallpox is but slight.

By a table given by Dr. G., showing the amount of deaths that occurred in the patients ranged according to their different occupations, it will be seen that sedentary patients, contrary to what might have been expected, compare favourably with the others. The greatest mortality in smallpox occurs among individuals engaged in occupations whose workmen are confessedly most prone to intemperance, or are exposed to continuous high temperature. D. F. C.

ART. XXXV.—*Ueber ein Verfahren, die Einwirkung elektrischer Ströme auf die Sogenannten Binnenmuskeln des Ohres zu untersuchen*, von Dr. LÖWENBERG, in Paris.

A Method of Examining the Action of Electric Currents upon the Muscles of the Middle Ear, by Dr. LÖWENBERG, of Paris. From the "Monatsschrift für Ohrenheilkunde." No. 8. 1872.

THE author of this little work says: Since the labor of Brenner, of St. Petersburg, gave us the constant electric current as a means of treatment in dis-