

ing from pulmonary consumption, or of consumptive habits, appears at first sight not to have been borne out by the statistics of disease in the colony, the mean rate of mortality from phthisis in the nine years 1870-1878 having been 11·62 for each 10,000 of the mean population." But this death-rate is considerably increased by the prevalence of phthisis among the Polynesians. In 1878 the general death-rate from phthisis was 12·72, but excluding the deaths of Polynesians it did not exceed 8·08.

THE WEST KENT MEDICO-CHIRURGICAL SOCIETY.

THE twenty-fourth session of the West Kent Medico-Chirurgical Society was opened on the 3rd ult., when an address was delivered by Mr. J. Purvis, who had been appointed President in succession to Mr. A. Roper. Mr. Purvis dwelt upon recent advances in surgery and medicine, and gave consideration to the question of the prophylactic action of vaccination, as illustrated by a recent report of the Small-pox Hospital. He offered some observations also on the subject of animal vaccination, and expressed a hope that the day was not far distant when the Government would establish animal vaccine stations. The report of the Society for the preceding session (1878-79) shows that its several meetings had been well sustained, and that the subjects discussed had been varied and of much interest.

COLLEGE OF PHYSICIANS IN IRELAND.

CONSIDERABLE dissatisfaction has arisen owing to a regulation recently adopted by the authorities of this institution prohibiting licentiates from making use of the reading-room. One of the regulations of the medical society of the College of Physicians which holds its meetings within the walls of the College was that, a licentiate being a member was entitled to admittance to the reading-room; and on this account very many joined the Society. However, as that arrangement has been rescinded, it will be of great injury to the medical society, whose members may be expected to diminish considerably on this account. Those belonging to the new grade of members will be eligible for admittance to the reading-room, but it is rumoured that a separate room will be kept for the use of the Fellows.

ANTISEPTIC SURGERY.

A DISCUSSION on Antiseptic Surgery is to take place, at a meeting of the Metropolitan Counties Branch of the British Medical Association in the South London District, to be held at St. Thomas's Hospital on Wednesday November 26th, at 8 o'clock P.M. Professor John Wood will take the chair. The discussion will be opened by Mr. William McCormac, and it is expected that Professor Lister, Mr. Holmes, Mr. Hulke, Mr. Hill and many other hospital surgeons will take part in the discussion. We may confidently hope that on this occasion the truth of all sides of this question will be advanced—a question, in biology and surgery alike, which can scarcely be rivalled in interest and importance.

PRINCE BISMARCK.

PRINCE BISMARCK is reported to be suffering from gout and neuralgia, and from obstinate sleeplessness. The gouty forms of neuralgia are, as our readers well know, often most troublesome in old subjects, who have had many attacks of gout, and yield much less readily to treatment than the gouty neuralgias of younger persons. This is especially the case when they prevent sleep; the exhaustion from insomnia aggravates the pain and renders it still more difficult to subdue.

OUR service contemporaries reported lately an outbreak of cholera in H.M.S. *Charybdis*, which appears to have been unattended with any serious results. But yellow fever is said to have occurred in the *Shannon*, though no cases were spoken of when that vessel arrived at Valparaiso. It appears, however, that the gunboat *Beacon* has lost her surgeon, Dr. Kearney, from "fever." We quote from the *Irish Daily News*, which journal remarks that, though stationed at Bushire, she is not provided with any kind of flying deck, so that in addition to the misery caused by the intense heat of the Persian Gulf, there is no adequate provision for the sick, and their condition must, under the circumstances, be very deplorable.

A COPY of a return of deaths for Malta and Gozo during the fortnight 16th to 30th September, 1879, now lying before us, shows a death-rate for both islands of 30·52 per 1000, as compared with 28·52 for the corresponding period of 1878. Among the causes of death during the fortnight are enumerated diphtheria 1, typhoid 6, dysentery 4, diarrhoea 1, "fever" 2, gastritis 1, enteritis 24, ileus 1, tabes mesenterica 11, and teething 49. The total deaths from all specified causes were 192. The estimated population of the islands on the 30th June, 1878, was 151,980 (Malta 133,464, Gozo 18,516).

