lectures; also to Dr. Balding and Mr. David Hepburn for their drawings.

In conclusion, I beg to thank you, sir, and my audience generally, for the kind encouragement you have given me in attending lectures on a subject which must, of necessity, be uninteresting to the great mass of our profession in this country.

ANEURISM OF THE LEFT FEMORAL ARTERY: INSTRUMENTAL AND DIGITAL COM- PRESSION: RECOVERY.

By A. B. R. MYERS, ESQ.,
Surgeon in the Coldstream Guards.

So numerous have been the cases of late years of successful treatment of aneurism by compression, that it seems almost unnecessary to add to the number; but, as there were in this case a few points of special interest, I think it as well to bring it before the notice of the profession.

Serjeant S., aged 39, twenty years in the service, was admitted into hospital on May 23rd, 1872, for a pulsating tumour about the size of an orange, situated on the inner side of the front of the thigh immediately over Hunter's canal, and extending slightly also into the popliteal space. The patient stated that the swelling first appeared three

months before his admission, after running up and down stairs a great deal on duty; but he did not take any particular notice of it until very recently, when, after a fortnight's duty at Aldershot, which involved much marching, the pain in the tumour and along the front of the leg became so great that he was obliged to report himself sick. He was of slight build, and nervous temperament, but a healthy man and of steady habits.

The following day, a double femoral compressor was put on the thigh, and the pulsation of the aneurism was readily arrested. From that date to July 2nd (nearly six weeks) this instrument was constantly applied without any beneficial result, beyond, perhaps, developing the

collateral circulation. For a portion of this time partial compression by one or other pad was tried; but, this not succeeding, it was made complete. Owing, however, to the pain thus produced, and the consequent restlessness of the patient, it was very difficult to keep the instrument in one position, and consequently the circulation was never completely arrested for more than two or three hours consecutively. It was then determined to try the improved femoral compressor of Messrs. Blaise and Co., and with this instrument the femoral artery was compressed with great facility against the os pubis, and with much greater comfort to the patient; it also had the advantage of being much less liable to get out of position than the other one. Unfortunately, the patient could not bear the pressure to be continued for more than a few hours at a time, and after a week's trial it had not apparently produced any beneficial effect upon the aneurism.

Digital compression over the pubes was then (July 9th) commenced (this mode of treatment not having been previously adopted, owing to the difficulty of getting proper assistance), and continued without the slightest intermission for twelve hours. On slightly relaxing it, the pulsation of the aneurism returned; then, as digital compression could not be well continued any longer by hourly relays, I replaced Messrs. Blaise's instrument, and for the following twelve hours it was kept most carefully in position; occasionally, when the patient found it unbearable, it was relaxed by one nurse whilst digital pressure was kept up by another. On again examining the aneurism as before, pulsation had evidently diminished, and the sac felt more solid.

Mechanical pressure was now partially reapplied, and on the 13th pulsation had entirely ceased. From this time nothing untoward occurred, and the patient was discharged from hospital, on August 15th.

The chief points in this case to which I wish to draw attention are the unusual situation of the aneurism; the length of time mechanical pressure was applied without avail; the ultimate satisfactory result of combining mechanical with digital pressure; and the great value of Messrs. Blaise's instrument in the treatment of this disease.

THE SANITARY STATE OF ROME.

By LAUCHLAN AITKEN, M.D., Rome.

[Concluded from page 312 of last number.]

ALLUSION has already been made to the probable causes of the prevalence and fatality of pernicious intermittent fevers among the unacclimatised labourers who have flocked to Rome from all parts of Italy. The Municipal Council has now seriously turned its attention to the subject, and it is to be hoped that before long better and cheaper accommodation may be provided for the working classes, a small beginning having already been made by the mayor, who recently signed an agreement with a building society, according to which 6,000 rooms for the poorer classes are to be finished within thirty months. For the present, too, the fear of further inundations from the Tiber has disappeared; and, as the government is engaged in examining the different projects for the avoidance of such disasters in future, and is prepared to take action so soon as a feasible plan is selected, it may be confidently anticipated that this oft-recurring cause of increased sickness and mortality among the poverty-stricken inhabitants of the low-lying districts of the city will soon be remembered only as a danger of the past. It is certain that the terrible flood of 1870, which submerged the streets in a great part of Rome, has been highly instrumental in causing the increased death-rate of the last two years.

