really to appreciate and to think on subjects of this character. The innate credulity of his nature breaks forth, becomes clamorous, and must be fed: to such a person, the truth would be no more acceptable than the doctrines of the Temperance Society would be to a spirit-drinker, because it would cripple and fetter the exercise of the darling faculty of credulity.

To this majority, however, in all ages, have sprung up men willing to gratify their tastes, and such men are often rewarded, from the Holloways downwards, by a short cut to practice and reputation, and they become rich; but do you know any instance where men of this kind have contributed anything whatsoever to physical science? Therefore, to persevere in the love and search of truth, despite the many temptations, to deviate from the straight and narrow path, we must be prepared by God's help to sacrifice self, and, if need be, fall short of the wealth which the charlatan possesses, with a noble consciousness, however, that we are doing our best, not for self only, but for the extension of science, and, therefore, for our fellow-creatures.

THE COMPARATIVE BIRTH-RATE AND NUMBER OF CONCEPTIONS IN CANTERBURY AT DIFFERENT PERIODS OF THE YEAR.

By GEORGE RIGDEN, M.R.C.S.,
Surgeon to the Canterbury Dispensary.

It is probable that many obstetric practitioners have imagined, and yet have doubted, whether human births are more numerous at certain periods of the year than at others; but have been unable, from their individual experience, to come to a satisfactory decision. Nor can a much nearer approach to a satisfactory result be obtained from a perusal of the authorised register of births; for it will be found that, although a few births are registered within a week or two after their occurrence, many are not registered until after a delay of several weeks, and some not until after several months; consequently, the births of January are very frequently registered among those of February, March, April, May, and even June; and a recent registration act, with the laudable desire of preventing any births from remaining unregistered, allows, under some conditions, births to be registered at any period within a year of their occurrence. For many years, however, during which I paid considerable attention to the vital statistics of Canterbury, as a means of improving the sanitary condition of its inhabitants, I was under the necessity of reducing the births as well as the deaths into their order of daily occurrence; and am consequently enabled, at the request of Dr. Farr, of the Registrar-General's office, who informs me that he does not know of such another record, to prove the actual numbers at different periods of the year. I may observe that, during the twenty years from 1854 to 1873 inclusive, there occurred and were registered in the city of Canterbury 12,172 births; viz., 6,242 male births and 5,930 females, the average annual birth-rate being 33.33 per 1,000 of the average population. There was found, however, as the following table will prove, an excess of more than five per 1,000 in some months as compared with others; the month of December being the most prolific month, having an average birth-rate of 35.65 per 1,000, while the average birth-rate in June was only 30.27 per 1,000. There was also, as may be observed in the table, a considerable difference in the average birth-rate of several other months.

CANTERBURY.—Average Daily Number of Births in each Month in the Twenty Years 1854 to 1873.

[Note.—These are daily births in twenty years, and twenty times the actual daily births.]

Months of Conception.	Months of Birth.	Average daily Numbers.	Months of Conception.	Months of Birth.	Average daily Numbers.
April	January	34.84	October	July	32.71
May	February	35.33	November ..	August	30.58
June	March	33.45	December ..	September ..	34.97
July	April	32.80	January	October	34.10
August	May	32.23	February	November ..	33.70
September ..	June	30.27	March	December ..	35.65
March, April, and May ..	Dec., Jan., and Feb.	35.27	Sept., Oct., & Nov.	June, July, & August ..	31.19
June, July, and August ..	March, April, and May ..	32.83	Dec., Jan., & Feb.	Sept., Oct., & Nov.	34.06

By dividing the year into the different seasons—of spring, including the months of March, April, and May; summer, including June, July, and August; autumn, including September, October, and November; and winter, including December, January, and February—it was ascertained that the highest birth-rate—viz., 35.27—was in the winter season; the next greatest birth-rate—viz., 34.06—was in the autumn season; next (32.83), in the spring season; and the lowest birth-rate was in the months of June, July, and August. And it may further be noted that, although the total number of male births, as is generally observed throughout the kingdom, exceeded the total number of female births, this excess was considerably in excess in the least prolific months, while there was an excess of females in the most prolific months. It is evident, however, that the number of births must be dependent upon the number of antecedent conceptions; therefore, if we assume that conceptions took place within a week after the menstrual period of two hundred and eighty days previously to the births, we shall be able, within a very little, to calculate when the greater number of conceptions happened. And, following out our table, it will be evident that the greatest number, viz., 35.27 per 1,000 inhabitants in Canterbury, was during the spring months; the next greatest number, viz., 34.06, was in the winter months; the third greatest number, viz., 32.83, in the summer months; and the least number, viz., 31.19, in the autumnal months of September, October, and November.