THE Waterford Board of Guardians having reduced the salaries of their medical officers of health from £20 to £10 per annum, have been requested by the Local Government Board for Ireland to reconsider their resolution, for if the salaries were not fixed at a proper sum they would arrange it themselves. In consequence of this communication the guardians have determined to allow the medical officers of health of their union the original amount of remuneration—viz., £20 per annum.

IT is announced that Dr. Hughlings Jackson and Dr. Buzzard will alternately give a clinical lecture at the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury, on Thursday in each week till Christmas. Dr. Jackson will deliver the first on November 13th, at five o'clock.

SURGEON-MAJOR W. CREYK, Army Medical Department, has been ordered to Glasgow to superintend and instruct classes of Volunteers in ambulance and stretcher drill, on the same principles which have been so successful with the metropolitan corps.

THE JERSEY FEMALE ORPHANS' HOME.

THIS Home is situated in the country parish of Grouville, about three miles from the town of St. Helier. It stands in a depression on a tract of low-lying ground, and is about three hundred feet from the nearest house. The subsoil consists of about twenty feet of stiff sandy clay, below which is sand for a depth of about three feet and a half, and underneath the sand is from three to four feet of gravel, which rests on hard rock, most probably granite. The building itself was originally a farmhouse, to which extensive additions have been made. It consists essentially of two blocks of building, one behind the other, and connected at one end, one part being two storeys and the other three storeys high. There are thirteen dormitories, containing in all 115 beds, besides accommodation for the matron and some of the attendants. There is one large room used as a school-room, and two smaller rooms, one of which is the day nursery, and the other the infant school or work-room. Another room, called the bazaar-room, is sometimes used as a dormitory; and on the ground-floor, slightly separated

from the rest of the lower part of the building, is a room of from 800 to 900 cubic feet in area, which has been used for isolating infectious cases. According to measurements made by Mr. Le Coran, the States architect, the total cubic space in the dormitories is 44,474 cubic feet, which gives an average of 386·7 cubic feet for each of the 115 beds, without any deduction being made for furniture, beds, bedding, &c. The dormitories, as well as the other rooms, are very imperfectly ventilated; some of them are dark; and, even after the children had left them for some weeks, one or two of them, notably the night nursery, smelt disagreeably.

Earth-closets were introduced some two years ago, and are used by the majority of the children. These closets are situated in an outhouse adjoining the washhouse, and the urinals connected with the main building by a covered passage. The earth used is the sandy clay of the neighbourhood—an excellent material, but it is mixed with cinders and coal ashes, and is not dried by artificial heat. When these closets are emptied their contents are thrown into an ash-pit close by, which is cleared out only at long intervals. The last occasion was during the epidemic of enteric fever. There is also another heap in a field just outside the wall of the ash-pit. The urinals are basins like those of water-closets, with perforated zinc bottoms, to prevent pieces passing into the drain, as the children frequently defecate into them. Until the beginning of June the urine from these urinals, along with the waste water from the adjoining wash-house, drained into an old hole in the earth, denominated a cesspool. This pit, which had been used as a cesspool before the earth closets were introduced, was six feet deep, and consequently about fourteen feet above the water-bearing stratum of sand and gravel, and it was neither built round nor cemented. From this pit an overflow pipe led into a newer cesspool, built of stone, which is about 110 feet from the building, and still further from the old well. This cesspool was pumped out about every three months, and the contents carted away. It is said to have been cemented, but this seems to be rather doubtful. Inside the building are two water-closets, which drain into the cesspool just mentioned. Their common soil-pipe is said not to be disconnected by a trap from the drain leading to the cesspool, and neither the soil-pipe, the drain, nor the cesspool is ventilated. Outside the door of the upper water-closet, and close to the door of two of the dormitories, is a hand-basin, with an untrapped waste-pipe leading into the soil-pipe of the closet. All the sink waste-pipes, those from the rain-water cisterns, and that from a gully-trap in the yard, drain into a small brook which runs along the bottom of the garden, about 112 feet from the front of the house. Until the 31st of May the water-supply was drawn from an old well, which was from 22 to 30 feet distant from the nearest part of the building, and 60 feet from the old un-built, uncemented cesspool. This well was about 20 feet deep, and just reached the sand at the bottom of the clay. In December, 1878, it was cleared out and cemented, as the water had been noticed to be turbid.

