The medullary arteries are large and ramify in the white matter. They are straight, and penetrate at right angles to the surface of the convolutions; when they reach the white matter they curve, so as to run parallel to the bundles of nerve fibre, and give branches to form a pencil-like capillary network.

The cortical arteries penetrate the grey matter only, or as far as the boundary zone, and there break up into a capillary network, which, if exposed by sections parallel to the surface of the convolutions, will be seen to consist of—

a. A layer, a demi-millimetre in depth, of a large rectangular network parallel to the surface.

b. Two millimetres' depth, of a fine polygonal network.

c. One millimetre's depth, of a large network; not so large, however, as that of the white matter.

The capillary network of the white layer consists of fine but elongated meshes three or four times the diameter of the meshes of the grey matter. The veins are also divided into cortical and medullary. He denies the direct anastomosis of veins and arteries which has been stated to occur by Ecker. The veins here, as in other parts, are relatively large, but less numerous than the arteries.

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3. *Italian Psychological Literature.*

By J. R. Gasquet, M.B.

The *Archivio* for 1873 and 1874 contains fewer original papers than usual, though some of them are of particular interest and importance. Professor Verga continues his very detailed and careful account of *General Paralysis*, from which I can only find space to extract the following points. He remarks that inequality of the pupils is not peculiar to that disease, but occurs in all other varieties of insanity connected with organic affection of the brain. Some stress is laid upon the occasional loss of power over other involuntary muscles, of the bladder and intestine, causing ischuria and constipation, which are often relieved by the use of strychnia. It is singular to observe that some paralytics in Italian Asylums cease to open their mouths freely when they speak, as is the custom of their countrymen; but "speak between their teeth, like the English." In other cases, Dr. Verga has noticed that these patients always shout, as if they were speaking to deaf persons, either from not being able to regulate, or from not observing the loudness of their voice. He has also observed that, in the early stage of the disease there is occasionally genital excitement with persistent priapism. He sums up all the causes of general paralysis under the head of abuse of the moral and intellectual powers, or of the cerebral functions. It appears to be increasing in frequency in Italy as elsewhere, taking the place of other forms of insanity, especially in

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Lombardy and Piedmont; but he considers that it has no connection with pellagra, which is such a common disease there, and makes the remarkable statement that no peasant has ever been admitted into his wards in the Ospitale Maggiore of Milan with symptoms of general paralysis; on the other hand, his experience leads him to conclude that it is very common in the ranks of the medical profession. A dozen cases are narrated in the course of this very interesting paper; if they are fair samples of the disease as it occurs in Milan, it would seem to run a more rapid course than in England, remissions being rarer.

Dr. Riva publishes some elaborate statistics of the physical conditions of 304 insane patients, examined by him in the Asylum at Pesaro, and compared with similar observations of inhabitants of the same town in good health; I can only summarise the more interesting results. The healthy average weight of male Pesarese being about 70 kilogrammes (I omit decimals) the insane were found to range below this, the average weight of those suffering from general paralysis (early age) being 66 kilogrammes, from epilepsy 62, from melancholia 61, from mania 60, from acute dementia 58, from chronic dementia 57, from pellagra 56, and from idiocy 49. As to the shape and size of the head, the most prominent facts recorded are: that the head is generally smaller in the insane than in the sane, that the brachycephalic type is proportionately more frequent in the chronic and incurable than in the less grave forms of insanity, and that alterations in the shape of the head are notably more frequent in the occipital than in the frontal part of the cranium (in the proportion of 49 to 36).

Professor Porta, of Pavia, gives a careful description of a case in which, as the result of a severe wound of the head with fracture of the skull, the right central hemisphere sloughed away, leaving only the basilar portion intact. The mental faculties and the senses were unaffected, the only symptoms being paralysis of the left leg, and of the elevators and extensors of the left arm.

