The Contamination of Shellfish by Sewage.

The Royal Commission on Sewage Disposal has issued another interim report containing a most important statement. During the various "oyster scares" it has been assumed that the presence of the *Bacillus coli* in the oyster is proof of sewage contamination. The commission have discredited this test. They ordered Dr. Houston to examine a large number of oysters from the purest beds, waters and from beds liable to pollution, in order to ascertain the distribution of the *Bacillus coli* in nature. Over 1,000 oysters were examined, with the result that the organism was found in nearly all, but as a rule much fewer bacilli were found in oysters taken from pure than from polluted water. The commission hopes that eventually it may be possible to establish a quantitative test. The importance of this pronouncement is obvious. The chief sanitary inspector of the City of London recently obtained an order for the destruction of oysters because they contained the *Bacillus coli*. The layings from which they came were consequently withdrawn from the market. But during the hearing of the case it was shown that great pains had been taken to keep the oysters free from pollution.

Correspondence.

The Anglo-American Medical Association.

BERLIN, Feb. 3, 1904.

To the Editor:—The Anglo-American Medical Association of Berlin desires you to inform the profession of its organization and purposes. Realizing the difficulties which beset the path of the stranger the association places its services at the disposal of physicians who intend to study in Berlin. Such are cordially invited to attend the meetings which are held weekly, and any information concerning the work to be had here will be gladly given to any member of the profession who will communicate, on his arrival in Berlin, with Dr. J. H. Honan, president, Lützen Strasse 78, or with the undersigned committee.

ALBERT J. MAYER, M.D., Secretary.

DAVID SHANNON, M.B.

WM. W. GRAVES, M.D.

Albrecht Strasse 22.

NOTE.—Further particulars of this association were given in THE JOURNAL Jan. 30, 1904, p. 320.—Ed.

Susceptibility to Disease.

GODDARD, KANS., Jan. 14, 1904.

To the Editor:—I desire to call the attention of the profession to an important factor in the estimation of susceptibility to disease as influenced by age, namely, the decrease in the number of persons living as age increases. I have not been able to learn by a search of such literature as is available to me, and by a correspondence with several men of wide knowledge that this fact has ever been considered in the construction of tables intended to illustrate the varying susceptibility to a given disease at different ages.

The tables or reports, as constructed, doubtless illustrate truly the prevalence of the disease at different ages, but fail signally in showing the varying susceptibility. Thus, a compilation before me shows that out of 434 cases of pneumonia, 42 occurred between the ages of 10 and 20, and 24 occurred in persons from 60 to 70 years of age. This statement alone indicates a greater liability to the disease at the earlier age than at the later. Let us apply to the statement the American table of mortality and observe the result. This table begins with 10 years of age, and assumes the death of all persons at 96; and is on the whole probably the nearest approach to actual experience in the United States that has been as yet compiled. Out of 100,000 persons at age ten, 99,251 are living at eleven, 98,505 at twelve, and 92,637 at twenty. At the age sixty-one, 56,371 and at age of seventy, 38,569 are living. Assuming that the compiler of the cases of pneumonia meant by the phrase "between 10 and 20 years" from 11 to 20, inclusive, we find the average number living in that decade, out of the original 100,000, to be 95,928, while for the decade 61 to 70, inclusive, there are living an average of 47,996; barely half as many. The ratio of liability,

therefore, instead of being 42 to 24, is, if we take the number living in the first period as the basis of comparison, 42 to 24, multiplied by a fraction of which 95,928 is the numerator, and 47,996 the denominator; that is, 42 to 48—a marked difference.

In the computation of relative mortality, the difference is still more striking. Thus, Osler, in considering the etiology of pneumonia, quotes under the head of age from the census of 1890, that for every 100,000 of population there were between the ages of 15 and 45 years, 100.05 deaths; between 45 and 65, 263.12, and for 65 years and over, 733.77. Reducing this to a percentage, we have for the first period 9.1 per cent.; for the second, 24 per cent., and for the third period, 66.9 per cent.

Assuming that the author meant 15 to 44, inclusive, and 45 to 64, inclusive, for the first and second periods, we find the average number living in those periods to be, of the 100,000 living at 10 years of age, 85,751 and 64,242, respectively, while the average for the period of 65 to 95, inclusive, or the end of the table is 18,458. Assuming the average number living during the first period as the basis of comparison, we find the relative mortality to be, not 100.05 to 263.12, but 100.05 to 263.12 multiplied by a fraction, of which 85,751 is the numerator and 64,242 is the denominator; that is, 100.05 to 351.22. And a like calculation for the third period would show a relative mortality of the enormous number of 3,409. Reducing these numbers to percentages, we find for the first period a relative mortality of 2.6 per cent.; for the second, 9.1 per cent., and for the third, 88.3 per cent. While a comparison of deaths alone for the first and third periods shows a ratio of 1: 7.32, a consideration of the numbers of people living in the respective periods points to a real mortality ratio of 1 to 34.