There is, however, another important factor to be taken into account in explaining the increased mortality of late years from pernicious intermittents. It is well known that the shepherds and farm-labourers of the Campagna—men whose lot in life is a most miserable one—are the classes who mainly suffer from virulent types of ague, and who, when attacked, are usually brought into the hospitals of Rome in many cases only to swell their death-returns. It appears from the census taken at the beginning of last year, that the combined number of agricultural labourers and shepherds in the Agro Romano is now over 20,000, while in 1853 there were only 3,700 of the same classes of the population; and as the condition of the Campagna has undergone but little change during the intervening years, there must now be a larger proportion of cases of intermittent fever admitted into the hospitals from the country round Rome. It is possible that this marked addition to the population of the Agro Romano may be in part fictitious, and due to the season of the year in which the last census was taken: that of 1853, ordered by Pope Pius IX, extended over a prolonged period, while the census of 1872 was begun and ended in a single day in midwinter, when the population of the Agro Romano is at its maximum. But even granting a possible error from this cause,

it is quite obvious that the whole increase of inhabitants which the census demonstrates cannot thus be explained.

Typhoid fever, under which head are included apparently more than one variety of continued fever, is neither more prevalent nor more fatal in Rome than in several of the larger capitals of Europe, such as Berlin and Vienna; but it is, unfortunately, impossible to compare the mortality from the disease in 1872 with that of the whole preceding year, as the necessary data for 1871 have only been supplied for the six months of that year, beginning with May. During those six months, the death-rate from typhoid fever in 1871 was materially higher than in the same period of last year. The water-supply of Rome is still good, though by no means so abundant as in the days of its great glory. All its chief sources are ancient and well known, though often cut off and renewed. The four principal waters are the Acqua Vergine, or Trevi, so called from supplying the famed fountain of that name; the Acqua Felice, the Acqua Paola, and the Acqua Marcia; the first and last named being much the most pleasant to drink, and containing least organic matter. In one litre of the water of Trevi there are fixed principles to the extent of gr. 0.26381; in the same quantity of Acqua Felice, gr. 0.27045; and in the Acqua Paola, gr. 0.14084, chiefly chloride of sodium, carbonates of lime and magnesia, and sulphate of soda. The Acqua Trevi contains more gaseous elements than the other two. Of the Acqua Marcia, re-introduced into the city only in 1870, no good analysis has as yet been published. It is to be feared, however, that all the three waters, Acqua Trevi, Felice, and Paola, receive organic impurities; the Acqua Trevi from the aqueduct in which it runs, being open here and there in the Campagna; the Acqua Felice at its source, and the Acqua Paola on the Janiculum, as Professor Scalzi points out, in an article on the subject in the *Giornale Medico di Roma* for December, 1869. There are besides several other sources of water-supply of minor importance, and many wells, unfortunately still in use, within the walls; but as regards the quantity, no city in the world is better off than Rome, as the four chief aqueducts alone provide 1,439 litres, or 317 gallons per day, for each inhabitant.

The present article would not be complete without some reference to the chief meteorological features of the year; and those I have been able to obtain from the observatories of the Capitol and of the Collegium Romanum, and now present in the following table.

Table showing the Temperature, Rainfall, and Deaths in each Month of the Year.

[The observations on the temperature were made at the Capitol at a height of nearly two hundred feet above the level of the sea; those on the rainfall at the Collegium Romanum at a height of one hundred and sixty-two feet above the level of the sea.]

1872. Month.	TEMPERATURE.*				RAIN.		DEATHS.		
	Highest Day Temperature.	Lowest Day Temperature.	Mean Temperature.	Mean monthly range.	Number of days it fell.	Amount in inches.	Daily average.	From prevalent zymotic diseases.†	Total‡
January ..	60.8	26.6	46.7	12.6	13	3.622	34	288	1041
February ..	57.7	34.5	50.3	13.6	14	3.385	27	220	782
March	64.7	35.7	54.6	13.6	15	4.527	26	208	792
April	73	43.5	59.9	15.4	9	2.952	25	163	758
May	84.2	46.5	66	19.2	8	2.322	24	201	742
June	85.3	51.9	71.7	17.4	5	1.889	27	147	810
July	92.1	57.7	79.1	18.9	1	0.118	27	164	839
August	89.9	59.1	78	19	3	1.181	29	237	911
September ..	88.5	50	74.4	18.9	3	3.582	30	230	890
October	75.9	48.2	66.5	14.2	16	9.370	26	158	808
November	68.3	37.4	55.2	14	14	4.133	27	139	818
December ..	75.7	35.7	53.7	13.3	15	4.015	25	137	786
Total					116	41.096	27	2202	9977

Temperature.—The mean temperature of all the months of the year, except May, June, and July, was above the average mean monthly temperature, as deduced from the observations taken at the Collegium Romanum for the ten years from 1863 to 1872 inclusive. May and June were slightly colder than usual, while July had almost exactly the average mean temperature. March, October and December, were remarkably hot months, and their mean temperatures were greatly in excess of the average.

