resigns his commission; also is granted the honorary rank of Surgeon-Major, and is permitted to continue to wear the uniform of the corps on his retirement.—1st Edinburgh (the Queen's, City of Edinburgh Rifle Volunteer Brigade): The undermentioned Surgeons are granted the honorary rank of Surgeon-Major: R. J. B. Cunynghame and F. Cadell.—3rd Volunteer Battalion (the Essex Regiment): The undermentioned Surgeons are granted the honorary rank of Surgeon-Major: David MacEwan and Alexander Campbell.—1st Volunteer Battalion, the Buffs (East Kent Regiment): Surgeon Henry Penfold, M.D., resigns his commission; also is granted the honorary rank of Surgeon-Major, and is permitted to continue to wear the uniform of the Battalion on his retirement.—2nd Volunteer Battalion, the Queen's Own (Royal West Kent Regiment): Surgeon J. P. Purvis is granted the honorary rank of Surg.-Major.—3rd Volunteer Battalion, the Norfolk Regiment: Surgeon S. M. Hopson is granted the honorary rank of Surgeon-Major.—2nd Volunteer Battalion, the Northumberland Fusiliers: Surgeon A. Wilson is granted the honorary rank of Surgeon-Major.—1st Tower Hamlets (the Tower Hamlets Rifle Volunteer Brigade): John William Jackson, Gent., to be Acting Surgeon.—1st Volunteer Battalion, the Gordon Highlanders: Surgeon A. D. Davidson, M.D., is granted the honorary rank of Surgeon-Major.—1st Dumfriesshire: Surgeon P. F. Robertson, M.D., is granted the honorary rank of Surgeon-Major.—8th Lanarkshire (the Blythswood): The undermentioned Surgeons are granted the honorary rank of Surgeon-Major: A. Fergus, J. E. Brodie.—20th Middlesex (Artists'): James Cagney, Gent., M.A., M.D., to be Acting Surgeon.—24th Middlesex: Surgeon J. T. Powell, M.D., is granted the honorary rank of Surgeon-Major.—1st Volunteer Battalion, the Royal Warwickshire Regiment: Surgeon Thomas Thompson is granted the honorary rank of Surgeon-Major.

Correspondence.

"Audi alteram partem."

THE BAROMETER AS A GUIDE TO HEALTH.

To the Editor of THE LANCET.

SIR,—A short while ago there came under my notice an abstract of the observations of Dr. M. A. Veeder of Lyons, New York, on the barometer as a guide to health. He says he has noted the occurrence of several deaths from apoplexy at times when rapid fluctuations of the atmospheric pressure were indicated by the barometer, and suggests the cause to be a difficulty in the adjustment of the volume and rate of the circulation of the blood to the varying atmospheric pressure upon the surface of the body, and consequent unusual strain on the weakened bloodvessels. He believes that at such times over-excitement, over-eating, improper clothing, and the like, act as determining causes of the rupture, and would warn persons who are advanced in years, or subject to symptoms that indicate an apoplectic tendency, to exercise great moderation in all things whenever the mercury is seen to be unusually active in its movements.

My attention was directed to this subject many years ago, and in the year 1872 I casually mentioned my opinions to Professor Gairdner of Glasgow, where I met him in consultation on a case of aphasia. I have often noticed a remarkable sequence of cases of cerebral and other hæmorrhages, and convulsions in children, during periods of great electrical disturbances and sudden and extreme fluctuations in the barometer. There is great difficulty, however, in obtaining an accurate reading of the barometer at the moment of seizure, the exact time of it being rarely noticed, and often considerable delay elapses before the message is brought to the medical man, during which the barometer may have made one of its sudden changes. On this account I have been unable to record many cases with the accuracy I could have wished. In two cases, however, I was more fortunate.