It is hardly to be expected that many diseases will show such a striking difference in mortality at various ages as pneumonia; but only a careful investigation will determine, and the subject is worthy of such investigation.

In this study, other factors ought to be considered as immunity from a disease at a later age by reason of an attack at an earlier age. Thus, measles in this country is almost exclusively a disease of childhood, because of the well-nigh universal exposure at that time of life, and the consequent immunity, with rare exceptions, for the remainder of life. That it may attack individuals at all ages we know; and the universal predisposition to the disease at all ages, when not protected by an attack early in life, is well illustrated by the epidemic which raged a few years ago on the introduction of the disease into the Fiji Islands.

It will not be easy to eliminate this disturbing factor, though attention being directed to it in this connection, a long course of careful observation will do much toward that end. It will be easier to eliminate the effect of those diseases which, as pneumonia, leaves the patient, after a short immunity, with impaired powers of resistance to further infection. All that we have to do in that case is to exclude attacks subsequent to the first. The instances of second and later attacks of those diseases, one attack of which almost universally grants a life immunity, are so rare as to be perhaps negligible.

Notwithstanding the difficulty and perhaps the impossibility of getting ideal results, by reason of the obstacles alluded to, the investigation ought to be made in the interest of greater accuracy; and I venture to suggest a way of making it. Let a large number of the best hospitals in all portions of the United States be requested to send transcripts of their records bearing on this subject to some central office for compilation and calculation. Only in this way, it would appear, can a sufficient number of cases at all ages be had to give fairly accurate results.

This calculation ought to be made for each year of life. While I have never seen a table of infant mortality, the fact that a number of life-insurance companies take risks on children, points to the existence of such a table; and the short time involved, from birth to the tenth or the fifteenth year, ought to give assurance that the compilers have attained

to at least as great a degree of accuracy as is found in the tables for older ages.

A combination of the tables of mortality of infancy and childhood could then be made with the American or some other standard table, as the combined experience, and the calculation for all ages, from birth to 96 if the American be used, or 100 if the combined experience be selected, can be made. By such a combination we should be enabled to use the initial number at birth as a basis or unit of comparison for all ages, just as in the standard tables we can use the initial number 100,000 at age 10 as a basis of comparison for all subsequent ages.

It is in the hope that some one with the authority of a great medical organization behind him and to whom vast numbers of histories are, or may be made acceptable, may take up this work, that I have ventured to make the above suggestions.

W. H. GRAVES, M.D.

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

CONGLUTINATION OF THE EXTERNAL OS AFTER AMPUTATION OF THE CERVIX.

SAN FRANCISCO, Feb. 1, 1904.

To the Editor:—The effect of amputation of the cervix on labor has, as far as I can ascertain, received but scant recognition; in fact, one of our most distinguished gynecologists dismisses the subject by saying: "Amputation of the cervix does not interfere with conception, pregnancy or labor." That with a preceding atresia conception could not take place needs no discussion, but that atresia can take place after conception, and interfere greatly with labor, the following case will illustrate. In May, 1903, it became absolutely necessary to amputate the cervix of a bipara, aged 26. She stated that menstruation had ceased a week previously. I did not curette the uterine cavity, being sceptical as to her veracity. Subsequent events proved my doubt to have been well founded. Three months after the operation, there being no recurrence at menstruation, she came for advice, and an examination showed a pregnancy of about four months, which continued without deviation, following the usual course. January 14 I was sent for, found patient in labor, the presenting part having entered the superior strait, covered by the upper vaginal wall, like a cap, but neither by the eye, through a speculum nor by the sense of touch, could the slightest opening be detected. The pains suddenly ceased for a week, then began with renewed vigor, keeping up for two days, the position of the fetus remaining exactly the same, with not the slightest sign of dilation. Further delay being dangerous, I called Dr. Frank Gray in consultation; we concluded that if an entrance could not be effected through the vagina, cesarean section and a possible Porro operation were strongly indicated. I admit the latter did not appeal to me, both on account of the danger from shock and the age of the patient. She was removed to Lane Hospital, and after twenty minutes' probing with the finger, I felt a sunken spot, bored through and entered the cavity through the internal os, which was dilated to the size of a dollar. I continued manual dilation and found a breech, that had just about entered the pelvic cavity, applied forceps and extracted babe in a condition of asphyxia livida. Twenty minutes of artificial respiration insuflation, etc., restored the child. The patient made an uninterrupted recovery, the temperature never reaching above 99.8. At present both mother and child are doing well. Had the patient menstruated within the usual time after the cervical operation the probabilities are that no atresia of the canal would have taken place, as no such result followed a number of previous similar operations. Now the question arises, will the os remain patent? I can not evolve a satisfactory answer, for possibly the next six months, but in the meantime will keep the patient under observation, using the probe from time to time.