Dr. Calastri publishes some additional cases illustrating the influence of an attack of variola on the course of chronic insanity; 61 cases of the kind have been recorded in Italy, of which 14 recovered from their mental disease after the variola had passed away, 8 were improved, 28 were unaffected, the remaining 11 dying of the acute disease. He suggests that in order to discover whether the beneficial influence of small-pox is due to the disease in itself, or to the prolonged and abundant suppuration accompanying it, patients should be subjected to vaccination, and the effect on the course of their insanity noted.

Dr. Solfanelli, of Rome, gives a very interesting account of the connection between *heart disease* and insanity. He records 17 cases which he has carefully observed, and concludes that there is some evidence to show that the molecular cerebral changes to which insanity

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is due, must be owing to alterations in the capillaries in the brain. The circulation in the brain will naturally be affected by heart disease; thus cerebral anæmia will be the result of aortic stenosis, venous congestion and œdema will follow upon mitral regurgitation; but there is no apparent correspondence between the variety of cardiac disease and the form of insanity found accompanying it, and his cases fully bear out this statement.

Dr. Frigerio gives a good description of two cases of what he terms "*Melancholia Cataleptica*," which corresponds rather to our acute dementia than to melancholia attonita; in the latter case, post-mortem examination showed atrophy and hardening of the gray matter of the convolutions. He looks upon this variety of insanity as secondary to melancholia, and considers deficient power of volition as its principal characteristic.

Dr. Verga has been bold enough to propose a *new system of classification* to the Italian Phreniatric Society. He distinguishes the congenital forms of mental weakness ("Phrenastheniæ") from the "Phrenoses" acquired in after life, and divides these last into the simple forms of insanity, and those complicated with other diseases.

In a lecture introductory to his course at Milan, the same author has taken a more practical subject:—the position of medical experts in the law courts. He complains most forcibly of the manner in which medical evidence in criminal cases is received; and one might almost think he was writing of England and not Italy, when he tells us that an advocate was allowed to say, in the course of a trial, that "he wished for a jury, not of specialists, but of honest men, who knew what they said."

The "Affare Agnoletti," a "*cause célèbre*," occupied the law courts of Lombardy in 1872, and, as a large number of specialists were examined, it should perhaps be noticed here, although it seems to present no features of special interest. Agnoletti was tried for drowning his child, found guilty with extenuating circumstances, and condemned to hard labour for life. Eleven specialists were examined at the two trials which were held, and eight of these considered him to be only partially responsible, while three looked upon him as responsible for his actions. According to Dr. Verga's report, the families of both the father and mother of the accused seemed to have had insane members; he was himself known in his youth as "the madman," by which his fellow-townsmen of Ferrara meant to describe his impetuous fanciful character. He rapidly dissipated a tolerable fortune, and having suffered much from his creditors, and being separated from his wife, he determined to drown himself and his child (of whom he was passionately fond) together; but, on throwing himself into the water, he seems to have dropped the child, and made a sudden and instinctive effort at self-preservation. When examined in prison, he seems to have argued that he had a right to

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drown the child, and that he only did so to save him from an unhappy life. It would appear from these facts that Agnoletti was undoubtedly of unsound mind, and should hardly have been treated as a criminal without more prolonged observation.

In the course of his report, Dr. Verga makes some excellent remarks upon "moral insanity," which he describes as being "a subalienation of mind, standing in the same relation to insanity proper as varioloid does to variola. The mistaken lives of most of these persons are like some ill-arranged texture of which the warp is vanity and triviality, and the woof impetuosity and violence; according as one or the other of these prevail, they end in the prison or the Asylum."

It would appear that *drunkards* in Milan, when found in the public streets, are taken to the great Hospital, and placed in the insane wards there, when they are maniacally violent or comatose. Delirium seems to be more common than in England (viz., 336 cases out of 725); a circumstance I have also noticed in France. In one case of death during drunkenness, Dr. Verga found thrombosis of the cerebral veins.