Rainfall.—The amount of rain which fell at Rome in 1872 exceeds the average rainfall taken from eighty-five years observations, by nearly ten inches. Much of this excess of rain fell in March and October,

when double the mean quantity for those months was registered; but January, February, April and September, were all wet months, their rainfalls considerably exceeding the average. The number of rainy days throughout the year was one hundred and sixteen, or fourteen more than the average in the last ten years.

Winds.—The prevailing winds of the year were directly north or south. For periods of four hours observations the north wind was registered four hundred and nine times, the south wind four hundred and thirty-five times, in the eleven months of the year ending with November. The next most prevalent directions of the wind were S.W. and W., chiefly in the five months from May to September. December presented the peculiarity that for the first twelve days the wind blew steadily from the south and south-east, while from the 13th to the end of the month the direction was just as persistently from the north and north-east.

Births.—The birth-rate in Rome has often been stated to be exceedingly low by those who have not noticed that, according to the census returns, the city contains a surplus male population of over 34,000 souls. This excess of males is usually supposed to be due to the number of unmarried men belonging to the priesthood, and to the various monastic orders; but as there are only about 3,600 members of both these classes, we can thus account for but an insignificant part of the surplus. The garrison of Rome does not amount to 6,000 men; and indeed the true explanation of the large excess of males is found in the fact, that the shepherds and farm labourers inhabiting the Agro Romano outnumber the female population there by nine to one, there being 18,000 males to 2,000 females. True, a great number of those men are married; but, as most of the wives live elsewhere, their children are not registered in Rome, and the birthrate, as compared with the population, is thus proportionately diminished.

In the past year there has been a considerable improvement in the birth-rate, as it has risen from 25.4 per 1000 in 1870, and 27 per 1000 in 1871, to 29.4 per 1000 in 1872. The number of male children born is surprisingly large, the proportion for the year being 111 boys to 100 girls, which is very much above the average excess of male births in civilised countries. In close relation to this high proportion of male births, we find that the still-births among the boys outnumber those among the girls by two to one; and on deducting those still-born children, the proportion of boys to girls born alive is reduced to 109.2 to 100.

ON THE TESTING OF FLOUR AND BREAD.

By J. ALFRED WANKLYN.

In the course of my work for the chemical section of a Manual, which Messrs. Smith and Elder are publishing, for the Guidance of Medical Officers of Health and Public Analysts, I have had occasion to make some original observations on the subject of flour and bread, which appear to be called for at the present time. Notoriously, the detection of alum in bread is beset with difficulties, and is in a very unsatisfactory condition. This depends partly on the excessively small proportion of alum which is put into bread, and partly on the difficulty in dealing with alumina in presence of the ash of bread, which, as is well known, contains phosphoric acid, along with magnesia and lime, as well as silica. It has already been insisted upon by various authorities, that the testing for alum should not be on too small a scale: 100 grammes of flour or 200 grammes of bread appear to me to be proper quantities to operate upon; and I find that similar quantities have been recommended before. The novelties that I am introducing are, first, the acceleration of the incineration by the use of a jet of oxygen gas directed on the ignited mass. This is by no means unimportant, inasmuch as otherwise the task of incinerating 100 grammes of flour might last for a few days. Secondly, instead of using nitric or hydrochloric acid for the attack of the ash, I use sulphuric acid; and, thirdly, I use weighed quantities of reagents, and as little as possible of them, and at the same time avoid all unnecessary dilution. Attention to these particulars renders the detection of alum in bread a certainty. I will give an outline of the process.

The ash from 100 grammes of flour weighs 700 milligrammes, and, in a case of aluminised flour, may contain some 30 milligrammes of alumina in addition. I moisten this ash with a measured 0.5 cubic centimetre of oil of vitriol, then heat up until the oil of vitriol begins to volatilise, whereby the silica is rendered insoluble and the attack of the alumina in the ash is insured. Having done this, and allowed the ash to cool, I dilute with a little water and filter. The filtrate is then treated with 1½ gramme of pure caustic potash, which renders it alkaline and redissolves the alumina. The solution is then filtered, and

* Taken six times daily: at 7 and 10 A.M., and at 1, 4, 7, and 10 P.M.

† Only approximately correct, owing to the causes of death being returned as per week.

‡ Stillbirths alone deducted.