WILLIAM HIMMELSBACH, M.D.

ANSWER.—Occlusion of the external os is a well-recognized although somewhat rare cause of dystocia. It may occur in primiparae who have never undergone local treatment when it is generally due to persistence of a "pinhole" os. In multiparae or in primiparae who have had treatment, it is generally due to traumatic adhesions that may follow injuries of labor or caustic applications or operations like amputations of the cervix. Cases of occlusion of the external os due to amputation have been reported, but not

frequently, and the above case is worth recording. In the diagnosis of this condition the possibility of the displacement of the cervix to one side, backward or even above the promontory, must be kept in mind. When the diagnosis is made, the minute opening which marks the external os or the depression which marks where it should be, is carefully sought for by the examining finger, and if found, an opening made by the simple maneuver adopted by our correspondent. When the site of the external orifice can not be determined by palpation the patient should be put in a good light, under anesthesia if necessary, and the walls of the vagina well retracted to allow a thorough inspection of its fornix. In this way the orifice or the location where it should be may generally be found and dilatation begun by stretching or cutting. In these rare cases in which the original location of the os can not be determined it may be necessary to make a crucial incision that may need extension to admit the immediate delivery if the case is urgent. We are not aware that agglutination has occurred repeatedly in the same patient, but it would certainly be desirable to keep such a patient under observation, both before and after the occurrence of a subsequent pregnancy. Incidentally we suggest that the practice of applying forceps to the breech is not to be commended. Pushing up the breech and bringing down a leg is certainly a safer and more reasonable procedure.

FIRST AID INSTRUCTION TO PUBLIC SCHOOL SCHOLARS.

DRACHM, Salt Lake City, writes: A western physician has a 14-year-old boy who recently showed that he was not alone possessed of good sound horse sense and proper surgical instinct, but is a good booster for his father. While playing with a crowd of boys one little chap ran a rusty nail into the sole of his foot. The doctor's boy immediately carried him into a nearby house, where, in spite of his patient's tears and protestations, he first removed the shoe and stocking, and after washing the foot carefully with hot water, carried him several blocks on his back to his father's office, where the wound was disinfected and dressed. The incident suggests the good that might be accomplished, or rather the harm that might be prevented, by a little instruction along these lines to the older pupils in the public schools.

HERNIOPLASTY.

DR. HERMANN B. GESSNER, New Orleans, writes to suggest the use of the word "hernioplasty" to replace the expression "radical cure operation for hernia." The reasons for the substitution are, he believes, obvious.

Marriages.

EDWARD B. HODGE, JR., M.D., to Miss Mary G. C. Greene, both of Philadelphia, February 10.

THADDEUS COTHERN, M.D., Walcott, Ark., to Miss Anna Hutchins of Finch, Ark., January 24.

THEODORE H. PAGE, M.D., Gold Hill, Colo., to Miss Mathilda Heidrich of Peoria, Ill., February 9.

ANDREW CLIFTON HANSEN, M.D., Fulton, Ill., to Miss Stella L. Griffin of Peoria, Ill., December 31.

JAMES A. TURNER, M.D., High Point, N. C., to Miss Fannie M. Little of Charlotte, N. C., February 4.

ERNEST F. ROBINSON, M.D., Kansas City, Mo., to Miss Mary Kip of San Francisco, at Omaha, February 6.

J. MILLER BYRNE, M.D., Waynesboro, Ga., to Miss Mary Willie Heggie of Grovetown, Ga., February 24.

JOHN DUNCAN EMMET, M.D., New York City, to Miss Josephine Wharton Drexel of Philadelphia, February 9.

Deaths.

Virgil O. Hardon, M.D. Bellevue Hospital Medical College, New York, 1874, professor of obstetrics and diseases of women and children in the Atlanta College of Physicians and Surgeons, died at his home in Atlanta, Ga., from pneumonia complicated by organic heart disease, February 7, after an illness of ten days, aged 54. The active and honorary pallbearers were members of the faculty of the college, and the Atlanta Academy of Medicine furnished an honorary escort of its members.

John Eggleston Byers, M.D. New York University, 1879, for twenty years surgeon of the Pennsylvania Railroad at Butler, Pa.; a member of the National Association of Railway Surgeons, the Medical Society of the State of Pennsylvania, and recently president of the Butler County Medical Society,