While examining fresh human supra-renal capsules, I frequently scratched out some of the nuclei from the reticulated fibres, and they had in most cases exactly the appearance spoken of by Ecker. The nucleus lay in the midst of granular flocculi, without any vestige of an enclosing envelope. When the meshes of the fibres were slowly torn across, however, the margin of the granular flocculi in some cases was so distinct, that one could scarcely doubt the existence of a cell-wall. This point requires further investigation. The general appearance of the medullary fibres is given in fig. 2, *b*.

Virchow mentions having seen true ganglion corpuscles in the human capsules; but adds that he does not look upon them as composing the medullary substance of the organ, but merely attached to the nerves.* In describing the supra-renal capsules of the land salamander, Leydig states that one part of them is almost entirely composed of dirty-yellow ganglion corpuscles; and that these, through a gradual change in their contents, go directly over into the fatty granular cells proper to the supra-renal body.

Vessels.—The supra-renal capsules are very freely supplied by bloodvessels. Nagel,† who described the arrangement of them very minutely, says that the greatest part of the capsules consist of capillaries, and that there are two sets of blood-vessels very differently distributed. One set pierce the fibrous sheath of the organ and penetrate directly into its substance, where part of them immediately divide themselves into a capillary network, which surrounds the columnar cell masses. Another portion pass through the cortical substance, and divide into branches in the medullary part. Some of these latter branches here form a capillary network, while others return to the cortical substance, and there, amongst the cell-masses, break up into capillaries.

Another portion of the arterial trunks, before entering into the substance of the supra-renal body, to follow the ultimate distribution just spoken of, course along for some distance in the fibrous capsule. I have been able to confirm this description, although not entirely. I never saw, for example, any of the branches returning from the medullary portion of the organ break up into capillaries in the cortical substance, which they had already traversed in the form of twigs. My idea of the distribution of the vessels may be given in a very few words. When the arteries arrive in the fibrous capsule of the supra-renal body, they divide into a number of branches, which spread themselves in the fibrous sheath over the organ. These branches penetrate at various points into the cortical substance, in which they subdivide into smaller branches. The greater part of the latter form a capillary network amongst the columnar cell-masses. While a few pass onwards into the medullary substance to supply its tissue with blood. The veins resulting from the reunion of the capillaries commence in the cortical part of the organ, and pass on towards the sinuses, into which they empty themselves. The arrangement of the bloodvessels is represented in Fig. 6.

Nerves.—The supra-renal capsules are supplied by almost more nerves than any other organ of the body. Nearly every section placed under the microscope contains some twigs. They run in such irregular order that I have not yet been able to satisfy myself with their true distribution. According to Ecker, however, the bundles of nerves surrounded by cellular tissue, which penetrate the cortical, give off no fibres until they have reached the medullary substance. They then break up into twigs, and form a network of nervous tissue.

Upon histological grounds, Kölliker says that he would regard the function of the cortical and medullary substances as distinct from each other. The former portion of the organ, he thinks, is probably in some way connected with the blood glands; while the latter substance, in consequence of its richness in nerves, and its containing cells resembling ganglion corpuscles, he regards as probably an apparatus connected with the nervous system. Leydig and Bergmann go even further, and say that the supra-renal bodies stand in so close a relationship with the nervous system, that they are entitled to be considered as a part of it. I cannot agree with either of these conclusions; because, although in man and some of the higher mammalia the cortical and medullary substances appear to be made up of perfectly different elements, this is not the case in all. In the horse and in birds, as Frey has pointed out, the whole supra-renal capsule seems to have a tolerably uniform structure, and even in man I have occasionally seen the medullary substance filled to such an extent with the cell-masses proper to the cortical portion, that scarcely any difference could be detected between the two parts. Moreover, from my

FIG. 6.

Transverse section of a human supra-renal capsule, showing the distribution of the bloodvessels. *a*, artery; *b*, veins; *c*, sinuses.