It may be suggested that probably the excess of marriages at some periods of the year would influence the birth-rate, particularly of first children, at nine or ten months subsequently; but from inquiries I have made of the registrars of marriages in this city, it appears that the excess of marriages takes place during the months of October, November, and December, and the least number of marriages at periods of nine calendar months antecedent to the excess of births. It is, therefore, difficult to account for the excess of conceptions in the months of March, April, and May, unless we assume, as is very probable, an excess of animal as well as vegetable vigour during these months; but why there should be an excess of females during the most prolific months, it is not easy to conjecture.

HYDATID DISEASE:

AS ILLUSTRATED BY SPECIMENS CONTAINED IN THE PATHOLOGICAL MUSEUMS OF THE METROPOLIS AND IN OTHERS ELSEWHERE.

By T. SPENCER COBBOLD, M.D., F.R.S., F.L.S.,
Correspondent of the Academy of Sciences of Philadelphia.

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ONE of the most valuable contributions to our knowledge of the prevalence of hydatid disease affecting animals is that supplied by Dr. Cleghorn, from a statistical table constructed by the executive commissariat officer stationed at Mooltan. The record in question shows that out of 2,109 slaughtered animals, no fewer than 899 were affected with hydatid disease. This is equal to more than 42 per cent. In the majority of cases, both the lungs and liver were affected. Cysts were found 829 times in the liver and 726 times in the lungs. In a few instances they were present in the kidneys, and also occasionally in the spleen. The inference from all this is, that in India, if not elsewhere, the echinococcus disease is much less common in man than it is in animals. The explanation is simple enough, since cattle have more ready access to, and less scruple in partaking of, filthy water in which the germs or eggs of the *Tenia echinococcus* abound.

Those who have taken the trouble to peruse the foregoing data (giving a *résumé* of the wealth of our museums) will naturally desire to know whether these facts, taken along with others elsewhere obtained, afford us any assistance in determining the amount of injury that we, as a people, sustain either directly or indirectly from hydatids. On carefully reviewing all the facts that I have been able to gather, I may say that it is difficult to draw any very precise conclusions; albeit, it is not mere guess-work when I express the belief that in the United Kingdom alone several hundred human deaths occur annually from this cause. In many other countries the proportion is far greater; the oft-quoted case of Iceland, where the disorder is fatally endemic, still standing at the head of the afflicted territories.

Our Australian colonies are probably entitled to the next place of distinction in this respect. We have strong and recent evidence of the truth of this statement. Thus a writer in the *Australian Medical and Surgical Review* says, "This disease is becoming unpleasantly frequent, and at present we have no reliable mode of treatment, either theoretical or empirical". Another writer observes (*Melbourne Argus*, May

18th, 1874), "Hydatid disease is endemic in this colony; and, though not so constantly met with as in Iceland, we may probably claim the doubtful honour of holding the second place in the list of countries so affected". In the *Argus* for June 20th of the same year, another writer (whilst recommending turpentine as a cure) refers to the frequent notices of cases of hydatids published in the various local newspapers. A retired member of the profession—Dr. John P. Rowe—writing on sheep-rot in the *Melbourne Leader* (September 7th, 1872), incidentally remarks on the "notable increase of hydatid disease in the human subject". Again, still more satisfactory evidence is afforded by a writer in the *Leader* of the 31st January, 1874. Whilst reviewing one of my manuals, he not only takes occasion to speak of the prevalence of hydatids in a general way, but also supplies just that very kind of accurate statistical evidence of which we much stand in need. He gives the following table, showing the number of deaths (not cases merely) from hydatids in Victoria for eleven years, ending in 1872. It is too instructive to be passed over.

Years.	Males.	Females.	Total.
1862	3	2	5
1863	3	2	5
1864	6	3	9
1865	9	6	15
1866	18	7	25
1867	13	12	25
1868	21	12	33
1869	12	10	22
1870	10	7	17
1871	6	9	15
1872	24	5	29
Total deaths in eleven years ..	125	75	200

To employ the writer's own words, "this mortality gives only a faint notion of the extreme prevalence of hydatids in Victoria, since numbers of cases are cured by tapping, and otherwise by medical treatment, or by spontaneous bursting of the cysts; and also since hydatids are often found *post mortem*", where the patients have died from other diseases. Doubtless, as with ourselves, their presence has often never been suspected during life. "To meet with hydatids as a cause of deranged health is now a matter of daily expectation with every medical practitioner."

Such are the facts from Australia. As regards home evidence, so far as I am aware, little or nothing has been done towards securing an accurate estimate of the mortality in England from echinococcus disease. The reports of the Registrar-General give no sign. That is not his fault, perhaps; but if the public relied on such a source of information, they might be led to conclude that hydatids had no existence, or, at least, if they had, their presence added nothing to our bills of mortality. The explanation is not far to seek. For the most part, hydatids are either classed with diseases of the liver, or of other organs in which they happen to have formed, thereby producing fatal results.

As a student of parasites for more than a quarter of a century, I must, without giving intentional offence, be permitted to protest against the omission of parasites in statistical evidence as a cause of mortality. The Australian table alone is a standing protest. From facts within my own knowledge, I can confidently assert that parasites in general, and hydatids in particular, play a far more important part in the production of disease and death (alike amongst mankind and animals) than either the public or (if I may say it unoffendingly) the profession are aware of.