On Monday, March 1st, 1880, whilst spending the evening at the house of a friend, I received an urgent message to attend two patients who had been seized with cerebral hæmorrhage within a few seconds of one another. They were both past the middle period of life, one (a male) dying in a few hours, the other (a female) surviving for four days. My friend, who was in the habit of frequently consulting

his barometer, examined it immediately after seeing me to the door, and found it standing at 28.10, the lowest reading he had ever seen it register. From the *Scotsman* of Tuesday, March 2nd, 1880, I extract the following notes of the storm:—"The following telegram was received at the East Coast Signal Stations from the Meteorological Office, London, yesterday: 'Deep depressions off north of Scotland; hoist north cone for west to north-west gale, Monday, 10.20 A.M.' A severe gale was experienced in Glasgow on Feb. 26th. The barometer by 10 A.M. stood at 28.8, a fall of 0.5 from Sunday. The barometer at Kirkcaldy registered 28.34, the lowest point registered since Nov. 22nd, 1877. At Longhope, Orkney, the barometer registered at midnight on Sunday 28.45, and at 9 A.M. on Monday 28.10, when broke forth the severest storm from the west witnessed since Nov. 16th, 1877. Between 2 and 3 P.M. peals of thunder were heard at Edinburgh."

I think that there can be no hesitation in connecting the cerebral hæmorrhage in the above cases with the sudden fall in the barometer. Indeed, so convinced am I of the connexion that for many years past I have been in the habit of advising my elderly patients to remain in-doors, and avoid intemperance in eating or drinking and over-physical or mental exertion, when the barometer suddenly rises or falls. Such sudden changes of atmospheric pressure must be attended with great danger to persons with weak hearts and diseased arteries. As none of our text-books, nor any of the authorities I have been able to consult, make any mention of the connexion between cerebral hæmorrhage and sudden variations of atmospheric pressure, I have cited the above cases in the hope that some of your contributors may be able to throw some light on the subject.

I am, Sir, yours sincerely,

WILLIAM F. MURRAY, M.D., F. & L.R.C.S.

Forfar, March, 1886.

P.S.—On Wednesday last, April 7th, the barometer suddenly sank to 28.4 in the evening, and remained at that point for a considerable time on Wednesday evening and Thursday morning. On my way to Perth on Thursday forenoon I ascertained from Mr. Robertson of Coupar Angus, who reports for the Meteorological Society, that his instrument had stood at exactly 28.4 the same evening and morning. On Wednesday night I had one case of convulsions in a child, and two cases of uterine hæmorrhage ending in abortion in the early months of pregnancy. In the *Dundee Advertiser* three cases of sudden death are reported to have occurred on the same evening within a radius of about twelve miles. They were all males—one seventy-two, one seventy-eight, and one above eighty. They had all been apparently in good health. This must be more than a mere coincidence.

SUPRA-PUBIC CYSTOTOMY.

To the Editor of THE LANCET.

SIR,—The danger of wounding the peritoneum in epicystotomy depends, I believe, to a great extent on the condition of the urine in the bladder. In a large proportion of cases of vesical calculus, bladder tumour, or cystitis (not induced by external agencies, dirty catheters, &c.), the urine is not septic. In some instances it is peculiarly suited to the growth of micro-organisms, so much so that, if passed into anything but a carefully purified vessel, it becomes putrid in a few hours. Even in these cases, as my valued teacher, Sir Joseph Lister, first pointed out, it is not necessarily septic when voided. I have now in my possession several specimens of urine from cases of cystitis and pyelitis, which I have preserved for a considerable time without any change having occurred in them (in one instance for more than six months), showing the absence of putrefactive organisms in the urine of these cases. These specimens have not been boiled, but were simply passed into purified vessels.

Numerous experiments on the lower animals, and cases of wound of the bladder in the human subject, during operation or otherwise, show that the contact of healthy urine with the peritoneum does not necessarily produce peritonitis. I believe that urine which contains muco-pus or pus, provided it is not septic, would be as little irritating to that membrane as healthy urine. From the examination of numerous subjects in the post-mortem theatre, I have satisfied myself that in a small proportion of them epi-

cystotomy could not have been performed without wounding the peritoneum or stripping that membrane off the bladder, as in M. Autal's case.