observations, chiefly those upon sheep, I am not prepared to admit that the large cells of the medullary substance are ganglion corpuscles; and further, the columnar cell-masses are so closely allied to some of the gland vesicles found in the digestive canal, especially to those of the Peyerian patches, as Frey pointed out, that I incline to the opinion that the function of the former is like that of the latter, secretory. As the aim of this communication is not to attempt an explanation of the function, but merely to describe the structure of the supra-renal capsules, I shall not at present enter more fully into the question.* I shall merely add that in the supra-renal capsules of the frog I have been able to trace the development of blood corpuscles. I have seen, as represented in Fig. 1, first, a collection of granules without any cell-wall, or the slightest appearance of a nucleus, (Fig. 1, A); secondly, a mass of granules surrounded by a delicate envelope; thirdly, a gradual aggregation of the granules in the centre of the cell; fourthly, the increased aggregation of the granules, giving rise to the appearance of a nucleus, (Fig. 1, A, 2); fifthly, a perfectly-formed granular nucleus, and a great decrease of the granular matter throughout the rest of the cell; sixthly, a homogeneous nucleus, and a total absence of granular matter, the cell having at the same time a general yellow hue; seventhly and lastly, a perfectly-formed blood corpuscle. (Fig. 1, A, 3.) Besides, there are a number of much larger cells in the supra-renal capsule of the frog; they are pale, slightly granular, have a very delicate cell-wall, a well-marked nucleus, and occasionally one or two nucleoli. (Fig. 1, B, 1.) Sometimes a cluster of nuclei is observed, which present no appearance of being enclosed in cells. (Fig. 1, B, 2.) This observation tends to support the opinion that the supra-renal capsules serve for the higher organization of the blood.

Somerset-street, Portman-square, May, 1858.

FIRST QUARTERLY METEOROLOGICAL REPORT FOR ST. THOMAS'S HOSPITAL FOR 1858.

By ROBERT DUNDAS THOMSON, M.D., F.R.S. L. & E.,

EXAMINER IN CHEMISTRY AT THE UNIVERSITY OF LONDON; AND LECTURER ON CHEMISTRY AT ST. THOMAS'S HOSPITAL, ETC.

In the first month of the present year the barometer was remarkably high, the mean altitude being upwards of thirty inches and a quarter. The weather was hence dry, the amount of rainfall being .72 in., and the number of days on which rain

* Archiv. f. Pathol. Anat., band xii., heft 4, w. 5, p. 483.

† Müller's Archiv. f. Physiol., 1836, p. 366.

January, 1858.—31 Days.

Week ending—	Barometer. Corrected Mean.	THERMOMETERS.				Adopted Temperature of Air.	Adopted Temperature of Evaporation.	Dew Point.	Elastic Force of Vapour.	Weight of Vapour in Cubic Foot of Air.	Wind.	RAIN.	
		Dry.	Wet.	Highest	Lowest							Amount	Days
	Inches.	°	°	°	°	°	°	°	Inches.	Grains.		Inches.	
Saturday, 2nd ...	30·483	42·3	41·2	46·0	38·3	42·2	41·1	38·4	·245	562·6	W.	...	...
„ 9th ...	30·269	35·7	33·5	41·2	33·8	36·5	34·3	29·6	·175	565·2	S. W.	...	...
„ 16th ...	30·268	42·9	41·0	47·6	39·0	43·0	41·1	36·9	·236	557·6	W.	·14	2
„ 23rd ...	30·364	38·7	35·9	43·3	37·1	39·3	36·5	31·3	·187	564·0	W.	·01	1
„ 30th ...	30·235	39·3	37·5	43·5	33·7	38·8	37·0	33·1	·201	562·0	S. W.	·22	1
Monthly Mean, from 1st to 31st, inclusive.	30·284	39·4	37·2	44·2	36·2	39·7	37·5	33·2	·201	562·0	W.	·72	5

Highest reading of barometer on 17th	Inches.	30·700	Highest reading of thermometer on 31st	52°·3
Lowest reading of barometer on 31st	29·946		Lowest reading of thermometer on 31st	26°·2
Monthly range	·754		Range of temperature in the month	26°·1

February, 1858.—28 Days.

Week ending—	Barometer. Corrected Mean.	THERMOMETERS.				Adopted Temperature of Air.	Adopted Temperature of Evaporation.	Dew Point.	Elastic Force of Vapour.	Weight of Vapour in Cubic Foot of Air.	Wind.	RAIN.	
		Dry.	Wet.	Highest	Lowest							Amount	Days
	Inches.	°	°	°	°	°	°	°	Inches.	Grains.		Inches.	
Saturday, 6th ...	29·847	39·2	37·5	46·9	37·1	40·4	38·7	34·7	·216	552·9	S. W.	·67	2
„ 13th ...	30·067	35·3	34·0	41·8	33·7	36·3	35·0	31·3	·190	561·8	E.	·36	2
„ 20th ...	30·009	35·5	32·8	41·3	34·3	36·4	33·7	26·9	·159	561·9	E.	1·06	3
„ 27th ...	29·915	34·0	30·7	39·6	31·6	34·6	31·3	23·4	·134	560·3	E.	...	...
Monthly Mean, from 1st to 28th, inclusive.	29·937	35·7	33·5	41·9	33·8	36·5	34·3	29·3	·175	559·3	E.	1·74	6

Highest reading of barometer on 25th	Inches.	30·300	Highest reading of thermometer on 7th	50°·9
Lowest reading of barometer on 27th	29·290		Lowest reading of thermometer on 26th	28°·2
Monthly range	1·010		Range of temperature in the month	22°·7

March, 1858.—31 Days.

