

72 from whooping-cough. The annual death-rate from these seven diseases averaged 4 per 1000 in the twenty towns, and ranged from 1.2 and 1.4 in Portsmouth and Plymouth, to 5.7 and 5.8 in Liverpool and Leicester. The high zymotic death-rate was due to diarrhoea, scarlet fever, and measles in Liverpool, and to scarlet fever and diarrhoea in Leicester. The fatality of diarrhoea showed a general slight further decline last week; the annual death-rate from the disease, which averaged 1.9 per 1000 in the twenty towns, was equal to 2.9 in Salford, and to 3.3 both in Leeds and in Leicester. Scarlet fever showed the largest proportional fatality in Sunderland, Leicester, and Newcastle-upon-Tyne. The 23 deaths referred to diphtheria exceeded the numbers in recent weeks. Small-pox caused three more deaths in London (and six in Dublin), but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals further declined during last week to 79, from 111, 103, and 99 at the end of the three preceding weeks; and only three new cases of small-pox were admitted to these hospitals during last week, against numbers declining steadily from 35 to 13 in the four previous weeks.

Correspondence.

"Audi alteram partem."

TOXIC SYMPTOMS FROM THE USE OF DUBOISIN DROPS.

To the Editor of THE LANCET.

SIR,—The publication in your "Mirror of Hospital Practice" of the 6th instant, of some cases of poisoning from the application of duboisin drops to the eye, offers a long-sought opportunity for some remarks on this new mydriatic, which, with your permission, I will now avail myself of.

Within a few months of the introduction of the alkaloid of *Duboisia myoporoides* into ophthalmic practice, I was asked if I had observed toxic symptoms, such as giddiness and delirium, follow its application? I replied in the negative, and ascribed the alleged symptoms to some impurity in the particular specimen of the alkaloid that had been employed. But as time went on cases accumulated, and the circle of friends mentioning the occurrence of such symptoms widened, till this explanation no longer sufficed. Meanwhile my own experience preserved for the most part its negative character, although I very frequently had recourse to the drug. I could only account for this in two ways: first, I had from the beginning held that duboisin was far too strong to be prescribed indiscriminately, even if it were ever allowed to leave the surgeon's own hands; and second, having by me a considerable portion of the extract with which Dr. Ringer and I originally experimented (see THE LANCET, March 2nd, 1878, p. 304), I mostly used a solution of this instead of the alkaloid.

In March last I was induced to break my rule of not allowing patients themselves to have duboisin, and with the following result. About the time referred to I was asked by Dr. Ringer to see a gentleman under his care who had just been seized with a sharp attack of recurrent iritis in the left eye. From oft-repeated inflammation, the pupillary margin of the iris was so firmly bound down to the anterior capsule of the crystalline that we despaired of ever getting the pupil to dilate. Nevertheless, we resolved to try. Leeches were applied, and the pharmacopœial solution of atropia was dropped into the eye every ten minutes for an hour, and then at intervals of two hours. Several days were consumed by this mode of treatment, but with scarcely any appreciable dilatation of the pupil, although the pain abated. As an earlier experiment had given rise to the notion that the extract of duboisia was stronger than atropia, and later trials had shown that the alkaloid duboisin is unmistakably stronger, we determined to see whether duboisin would accomplish what atropia had failed to do. In many other respects the case was suitable. Our patient was not only an unusually intelligent man, but he had had twenty years of grievous personal experience in the treatment of iritis, and was, moreover (except for an in-

eradicable distrust of iridectomy), fully alive to the importance of energetic treatment. He could, therefore, be entrusted with more potent remedies than most persons. Accordingly we prescribed a solution of duboisin, four grains to the ounce, to be used every three hours, and with some impatience awaited the next visit. We saw him again next morning, and were somewhat disappointed not to find any signs of duboisin having done more than the atropia. While we were commenting on this, our patient broke out—"Oh! I could not use the new drops. I applied them once, but they made me so giddy I could not stand." To urge him to give the solution another trial would have been labour in vain. He had made up his mind to have nothing more to do with it, and so have I, except when I can apply it myself.

I have long felt that duboisin, like many other new remedies, has been, and still is, extravagantly abused. It is of immense power and value, and necessary only in special cases, for which it should be reserved. Bulk for bulk, it is much stronger than atropia, and should be employed with corresponding caution. I may add that the remarkable difference in the relative strengths of duboisin and atropia will be very strikingly shown by Dr. Ringer in a paper in the forthcoming number of the *Practitioner*.

I am, Sir, yours, &c.,

JOHN TWEEDY,

Assistant-Surgeon Royal London Ophthalmic Hospital.

Sept. 1879.

THE TARTAR STEPPES, ICELAND, &c.: THEIR IMMUNITY FROM CONSUMPTION.

To the Editor of THE LANCET.

SIR,—On my return from Ireland, I find in your journal of August 23rd last a letter from Mr. Cullimore, ex-surgeon to the Residency in Burmah, on the question of the value of mountain air in phthisis, and the immunity from that disease enjoyed by the inhabitants of the Tartar steppes, of Iceland, and the Shetland islands, as mentioned by me at Cork in the discussion following Dr. Bennet's paper read at the meeting of the British Medical Association.

Mr. Cullimore appears to regard my statement as favourable to the mountain-air theory, on the assumption that the steppes of Tartary are elevated some 3000 to 4000 feet above the sea level, and are in the same latitude (40° N.) as Naples or Madrid. On both these points he is in error.

A. von Humboldt ("Aspects of Nature," translated by Mrs. Sabine, 1849) states: "Steppe is a plain representing the bottom of a great Mediterranean sea." He visited the like districts of America, as well as the Kirghiz steppes between the Don, the Wolga, and the Chinese lake Dsaisang, these latter presenting an extent of nearly 2880 geographical miles. In the work just named (page 73) he says: "The erroneous idea of a single, vast, elevated plain, occupying the whole of Central Asia (the plateau de la Tartarie), took its rise in France during the latter half of the eighteenth century. The inaccuracies have now vanished. If the word 'plateau,' so often misemployed in modern works on geography, is to have its use extended to elevations which hardly present any visible difference in climate and vegetation, the indefiniteness of the expressions 'highlands and lowlands,' which are only relative terms, will deprive physical geography of the means of expressing the idea of the connexion between elevation and climate, between the profile or relief of the ground and the decrease of temperature. Lowlands is an expression for flats of little more than 200 to 1200 feet of elevation, and the definition of Steppe has already been given."

If we take the latitude of 40° N. in Tartary, we find ourselves on this side of the Caspian sea, amongst the Caucasian mountains; whilst to the eastward of that sea lies Turkestan, near the Aral sea, as to which little indeed is known of interest to medical science. In speaking of the Tartar steppes, what is really meant is the district of lowlands in European Russia from the Don to the Ural rivers, the plains on each side of the Wolga (45° to 55° N. lat.), and the towns between this last-named river and the city of Kasan. Kasan (according to Kupfer, "Voyage dans L'Oural, 1833," page 278) is only eighty Parisian feet above the sea-level of the Baltic, an elevation considerably decreased at Astrachan, at the mouth of the Wolga, and its embouchure into the