As regards the Australian evidence, I cannot close my references without also referring to the experiences of Dr. MacGillivray, as recorded year after year in the *Australian Medical Journal*. The able surgeon to the Bendigo Hospital, from 1862 to 1872 inclusive, treated as in-patients no fewer than seventy-four cases of hydatid disease. He operated on fifty-eight of them. Two patients were tapped for temporary relief (as they were dying of other diseases); and of the remaining fifty-six, only eleven died. No fewer than forty-five were discharged *cured*—a fact redounding largely, I should think, to the credit of Australian surgery.

Not without some trouble have I gathered the foregoing particulars from museums, with others recorded in a widely scattered literature. I have also in my possession a number of characteristic specimens, contributed by medical friends, with notes of the cases. I regret that I am unable to pursue the subject further. I have elsewhere shown that it is possible to form an approximatively correct notion as to the prevalence of hydatids in particular organs of the body (*Lancet*, June 9th). Here I have been chiefly desirous of calling

attention to the mass of pathological data which, although well within reach, has not at present been utilised to the extent to which they might have been. In publishing these notes, under editorial approval, I have been animated by no professional motive other than and beyond that of advancing the helminthological department of sanitary science and the healing art.

SUPPRESSION OF URINE FIVE DAYS: DEATH: POST MORTEM EXAMINATION: SYMMETRICAL BLOCKING OF BOTH URETERS WITH CALCULI.*

By WILLIAM NEWMAN, M.D.Lond., F.R.C.S.Eng.,
Surgeon to the Stamford Infirmary.

M., AGED 73, on two prior occasions—the first eight years ago, the last about two years ago—had had attacks of severe pain in the loins, and had passed lithic acid calculi. On the occasion of the first seizure, he seemed to be very ill, and in danger of dying, though the history of his symptoms was by no means clear.

1875. July 24th. He had some uneasiness about the left loin rising to much more severe pain on the next day. This pain was relieved by opiates. No calculus was detected in the urine passed on the 24th; and since the morning of the 25th, no urine whatever had been passed.

July 28th, 8 P.M. I saw him in consultation with Mr. Eddowes. The above note was then made. A catheter was passed easily enough. About twenty drops of fluid flowed out, acid to litmus paper. Pulse 96; respirations normal; temperature normal. The skin was acting profusely. The bowels acted freely, three times in the day after some aperient; but no urine passed with the motions. He was said to have been more drowsy than usual to-day. There was no pain on pressure over the pubic region. The hand sank well back into the pelvis. There was no apparent change from the normal condition.

I ventured to make this note on returning home. "Query. The suppression due to blocking of the left ureter by a calculus? If this be the true explanation, then, to account for the suppression, one must suppose that the right ureter is also blocked by some prior inflammatory attack or similar condition of impacted calculus."

Aperient and diuretic medicines were given.

July 29th. A consultation was held with Mr. Eddowes. There was nothing to add to the prior history. No urine was passed. His condition was practically unaltered. He was not in pain. I remembered to have seen noted the good effect of fresh digitalis leaves applied as a poultice in similar cases. Some were obtained, and applied until distinct slowness of pulse was observed; but no good result followed.

July 30th. A consultation was held with Mr. Eddowes. There was still no urine. A catheter was passed, but nothing followed save four or five drops of dark fluid, acid to litmus paper. Pulse 90. Tongue, brownish coating and somewhat dry. He had been sick not unfrequently through the night. He was decidedly drowsy, and more exhausted. We had urged that his family should be telegraphed for; but this, after our leaving, he declined, saying "I am not so ill as to make that necessary". Yet, in less than ten minutes afterwards, after drinking some brandy and water, he laid back in bed, and died at 11 A.M.

July 31st, 7 P.M. Mr. Eddowes was good enough to make a *post mortem* examination. The right kidney was represented by a mere capsule of the size of a small hen's egg; and in this there was hardly a trace of kidney-structure to be seen. At the point of emergence of the ureter was found a calculus, an aggregated mass of lithic acid coated with phosphates, firmly adherent to the lining membrane. The left kidney was normal in size and healthy in appearance. The pelvis contained about a drachm of urine, and several small calculi were fixed in the substance of the kidney. At the same point as on the other side was a calculus, similar in structure and smaller in size, firmly wedged into the ureter.

I have thought that this history would be worthy the notice of the members present, because it illustrates one of the causes of sudden suppression of urine—the mechanical form of "surgical" suppression, if I may be allowed the phrase.

The influence of alterations in the circulating fluid, *e.g.*, in fevers, etc., is often markedly shown in the diminution of or suppression of urine. But this case must be ranged under a different heading, and claims your notice more as a curiosity than as available for special instruction.

It is interesting, however, to note that for several years uniform good

* Read at a meeting of the South Midland Branch.