At the beginning of May there were 150 persons in the Home, 140 of them being children of all ages, and the rest the staff and some girls, former inmates of the Home, who were out of place. At this time, therefore, the overcrowding was greater than that shown by the 115 beds in the house. On the 19th of May, when the medical officer visited the institution, he found three girls suffering from enteric fever; and from this date until the beginning of September, when the epidemic died out, there were 47 cases and 6 deaths. Another child died later from phthisis, who had been one of the cases. The epidemic did not break out in any particular dormitory, each of the first three cases being in a different room, and children of all ages were attacked, though there were only two or three under five years. As soon as the disease appeared Dr. Le Rossignol, the medical officer, recommended that the water should be well boiled before using, or that rain water, or water from another source, should be used. He also advised that the water from the well should be analysed, and an analysis was accordingly made by Mr. Morgan, science master at Victoria College, with the following result¹ :—

	Parts per million.
Total solids	1378
Chlorine	326·6
N as nitrates	26
O of K MnO consumed	0·186

¹ Chemical News, August 29th, 1879.

Dissolved gases per litre CO₂ 58 cc., O 4 cc., N 15 cc. Mr. Morgan also remarked that when kept for a few days the water acquired an unpleasant odour, and that when this was made more sensible by heat it resembled the smell of putrid urine. In consequence of this report the use of the well-water was forbidden on May 31st, and rain-water was used instead.

In July, after one or two borings, which yielded distinctly bad water, a tube well was sunk in an orchard adjoining the Home, about 300 ft. from the old cesspool, and 350 ft. from the old well, but even from this the water was not satisfactory. About the same time the old cesspool was filled up, and the drain entering it from the urinal and the washhouse was joined to the overflow-pipe, so that these now drain directly into the newer stone-built cesspool already mentioned.

On August 5th a child was brought into the Home which on the 10th showed symptoms of measles. It was immediately isolated, as far as possible, but two other children were allowed to assist in nursing it, one of whom took the disease on the 19th or 20th. After this the disease spread rapidly, and up to the middle of September, when it died out, there were 51 cases and 11 deaths. During both epidemics the nursing seems to have been very deficient. The only nurses appear to have been the matron, one or two girls out of place staying at the Home, and an old woman engaged during the epidemic of measles, assisted by some of the elder children. Dr. Le Rossignol repeatedly urged the necessity of obtaining skilled nurses, but it was not till the epidemics had nearly ceased that one professional nurse was brought over from London. When the epidemics came to an end the convalescents and most of the other children were sent to some empty barracks at Rozel, on the north coast of the island, from which they have only recently returned.

At about the middle of September the medical officer sent in a report on the outbreaks to the committee of the institution, in which he also pointed out the sanitary defects of the Home, and complained of the want of proper nurses. At about the same time the sanitary committee of the States appointed a commission to inquire into the causes of the epidemics, the members being Dr. Le Cromer, and Messrs. A. Godfray and H. C. Taylor. At the end of the month the committee of the Home requested Drs. Morison and Dunlop, along with Dr. Le Rossignol to examine the place and advise as to the best mode of remedying its sanitary defects. The report of Drs. Morison and Dunlop has not yet been made public, but the reports of Dr. Le Rossignol and of the States commission are on the point of publication, along with a supplementary report on the water from the new well by Mr. Taylor, and various documents connected with the affair. It is believed that the States commission pointed out the sanitary defects above mentioned, that Mr. Taylor distinctly condemned the water from the new well, and that the commission complained of the nursing, and thought the diet insufficient. They are said to have recommended that more cubic space should be allotted to each inmate, and that the dormitories should be properly ventilated. They also advised thorough cementing of the new cesspool, and more care in the management of the earth-closets and urinals. A separate building for the isolation of infectious cases was also advised. A more clear and correct idea of its contents, however, will shortly be obtainable from the report itself.

