

## AMERICAN INTELLIGENCE.

## ORIGINAL COMMUNICATIONS.

*Indigo Detected in the Urine.* By CHARLES FRICK, M. D., of Baltimore. (Extract from a letter to the Editor.)—*My Dear Sir:* I have lately had presented to me for analysis a specimen of urine, which contained a substance so rarely met with, that by some its occurrence in this secretion has been altogether denied—I mean indigo; and I believe that the present case is the first one reported in this country. Drs. Prout and Simon, and also Dr. Hassell, speak of having detected it in one or two instances where no indigo was taken into the stomach, as in the present case; and the latter observer proposes a hypothetical explanation of its formation in the human body. In the present instance it occurred in a patient fifty years of age, labouring under hemiplegia of some months' duration. The urine was slightly albuminous, specific gravity 1.011, full colour, and exhibited a few tube casts, and hypertrophied epithelium cells under the microscope. The reaction was faintly alkaline when I received it. On standing a few days, the colour changed to a dull leaden hue. On the surface, particularly around the circumference, and in some degree coating the sides of the vial, I observed a slight deposit of a deep blue colour. This hue also predominated in the deposit, which, under the microscope, was found to consist of urate of soda granules, and prisms of triple phosphate, mixed with an amorphous substance, in colour of a deep blue. I suspected this to be indigo, and was confirmed in my suspicions by an analysis made of it by my friend Dr. Steiner, of this city, as well as my own subsequent examination. The reactions it gave were as follows: The deposit was first digested in dilute acetic acid, and then washed in cold water. Muratic acid neither dissolved it nor changed its colour. In sulphuric acid it dissolved, forming a solution of an indigo colour, but with nitric acid the colour changed from blue to yellow. On warming a portion of the sediment with dilute alcohol, to which grape sugar and potash had been added, the fluid lost its blue tint, and assumed a yellowish red colour, which, on shaking, was converted into a deep blood red, and then rapidly into a green. After resting some hours, the green tint disappeared, and the fluid became a yellowish red. Townes states that this change of colour is due to the sugar being oxidized, and the indigo reduced.

BALTIMORE, June 10, 1856.

*Case of Monstrosity.* By H. C. MARTHENS, M. D., of St. Louis.—I have lately met with an instance of the most remarkable deviation in the development of the human form, probably the most singular one on record.

The subject is a white male child, having a well-developed head and trunk, but with a total absence of the upper and lower extremities. The head is of good shape and size, perhaps a little too large. The eyes are bright and intelligent. The body is also well formed. The clavicles and scapulæ are in place, but there is not a rudiment of either arm visible. The skin is carried smoothly over each shoulder, except a small central dimple. The pelvis also

is natural; here, likewise, there is no trace of a lower limb. The cuticle covers the acetabulæ smoothly, save a nipple-like projection in the centre.

The child was born in New Mexico, of American parents; is now sixteen months old; sprightly, active, and intelligent; has generally had good health. The mother is an educated and refined woman, as much attached to and interested in her offspring as if it were perfect in form.

SAINT LOUIS, Mo., June 10, 1856.

*Experimental Physiology.* By DAVID R. WALTON, M.D.—Among the interesting lectures on Medical Science in Paris, none are pursued with more zeal and success than the several courses of Experimental Physiology.

M. Coste, at the Collège of France; M. Claude Bernard, at the same Institution, and at the Sorbonne; M. Flourens, at the Garden of Plants; MM. Wurtz and Verneuil, at l'Ecole Collège de Médecine; M. Brown-Séguard, M. Béclard, and M. Martin-Magron, at l'Ecole Pratique; M. Charles Robin, and others in private courses, each pursuing specialties, and all contributing to the discovery of elementary truths, are harmoniously developing the science of Physiology.

A circumstance which promises the most valuable results is the surrender of preconceived theories opposed by legitimate experimentation; the unanimous pursuit of facts as individualities, and a natural arrangement of analogical facts; thus establishing doctrines and practice as *spontaneous necessities*—i. e., doctrines flowing from demonstrated facts. This characteristic may be easily illustrated by stating what passed this day before the pupils of M. Brown-Séguard, late Professor of the Institutes of Medicine and of Medical Jurisprudence in the Medical College of Virginia. Transfusion of blood formed the subject of experimentation in his regular course this day. The Professor first showed a dog, into the jugular vein of which had been, the day before, injected a mixture of blood drawn from two pigeons and a rabbit. The good state of this animal, in which circulated the blood of distant species, formed a contrast with the results obtained in the experiments reported, and the doctrines maintained by MM. Prevost and Dumas, who say the blood of a bird is poison if introduced into the vein of a mammal, and who maintain the incompatibility of the blood of different species. The following experiments show the grounds of error in said doctrine; and at the same time are suggestive of the true method of transfusion necessitated by dangerous hemorrhage.

It will be seen that it is the state or condition of the injected blood, rather than the species of animal from which it is derived, that determines its poisonous effects.

M. Brown-Séguard commenced by injecting into the veins of animals their own blood in different states. First experiment: blood was drawn from the right carotid of a dog, and as it flowed it was beaten by a feather brush to separate the fibrin and to oxygenate the liquid. A portion of this aerated blood was injected into the jugular vein of the same animal. At the expiration of an hour, more blood was taken from the dog, defibrinated and injected as before. This series was repeated eight times in six hours. The third abstraction was nearly devoid of fibrin, and the last five appeared to be destitute of any; but it was only when the blood had lost its power of being aerated, and when the black blood was injected, that fatal convulsions occurred.

In some animals blood was drawn from arteries, and in others from veins, and beaten from the commencement of the flowing till the same was injected into the veins of animals from which it had been drawn, or of animals of a