Week ending—	Barometer. Corrected Mean.	THERMOMETERS.				Adopted Temperature of Air.	Adopted Temperature of Evaporation.	Dew Point.	Elastic Force of Vapour.	Weight of Vapour in Cubic Foot of Air.	Wind.	RAIN.	
		Dry.	Wet.	Highest	Lowest							Amount	Days
	Inches.	°	°	°	°	°	°	°	Inches.	Grains.		Inches.	
Saturday, 6th ...	29·606	29·6	29·1	36·9	30·9	31·2	30·7	27·2	·162	558·9	N. W., N. E.	·21	1
„ 13th ...	29·606	34·0	31·7	41·3	31·8	34·7	32·4	26·3	·157	555·2	N. W.	·40	2
„ 20th ...	30·142	47·7	43·6	54·6	43·8	47·9	43·8	37·0	·240	550·8	N. W.	·05	1
„ 27th ...	30·314	46·8	43·1	56·8	41·1	47·3	43·6	37·5	·241	553·9	N. W., N. E.	...	...
Monthly Mean, from 1st to 31st, inclusive.	29·613	41·0	38·3	48·9	37·9	41·7	39·0	33·4	·209	548·4	N. W., N. E.	·70	6

Highest reading of barometer on 22nd	Inches.	30·584	Highest reading of thermometer on 25th	62°·4
Lowest reading of barometer on 31st	29·312		Lowest reading of thermometer on 4th	28°·8
Monthly range	1·272		Range of temperature in the month	33°·6

Quarterly Summary.

Barometer. Corrected Mean.	THERMOMETERS.				Adopted Temperature of Air.	Adopted Temperature of Evaporation.	Dew Point.	Elastic Force of Vapour.	Weight of Vapour in Cubic Foot of Air.	Wind.	RAIN.	
	Dry.	Wet.	Highest	Lowest.							Amount	Days
Inches.	°	°	°	°	°	°	°	Inches.	Grains.		Inches.	
29·945	38·7	36·3	45·0	36·0	39·3	36·9	31·9	·195	556·6	W., N. E.	3·16	17

fell 5, against 18 in the corresponding month of the preceding year. The winds were principally from the west and south-west. The mean temperature was $39^{\circ}7$, or $1^{\circ}4$ higher than in January of 1857. February was a moister month, the quantity of rain which fell amounting to 1.74 in. The temperature was much colder than that of the foregoing year—by 4° ,—and to the same extent inferior to the average of London in February ($40^{\circ}1$) for sixty-five years. March was also a cold month, the temperature being $41^{\circ}7$ against $42^{\circ}5$, the average of London for sixty-five years.

The mean temperature of the whole quarter ($39^{\circ}3$) was $^{\circ}6$ lower than the usual average of the Metropolis. The greatest cold ($26^{\circ}2$) during the quarter occurred on the 6th of January, and the highest point the thermometer attained was $62^{\circ}4$, on the 25th of March.

From the returns of sickness which have been collected by the medical officers of health for London, the season appears to have been an average one in regard to the health of the community.

REPORT OF A CASE OF

OBSTINATE CHRONIC RHEUMATISM CURED WITH THE SULPHUROUS VAPOUR-BATH.

By JAMES WILLIAMS, M.D., Woburn, Bedfordshire.

JOHN D—, of Aspley Heath, a labourer of about sixty years of age, has been much exposed to weather during the greater part of his life. I have known him some years as a constant sufferer from rheumatism of a most obstinate and intractable character, though he has been frequently under medical treatment, and that, too, of all the neighbouring practitioners and public institutions in the county. His case being considered hopeless, he was obliged to give up ordinary labour, and lately he had taken an acre of ground upon which to amuse himself and eke out a bare subsistence, his nights being spent in restlessness and pain, and the little labour he was capable of pursued under constant pain and misery.

The principal parts of the body affected were the feet and ankles. He had, however, pains and soreness in the shoulder, back, &c. These pains frequently moved about, and were not almost present; they were sometimes in the hands. His general health was unimpaired, though the feet were constantly swollen, with great turgidity of the bloodvessels, rendering them partly varicose. The ankles are nearly stiff, and have been so for about two years. This circumstance made walking extremely painful and difficult, and if by chance he stepped upon a stone or an unlevel surface, the pain was so great as to cause him to almost sink upon the ground.

