

regulated, and of the blandest and most nourishing nature.

As improvement progresses, other symptoms may supervene indicative of intra-cranial mischief. Where the indications are those of meningitis, the iodide of potash and counter-irritants may be used with advantage. Removal to a cooler climate is essential: as a general rule, it is desirable that the sufferer should not, for a long period at least, return to a hot or tropical climate, and he should be guarded against all undue exposure to heat work, or mental anxiety of any kind. The sequelæ of sun-stroke are frequently from such causes most distressing and render the patient a source of anxiety and suffering to himself and to his friends.

The less severe symptoms—those, probably, indicative of the slighter forms of meningitis, or of abnormal brain or nerve change—occasionally pass away after protracted residence in a cold climate, but they are not unfrequently also the cause not only of much suffering but of shortening of life. It is not possible, in a short notice, to describe all the conditions that may result; they point to permanently disturbed, if not structurally injured, cerebro-spinal centers, and the treatment required is as varied as the symptoms presented.

#### PUERPERAL ECLAMPSIA.

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The pathology of puerperal eclampsia continues so involved by the confusion of conflicting opinions, that the student is more confounded than were the builders at the tower of Babel. But, notwithstanding this diversity and contrariety of opinion, there are a few facts which may be profitably studied in connection with recent discoveries.

1st. About ninety per cent. of the cases of puerperal eclampsia\* are associated with albuminuria. †

2d. Much the larger number of the autopsies of women dying of puerperal convulsions exhibit renal lesion; and Bright's diseases in women are most frequent among the child-bearing and during the child-bearing period. Hence the corollary is inevitable, that pregnancy stands in the relation of cause.

To this, however, there is an apparent contradiction, in that primiparæ and plural pregnancies are more liable to convulsions than multiparæ, whereas, by parity of reasoning, the reverse result should obtain.

The excess of liability in primiparæ and plural

\* In 50,928 deliveries reported by Clarke, Collins, C. Johnson, Skeleton, and George Johnson, there were 138 cases of convulsions, of which 109 were primiparæ,—seventy-nine per cent.

† Nat. Med. Jour., vol. ii., p. 1, et seq.; also, Obst. Jour. Great Britain and Ireland, vol. ii., p. 254.

pregnancies, and the additional fact that depletion of the gravid womb is the most certain method of terminating the convulsive seizures, have given undue prominence to the mechanical theory of causation,—obstructive hyperæmia of the kidneys. I acknowledge the force of this hypothesis, but cannot accept its absolute verity. That a kidney engorged either with arterial or venous blood should supply a diminished quantity of urine, and that that should be stained with blood and contain albumen, either or both, is not remarkable, nor is it extraordinary that such a condition should result in the establishment of permanent lesions, similar to if not identical with the ordinary post-mortem appearance of the kidneys found in cases of Bright's disease. But it is the presence of the gravid womb, not of every abdominal tumor,\* which is so frequently associated with albuminuria. Nor is this phenomenon incident only to the period of greatest mechanical disturbance, but to the condition of gravidity; and oftentimes it is present long anterior to the commencement of convulsions or to the completion of the term. It is but a symptom, denoting, it may be, "change in the blood-pressure" (Wagner) either in the renal vessels or in those of the whole body, or alterations in the parenchyma or substance of the kidney, or, more probably, alterations of the blood. If, then, interruption of the blood-current through the emulgent veins be a factor, it must, like many of the accidental phenomena of uterogestation, be classed as an adjuvant,—the culminating event,—and as such offers an explanation of the greater frequency of convulsions among the primiparæ, because of the greater tension and rigidity of the abdominal walls, and the unaltered relations of the angle of pelvic inclination. Pregnancy, not the period of utero-gestation, is the essential factor. The cause, then, must lie in the altered relations, not of the parts which lie in anatomical contiguity, but of the functions of the animal economy.

During pregnancy the mass of blood is augmented, its constituent fibrin is increased, the albumen is diminished, the number of red blood-corpuscles is reduced (most markedly so during the later months), its temperature is elevated, the proportion of solids lessens, and the quantity of water increases with the progress of gestation, the normal relation which exists between the fibrin and water becomes disturbed, there is hypertrophy of the left ventricle the heart becomes stronger, arterial tension (especially in the primiparæ) is increased, and during labor the blood-pressure (Fritsch), both arterial and venous, rises, while a uterine contraction is present. Thus, conditions favoring fibrin-separation and congestions are present to a remarkable degree, and various viscera—brain, heart, lungs, and kidneys—may be temporarily congested. There are also added and retained effete products, and consequent

\* Albuminuria frequently results from impediment to the evacuation of the bladder, occasioned by pressure of fibroid, or other tumors upon the ureters." Hue has observed such cases. Amer. Jour. Obst., vol. ix., p. 159.