The date at which the producing cause of the enteric fever became active is pretty accurately fixed by the suddenness of the outbreak, but perhaps still more so by the case of a girl who returned from service to the Home on April 28th, and left it again for another place on May 8th, from which latter place she returned suffering from enteric fever on the 23rd, at which time there were three other cases in the Home. She was in perfectly good health until about five days before her return to the Home. Why the disease should have broken out at this precise time is not so apparent. The subsoil must have been saturated with organic matter from the old cesspool, and the well contaminated, latterly especially by urinary matters, for years past. Yet for at least over ten years there had been no epidemic of typhoid at the Home, nor had there even been any well-marked cases of the disease. Some years before this time there had been an epidemic of "low fever," but, whatever the disease may have been, it was of a mild character and no children died. It is to be noted, however, that when the well was cemented in December last it was pumped out,

and this must have been followed by a strong flow of water from the filth polluted water-bearing stratum. Also, after a high rainfall in January and February, little rain fell in March and April, so that the water entering the well during those two latter months must have been highly charged with organic matter. At that time also the ground water must have been falling.

It is to be noticed that the epidemic continued after the well was closed, on May 31st, and even after the pipe was removed and attached to the new well in July. There is indeed a case in the Home now in a girl who left for Rozel on September 10th, and returned ill on October 11th. Since May 31st, however, up to the present time rain water has been largely used for drinking purposes, and it was found a few days ago that the overflow-pipe of one of the cisterns, instead of leading into the brook, terminated in the subsoil not half way to it. No trace of introduction could be found, so far as evidence could be obtained. The milk was obtained from one farmer, and there had been no illness at his house nor amongst his servants. The new inmates received into the house during April and the beginning of May were all in good health, and continued well. The only possibility is that it may have been introduced by a visitor, but it is not easy at this date to collect reliable evidence on this point. The water seems to be the most likely vehicle by which the disease was conveyed, for the disease did not first occur in nor principally affect the dormitories more exposed to the influence of sewage gas—viz., those next the upper water-closet. Gases escaping by the urinals are not so likely to have acted as carriers, inasmuch as the urinals were separated by a passage from that part of the building which contains the dormitories. The emanations from the ash-pit and heap, containing the clearings from the earth-closets, may possibly have had an effect.

It is to be remarked that this outbreak was the first indication that there was any amount of enteric fever in the island. During the month of June a few cases occurred, there were more in July, and since August the disease has been very prevalent, the cases being in various parts of the town, and scattered all over the country in isolated houses. This is the usual manner in which an epidemic of enteric fever shows itself in Jersey; first a few cases here and there, and then a burst of the disease all over the island, with simultaneous cases in widely separated hamlets and houses between which there is no bond of connexion.

The States having taken the matter up, there is a good prospect of many needed improvements being carried out at the Home, not only in its sanitary condition, but also in its arrangement and management. The committee of the Home have at present the recommendations of Drs. Morison and Dunlop under consideration. More cubic space and better ventilation, with sufficient and suitable means for the isolation of infectious cases, are urgently required. The closets and their refuse and the urinals want better management, and the drains require proper trapping and ventilation. It is possible that the Home may be placed under the supervision of the States, a Bill embodying this suggestion having been brought forward by Deputy Durell.

Correspondence.

"Audi alteram partem."

THE STATE OF THE UTERUS IN PLACENTA PRÆVIA.

To the Editor of THE LANCET.

SIR,—A clinical observation by Dr. Roper must command attention. His statement that the cervix uteri undergoes "a peculiar induration" in cases of placenta prævia is especially interesting. It is in the highest degree important to dispel the old pertinacious and pernicious error that in these cases "the cervix is always dilated or dilatable." Dr. Roper's observations should help to dispel it.