Major Tremaine has written in THE LANCET of April 10th, in reference to M. Polaillon's case: "Stranger yet that it [epi-cystotomy] should have been abandoned through dread of wounding the peritoneum; as this may occur without disaster, the following case will show, &c." This case supports my prediction at the British Medical Association meeting at Cardiff last year¹—"That in a short time some malignant growths of the bladder with the portion of bladder wall to which they are attached, even when implicating the peritoneum, would be successfully removed, &c." At a meeting of the Bristol Medico-Chirurgical Society on Jan. 13th, I ventured to state my belief that in all cases in which the urine is not septic the peritoneum can be wounded with impunity in epi-cystotomy, provided strict antiseptic precautions are carried out. In those rare cases of low distribution of the peritoneum, complicated with a septic condition of urine in the bladder, it would be advisable to adopt the perineal route.

I am, Sir, yours obediently,

Clifton, Bristol, April 12th, 1886.

W. J. PENNY, F.R.C.S.

NOTE ON ACUTE KERATITIS.

To the Editor of THE LANCET.

SIR,—In the many excellent treatises and manuals on diseases of the eye, the descriptions of the objective symptoms of acute inflammation of the cornea leave nothing to be desired in respect to minuteness and accuracy. Its constitutional relationship to syphilis and struma is also duly recorded and explained. But, so far as my reading extends, the acute constitutional disturbance with which it is not unfrequently accompanied in the case of children and some adolescents, also exceptionally among adults, has escaped the attention of writers. The local disease is ushered in by a febrile disturbance; the child has not only lost its appetite, but is thirsty and chilly, creeping up to the fire. The pulse is quick and easily compressed. It is under these conditions that small doses of tartarised antimony in combination with liquor ammoniæ acetatis prove useful. Our object, of course, is to restore the action of the skin; and until this has been effected, tonics, oils, or antisiphilitic remedies are useless and out of place. Quinine I have not found to reduce the febrile symptoms.—I am, Sir, yours faithfully,

Birmingham, March 31st, 1886. J. VOSE SOLOMON, F.R.C.S.

THE ROMAN SCHOOL ON M. PASTEUR.

(From our own Correspondent.)

THE universal interest now taken in the Pasteur treatment of hydrophobia is specially marked in Italy, where, according to the statistics recently collected by Mancini, cases of the disease occur in the proportion of 0·04 to every 10,000 of the inhabitants. Seldom, indeed, has the Reale Accademia Medica of Rome discussed any topic with more animation than the treatment in question, and a *résumé* of its proceedings on the 4th inst. will be found instructive in more than one phase of the subject. After Drs. Marchiafava and Brunelli had spoken, and Dr. Carruccio (the secretary of the Academy) had read Pasteur's letter on the necessity of forming a great international institution in Paris for the reception of hydrophobic cases of all countries, Professor Colasanti related the experience of Italian physicians who had watched Pasteur's methods in that physiologist's own laboratory, and, taking it as proved that of 500 hydrophobic patients under his care Pasteur had had but three failures, he contended that this result more than justified Rome in following the example of St. Petersburg, New York, Buda-Pest, and Berlin, and establishing a special hospital for the practice of the Pasteur treatment.

The next note struck was a slightly sceptical one. The President, Dr. Guido Baccelli, hoped that Pasteur's method would come out unscathed from the critical ordeal to which it was about to be subjected, but he counselled caution in accepting and still more in practising it, and reminded his audience that something very like the same experiments had already been carried on in Italy—notably, by Dr.