The Italian authorities seem to require much persuasion to induce them to establish a *Criminal Asylum*, although the disturbance to the discipline of ordinary establishments, and the injury done to other patients, by their association with criminal lunatics, are clearly set forth by several writers, particularly by Dr. Capelli.

The Rivista Clinica di Bologna contains much matter of interest, which I am reluctantly compelled to pass over, because it has no connection with our specialty; but I am able to notice briefly the following papers. Dr. Frigerio has tested, by means of the dynamometer, the *muscular strength* of 325 lunatics, 241 criminals, and 52 other persons. Cases of idiocy, melancholia, and dementia stand lowest in the scale, then come epilepsy, general paralysis and mania, while cases of monomania give a higher general average than criminals, who stand considerably lower than the 52 other persons. It may be doubted how far such examination is possible and, whether melancholic or idiotic patients can be induced to put forth all their strength; so, too, whether criminals do their best under such tests; but at any rate, the statistics are interesting.

Dr. Lombroso gives 8 very carefully observed cases of *microcephalic idiocy*. Certain pithecoid characters were notable in all of these; thus, the teeth were fixed obliquely in the jaw, the glenoid fossa was altered in direction, the occipital foramen was turned backwards; on the other hand the frontal crest seen in the simian races was not observed, nor were the curved temporal lines, which are so marked in the negro, while in one case the incisors were absent, and in another a large osseous tubercle projected from the basilar apophysis, both of these peculiarities corresponding to nothing analogous among the

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apes. The skull was remarkably thin in one case, contradicting Vogt's statement that it is thickened in such conditions, and in another case (25 years of age) all the sutures, even the spheno-basilar, remained open, thus weakening Virchow's hypothesis, which ascribes microcephalic deformity to premature closing of the sutures. The peculiarities noticed in the rest of the body were, some of them, simian in character, as the increased length of the fore-arm and phalanges, and the great development of the external ear; but most of them seem to point rather to the negro race (yellow colour of the skin, prognathism, square shape of ear, retreating chin). One of these idiots resembled an ape in his habits, but the rest did not, and another (who had received the nick-name of the "man-rabbit") had many of the habits of rodents, although it appeared that he had had no opportunity of imitating them; thus he stamped with one foot when frightened or when beginning to walk, he would not sit down, but propped himself in a corner of the room; his favourite food was uncooked green vegetables, which he ate like a rabbit.

Dr. Raggi describes a form of *Keratitis* as frequent in cachetic lunatics, particularly in cases of pellagra which are tending to a fatal issue. An opacity is perceived on the cornea, which in a few days spreads through its whole thickness; softening follows, when the aqueous humour escapes, and the iris projects; both eyes are usually affected in succession, without any apparent pain. He looks upon this affection as "neuro-paralytic," produced in the same manner as the corneal ulceration which follows experimental section of the trifacial. Since in this artificially produced keratitis protection of the eyes preserves them from destruction, he has tried keeping them firmly closed by bandaging, in the first appearance of the disease, and he finds it the only serviceable treatment. He might have supported his practice by Trousseau's precisely similar experience of the ulcerative keratitis which occurs during the course of enteric fever.

We have received the prospectus of a new periodical, the "Rivista Sperimentale di Freniatria e di Medicina Legale," which is to be published every two months at the Asylum of Reggio-Emilia, under the direction of Professor Livi, whose name has been frequently mentioned in these pages. It will be devoted to the practical study of insanity and of forensic medicine; the staff of contributors appears to be a very strong one, and we trust, therefore, that it may have a long career of usefulness before it. J. R. G.

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4. *American Retrospect.*

By Joseph J. Brown, M.B., M.R.C.P.E., Assistant Physician Royal Edinburgh Asylum.

American Journal of Insanity (July).—Dr. John P. Gray gives a condensed account of his pathological and microscopical investigations of 52 cases of insanity. He states that the vessels, nerve cells, and

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