But I must be permitted to call attention to the fact that in my "Obstetric operations" I have emphatically pointed out that the cervix in these cases is often rigid and unyielding. The following passage will be found in all the three editions of this work:—"So imperious is the dogma of unavoidable

persistent hæmorrhage, that the difficulty presented by an undilated os uteri is overcome by a special hypothesis, which assumes that in these cases of flooding the os uteri is by the flooding always rendered easily dilatable. Unfortunately this is not true. Proofs of laceration, of fatal traumatic hæmorrhage from the injured cervix, as the penalty of forcing the hand through the presumed dilatable cervix abound." And to immediate injury must be added the subsequent danger of septicæmia and metritis.

In so far as Dr. Roper's observations of indurated cervix in cases of placenta prævia support the view that this induration is of pathological import, they are, as far as I know, original. But I am inclined to think that the change is physiological in its nature, being pathological only as occurring in an abnormal situation. The gestation is in a physiological sense ectopic. The lower zone of the uterus proper is not so well adapted for the development of the placenta as are the fundal and equatorial zones. But the changes wrought in the placental seat are similar in kind. There is an enormous ectasia of the vessels, and concurrently two conditions ensue. First, some amount of transudation from the vascular channels—anatomically they are channels rather than vessels—into the proper tissues of the uterine wall takes place; some of the transuded serum remains fluid, some condenses or becomes the source of hyperplasia, and thus the uterine wall is not only greatly swollen by the expansion of the vessels by the growth and infiltration of tissues, but it may be hardened by the condensation of effused serum. Secondly, owing to the large proportion of fibrin in the blood, and to the comparative slowness of its movement in the containing reticulated channels, there is a disposition to fibrinous deposits or thromboses in these channels. These changes are observed wheresoever the placenta is attached. They are more marked in the lower zone when the placenta grows there; and these conditions extend to the cervix proper as coming within the range of the exalted action going on in the lower segment of the uterus.

There is a third special cause operating in this region. It is that in many cases—and the remark applies more forcibly to the central implantation cases—the area of growth of the placenta is more limited than when the placenta grows to the fundus or sides of the uterus. The lower zone, even when the placenta grows to it, is of smaller superficies, the placental structure is generally more concentrated, it is smaller in circumference and thicker. Hence there is greater development of uterine vessels at the corresponding site, greater thickness of uterine wall.

Another common cause of rigidity of the cervix in these cases is that, the labour coming on prematurely, the uterus is taken by surprise before its tissues have attained the development necessary for the easy accomplishment of delivery. The child's small and immature head impinging on the intervening placenta, or often giving place to the shoulder or breech, the natural agent of expansion is wanting.

The lesson to be derived from these anatomical and physiological facts, enforced as it is by clinical experience, is to distrust the old practice of the *accouchement forcé*. It is unscientific, violent—one might say brutal—and dangerous. We must adopt methods more rational and more safe. We must give time for the cervix to expand; remove the obstacle to its expansion which the adhesion of the placenta over the os internum presents by detaching it from this region, expand it gently by water-pressure if need be, not deliver until the parts are fairly dilated; and, if turning be indicated, to accomplish this by the bipolar method, which renders the introduction of the hand unnecessary.

Your obedient servant,

Harley-street, Oct. 1879.

ROBERT BARNES.

PLEURAL AND DIAPHRAGMATIC TENSION.

To the Editor of THE LANCET.

SIR,—In the letter you did me the honour to publish on the 25th ult., if I failed to convey the gist of his highly suggestive communication, I must ask Dr. Neale to accept my assurance that I had at least endeavoured to grasp his meaning.

When I wrote that rupture of air-vesicles "might occasion pneumothorax," I had not forgotten that the pleural covering must first give way. My words imply a chain of accidents, and according to Watson (Lectures, vol. ii., p. 189), this particular link is not always wanting. Further, I had