Amongst other remedies, I had tried to relieve him with colchicum, alkalies, lotions, embrocations, &c., which were not of the least service, and thus the case was given up. Some time after this a benevolent lady in the village applied to me on his behalf to know whether or not the sulphurous vapour-bath used by myself would relieve him, to which I replied in the negative. However, as she very much wished a trial to be made, I therefore agreed to give him a chance. I commenced with three baths, allowing an interval of one day between each. He was well steamed for about twenty minutes, and then showered with cold salt water before he left the bath. This practice I always adopt, as it seems to brace up the skin, and thus to fortify the system from a too relaxing action of the vapour. After these three baths he seemed much relieved, and the stiffness of the ankles considerably diminished. It now occurred to me that the principal disease being situated in the feet, the local application by means of a steam-bag would be sufficient to meet the requirements of his case, and it was consequently adopted. This mode of application was of no service; indeed he said he felt worse in his health, and therefore at his particular request returned to the general vapour-bath and shower afterwards. I gave him in addition, as he had a good deal of red sediment in his urine, a little bicarbonate of potash and tincture of colchicum, in a solution of the Heath cottage sulphurous water from the spring near Leighton Buzzard, twice a day. This he continued until he had had in all about seventeen sulphurous vapour-baths, with an interval of a day or two between each bath.

580

His recovery was progressive and steady, and in the course of about six weeks he had regained entirely the use of his ankles, could sleep soundly at night, and labour without pain or inconvenience. No wonder, then, that he presented himself at my surgery one morning, with a face beaming with gratitude, to express his thankfulness at being "perfectly cured." I must say I had no idea that such a result could follow in a case so obstinate as his. The patient has a ruddy complexion, and is, no doubt, of an inflammatory habit of body. Here there is the clue to our success. The use of this sulphurous water has been of marked benefit in rheumatism, and when conjoined with the vapour-bath, or made the basis of the steam, no doubt it acts as a great purifier of the blood, and by the free perspiration induced relieves the system of many impurities, which, circulating in the blood, are deposited in the various tissues, particularly the muscles and ligaments of large joints, giving rise to painful contraction in the muscles, and impediments to free action when deposited about joints.

Some persons may suggest that the potash, colchicum, &c., were the principal agents of cure in this case. This, however, may be safely refuted by stating that it was freely given, and tried in all its forms for years, with no benefit; in short, the case was not relieved at all, except by the use of the sulphurous vapour bath.

While upon this subject, I must express my regret at the falling off in the use of baths generally. Doubtless, many obstinate cases which now fall to the care of quacks and other pretenders might have been cured by orthodox practitioners with the aid of baths. I look upon the vapour bath as one of our most potent weapons in most chronic and many acute affections, and skin diseases, especially those where dryness and great irritation exist. I have lately cured a very obstinate case of scrotal herpes, in a gouty subject, where dry vapour, lotion, ointment, and other remedies were of no avail. This case, however, will more properly form the subject of a separate paper. It should be remarked, that though upwards of three months have elapsed of trying changeable winter weather, the rheumatic case continues a good and perfect cure, no return of the symptoms having taken place, the patient being able to attend to his ordinary daily labour, and walk miles to and from his work.

My vapour bath consists of a small wooden chamber, about four feet by three, and five feet high; it has doors which open and close like a cupboard; it has also a perforated zinc box fitted in the top, closed by a lid, which, when partially removed, acts as a valve to allow the exit of superabundant steam; this opening admits of water being poured from a large jug or other vessel over the patient while sitting in the vapour below. There is also a small zinc box, with a perforated lid fitted to the bottom of the bath, this receives the condensed steam or shower, and is emptied by a small tap underneath the floor. It is altogether very complete and inexpensive; and I shall feel much pleasure in showing it to any of my medical friends should they think it worthy of examination.

Aspley Guise, May, 1858.

A Mirror OF THE PRACTICE OF MEDICINE AND SURGERY IN THE HOSPITALS OF LONDON.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, collectas habere et inter se comparare.—MORGAGNI. *De Sed. et Caus. Morb.* lib. 14. Proœmium.

LONDON HOSPITAL.

OLD STANDING DISEASE OF THE KNEE-JOINT, WITH CONTRACTION; DIVISION OF THE HAMSTRINGS, FOLLOWED BY EXTENSION; CURE.

(Under the care of Mr. CURLING.)

THE following cases illustrate very well the advantage of forcibly straightening contracted limbs under the influence of chloroform, and dividing the tendons when necessary. The joint affected in each case was the knee; two of the patients were children, and one a young man eighteen years of age.