Agostino Cappello of Tivoli, more than sixty years since. These experiments, though made with the scientific resources of 1820, had still an appreciable value, if only as suggesting that rabies of the second degree is not transmitted. In Pasteur's experiments a distinction must be drawn between prevention on the one hand and cure, properly so-called, on the other; and on this point further light is to be desired. If, as Cappello asserted, rabies of the second degree is not transmitted, then multitudes of those who flock to Pasteur are already safe from the disease without his inoculations. Dr. Baccelli thought that, without committing itself further, the Academy should send a competent representative to Paris to watch the treatment with the vigilance it required. At this stage of the proceedings two telegrams were read for Dr. Politini announcing the despatch of a paper giving details as to the inoculation of the virus practised by him for a series of years.

Then followed an encounter between Dr. Colasanti and Professor Francesco Scalzi (Cesalpino's apologist), the former maintaining that Cappello's experiments differed from those of Pasteur, in that Cappello inoculated with the saliva of the hydrophobic dog, while the superior science of the Frenchman saw that the virus resides in the medulla spinalis, and used this, specially prepared, for the inoculations. Dr. Scalzi rebutted this charge, till an accurate account of Cappello's papers, as read before the Accademia dei Lincei in 1823 and 1826, had to be produced. This was done by Dr. Carruccio, who, recapitulating Cappello's attempt to neutralise the hydrophobic virus by the canine saliva, read the author's conclusion that, "from numerous experiments made on dogs and cats, he is satisfied that the rabies, after its first passage into another animal, not excluding those of the species *canis*, no longer preserves its venefic force, but is quite destroyed, and hence is not reproducible as contagious maladies are reproduced." Cappello, it seems, was able to predict with singular accuracy what cases bitten by a mad dog would die and what would recover—his thesis being that rabies of the first degree is alone capable of transmission, while that of the second (that is, one remove from the original mad dog) is not. Dr. Gualdi showed that Cappello's observations were most accurate, and were largely confirmed in France, where Brachit in 1840 and Regnault in 1844 published a long series of cases to prove that the hydrophobic virus in its second and third passage had lost its contagious virulence. As to Pasteur's statistics, Dr. Gualdi contended that their scientific value was often more than doubtful, because many patients subjected to the treatment had already been cauterised immediately after the bite; that others had been bitten in parts covered with their clothes; while very few, bitten on the naked skin, had not received some sort of therapeutic aid at the time. He mentioned what had occurred in the hospital of S. Gallicano, where a family of seven had been brought, all bitten by the same hydrophobic dog. Of these, three had their garments torn and the skin divided, but they escaped; two bitten on the bare skin died; and the remaining two, who had also been bitten on the bare skin, lived. He concluded by saying that if Cappello's observations and well-known practice had not been correct, the canine race in the Roman Campagna would have been stamped out long ago.

Dr. Bastianelli, in confirmation of the efficacy of clothes in preserving those bitten by mad dogs from the virus, cited the case of a countryman who, after a genuine hydrophobic bite, escaped, while his sister, who mended his trousers torn by the animal's teeth, and who had imprudently drawn through her teeth the thread which had been in contact with the saliva-stained garment, died of hydrophobia. Professor Marchiafava admitted the sagacity and diligence of Dr. Agostino Cappello, but dissented from Dr. Gualdi as to the validity of Pasteur's experiments, which, he said, rested on the grand impregnable principle of the attenuation of the virus, a principle demonstrated in the prevention of small-pox, carbuncle, the cholera of fowls, the red disease of pigs, &c., and established by the fifty animals which Pasteur had rendered scatheless from the bites of hydrophobic dogs. He was followed by Dr. Piermarini, who read from a former bulletin of the Academy (1881) an extract from a paper by himself to show the protective influence clothes exercise against the passage of the virus into the wounds inflicted by mad dogs; and the President, Dr. Baccelli, summed up the debate in a few succinct periods, in accordance with which was framed and unanimously voted the order of the day already given in THE LANCET.

Rome, April 9th.

¹ British Medical Journal, Aug. 15th, 1885.