Osnabrück, formerly of Königsberg, whose work as a government official in the medical and sanitary department brought him into considerable prominence. His writings dealt with legal reforms concerning the medical and pharmaceutical professions. He was 49 years of age.

Correspondence.

"Audi alteram partem."

THE USE OF VACCINES IN PNEUMONIA.

To the Editor of THE LANCET.

SIR,—At this inclement season of the year and with a probability of an accession in the prevalence of pneumonia in the next few weeks, I am tempted to make a few remarks suggested by Sir Almroth Wright's two communications and your interesting leader, in the hope of eliciting opinions as to the immediate prospect of utilising vaccines for pneumonia with greater advantage.

With regard to their use in prophylaxis one would gather from Sir Almroth Wright's tables that whilst of some decided value in lessening the incidence of the disease (Table XIII.),¹ the efficacy of the vaccine in this respect is not enduring. The probable incidence of pneumonia in towns in this country is about 5·33 per 1000 of the population, large enough indeed, but not such as would suggest any general use of vaccines for prophylaxis. Moreover, in the absence in European countries of the exceptional personal conditions present in the tropical labour population of the South African mines, pneumonia is not met with, even amongst concentrated labour communities, in the proportions of a contagious epidemic. It is true that a few instances of outbreaks of epidemic pneumonia have been recorded, such as that affecting a regiment of British troops in New Brunswick in 1867 and in the Punjab in 1883 and 1884. In such outbreaks preventive vaccines might be of use.

It is now well known, owing to the observations and experiments of Netter, Bezançon, and Griffon with others, that the majority of healthy people in civilised communities have the pneumococcus amongst other organisms with virulent possibilities always more or less present in their naso-pharyngeal and buccal cavities, and that these organisms are more numerous in those who have recently had pneumonia and during prevalence of the disease.

A common source of infection is, therefore, ready to hand, and a prophylactic measure more practicable and perhaps more efficacious than vaccines would be to advise persons, especially catarrhal persons and during pneumonia periods, to use daily naso-pharyngeal lotions or douches to keep their upper air passages cleansed.

We next come to the use of vaccines in the disease as a therapeutic measure. Sir Almroth Wright declines to make any therapeutic recommendations, reserving such as the outcome of a future inquiry, but he evidently thinks that a suitable vaccine may be of value in the commencement, and especially the "incubation period," of the disease. In the course of his researches he and his colleagues inoculated a certain number of persons who proved to be on the verge of attack,

thus covering the "incubation period" of the disease, and he claims that considerable doses of vaccine at this period have proved efficacious in aborting the attack and lessening the mortality. The Table (XVIII.) adduced in favour of this view appears to me by no means conclusive, the case numbers being very small, the mortalities showing great variations, and the controls not quite on a parity with the cases chosen. But they are at least suggestive for further inquiry.

As regards the composition of the vaccine, Sir Almroth Wright points out justly and confirms with his great authority, the observations of others that the strains of the vaccine vary considerably with individual cases, and he further finds that whilst insufficient doses are useless, too large a dose, over 1000 millions, for the tropical cases with which he was dealing appeared to be harmful.

Considerable experience must by now have accumulated on this difficult question of the use of vaccines in pneumonia. I have hitherto been in the habit, in cases threatening to prove severe or complicated, of suggesting that a vaccine should be prepared from the sputum early in the attack, to be used in the event of continued severity, or relapse of symptoms with fresh accessions of the disease, and in some cases of slow resolution. I cannot say that I have so advised with great conviction.

The "incubation stage" of pneumonia is generally conspicuously absent. The illness of the patient, as a rule, begins abruptly with the attack, with rigor, rise of temperature, pain or discomfort, and hurried breathing. For a day or two there is often no sputum. If any vaccine be used at the commencement, therefore, it must be a stock vaccine. Are such vaccines of value? The consultant is rarely called in at this early period of the disease. Having regard to the varied strains of organisms in individual cases and at different times of prevalence, it might be of value on the occurrence of each fresh outbreak to "pool" cultures taken from a few of the earliest typical cases for a vaccine to be employed, at the commencement of the disease, in those cases in which the use of a vaccine is decided upon. The great central hospitals and the various research institutions could easily prepare such vaccines, which would probably include the organisms engaged in the prevailing examples of the disease.

I am aware that a discussion will shortly take place at the Royal Society of Medicine on vaccines, but probably it may be on other lines than that of pneumonia, which I take to be especially interesting and important at the present moment.

I am, Sir, yours faithfully,

Portland-place, W., Jan. 17th, 1914. R. DOUGLAS POWELL.

TREATMENT OF GASTRIC AND DUODENAL PERFORATION.

To the Editor of THE LANCET.

SIR,—While congratulating Mr. Edred Corner on the success that has followed the "corking" or "plugging" of perforations,¹ I am inclined to think that he has been led to regard the method with undue optimism. By way of contrast, let me briefly record my own experience. On Dec. 12th I was summoned to a case of perforation in a man and operated within five hours of the onset of

¹ THE LANCET, Jan. 10th, 1914, p. 88.

¹ THE LANCET, Jan. 10th, p. 101.