proceeded from the other side of the gland, and terminated in greater veins. We could not detect any lymphatic vessel going out. The parts being arranged on a table, he introduced a tube into a lymphatic vessel, towards the gland, when, after moderate pressure, we saw by the aid of the column of mercury, all the lymphatic vessels of the gland in nodules—not only filled, but the mercury soon began to flow from the veins. Upon increasing the pressure, this vein was turgid with mercury, when a ligature was passed round it. We could not detect in this experiment any rupture of vessels, after the most accurate examination. At length, having opened the thoracic cavity, we saw the thoracic duct turgid with transparent chyle, without a globule of mercury; which proves that mercury, in the former experiment, did not pass from the thoracic duct into the veins.

Should any one wish to establish that the mercury passed from the lymphatic vessels of the gland by ruptured vessels, after such slight pressure, it would be necessary, after the increased pressure, that the mercury should be effused from this rupture not only into the vein, but also into the cellular tissue surrounding the gland, so as to be extravasated; which was by no means the case.

Afterwards, an opportunity offering itself through the kindness of the veterinary professor, Numan, my instructor endeavored to repeat these experiments in a colt. He filled with mercury the lymphatic vessels in the groin, at the os humeri, and in the mesentery; but after the mercury had entered the glands, an effusion of mercury always occurred from ruptured vessels. After employing less pressure, the glands, indeed, were filled with mercury; but the mercury neither passed from sound, nor from injured and ruptured glands, into other vessels, so that neither the lymphatic vessel going out, nor the adjacent vein, was filled. Perhaps the parts were more or less putrifying, from the increased temperature of the atmosphere, although no putrid odor was evident in the body. If the passage of the mercury from the glands into the veins was the result of rupture of the vessels, I do not see why we nowhere observed mercury passing from these glands into veins, but into the cellular tissue between the lymphatic vessels of the gland, which was expanded into large vesicles.—*Lon. Med. Gaz.*

THE FOETAL GENITAL ORGANS CONSIDERED IN REFERENCE TO HERMAPHRODISM.

BY A. F. MOIR, OF ARUNDEL, ENGLAND.

LOOKING over a few foetal preparations, varying from the second to the sixth month, my attention was casually directed to the conformation of their genital organs. The appearances (by a cursory examination) were at first believed to be the result of malformation. On a more minute and comparative view, we were, however, satisfied that it must be considered as the normal development of these organs in the earlier stage of organization. The subject, as far as I am aware, has not hitherto been investigated; I would therefore caution your readers neither roundly to con-

demn, or implicitly believe, the following statements, until they have examined the subject for themselves, which can be easily and satisfactorily accomplished by any one having access to a series of such preparations.

In a fœtus between the second and third month, examined by a microscope of a medium power, the rudimentary penis could be distinctly observed inclined downwards ; when elevated, its lower surface was seen cleft in the course of the urethra, with a similar cleft or fissure, bordered by a slight projecting fold of integument, extending from its base, and in the mesial line, to near the margin of the anus.

In two or three others more advanced, a similar conformation of parts could be distinctly seen with the naked eye. The cleft in the urethral surface of the penis was continued in the direction of the bladder, further than we could detect even by the aid of our microscope ; but as yet, not having dissected the parts, we are unprepared to state whether or not it may be continued as far as the orifice of the bladder. The *scrotal* cleft, or, from the now increased development, more properly *fossa*, was of a triangular shape, its base being towards the penis, and the marginal projecting folds of integument meeting, and slightly united at its apex, which (excepting the penis) might have readily been mistaken for the embryo organs of the female. In one fœtus in particular, between the third, or about the fourth month, as nearly as could be ascertained, the parts were so distinctly seen, that had it been in the absence of further, or comparative illustration, we should have had no hesitation in considering it as the usual anormal condition, tending to, and explanatory of, the nature of the anomalies occasionally occurring in these parts. The penis was considerably developed, covered superiorly by a continuance of the common integument of the abdomen, and inclined downwards ; when elevated, a similar condition of the parts, as already described, in a progressive state of development, was distinctly observed. This preparation is valuable, inasmuch as it must invalidate any objection that might be urged against us, in confounding the penis and clitoris ; a mistake which can be easily avoided by considering the locality of the two, and *that* in reference to the parts in their immediate vicinity.

From the above sketch of the organization and development of the fœtal genital organs, studiously endeavored to be faithfully described, and as concisely as consistent with perspicuity, we deduce the following inferences :—That prior to, or between the fourth or fifth month, (for we cannot be precise as to the exact period), the penis consists of the corpus cavernosum, covered superiorly by the common integument of the abdomen ; and inferiorly, a cleft or fissure (terms vague, but sufficiently expressive), is observed in the course, afterwards to be occupied by the urethra (the formation of which, with other peculiarities, we have not yet examined) ; that a similar cleft extends from the base of the penis, in the mesial line, to near the margin of the anus, bordered by projecting folds of integument, which gradually increase, and by their union form the scrotum ; that, by the retarded organization of either of these structures, we can readily account for the various species of genital malformation, known by the general name of *hermaphroditism*, and other *irregularities* occasionally met with in these organs. For the present, however,

we forbear to generalize further, well knowing that the importance of the subject precludes all speculation ; and that it is only by a patient and minute examination of a series of foetal preparations that the *truth* can be elicited.

Indeed, the chief object we have in view in soliciting the insertion of the above remarks in your excellent journal, is the desire that others, whose opportunities are more extended than our own, may co-operate with us in an investigation at once so interesting and curious ; otherwise common prudence should render us cautious in communicating observations so crude and meagrely *jumbled together*.—*Ibid*.

EFFECTS OF MOUNTAIN ELEVATIONS UPON THE HUMAN BODY.

BY P. CUNNINGHAM, SURGEON, R.N.

THE singular contrast of high mountains in the northern hemisphere producing reverse effects upon the travellers ascending them, to those in the southern hemisphere, never having been, to my knowledge, animadverted on, a short parallel between the two may not be unacceptable. At high elevations in the northern hemisphere (such as the top of Mont Blanc), there is a strong determination of blood to the head, indicated by swelling and lividity of the face and lips, sleepiness, and bleedings from the mouth, nose, eyes, and ears ; while at similar elevations in the southern hemisphere there is a strong determination of blood in a contrary direction, indicated by paleness and shrinking of the features, sleeplessness, giddiness, faintness, and vomiting ;—apoplectic symptoms thus characterizing the first ; and all the usual accompaniments of fainting, the second. The treatment affording relief in each is also equally opposite (with the exception of the horizontal posture, which is useful in both) ; the stimulant drinks, and the stimulant applications to the external parts, such as the mouth, nose, and ears, so beneficial in the southern affection, being hurtful in the northern one. The apoplectic symptoms experienced upon Mont Blanc and other high northern mountains, have been hitherto ascribed to the great rarefaction of the air, whereby the soft parts of the human body are permitted to be expanded by the reduction of the atmospheric pressure upon them ; but as no such effects, but, on the contrary, effects of an opposite nature, are produced by similar elevations in the Andes of Southern America, we must consequently look to some other cause than atmospheric rarefaction to account for them.*

In South America there are two distinct species of affections noted as liable to attack those unaccustomed to high ascents : the first being the usual difficulty of breathing arising from atmospheric rarefaction (common to all high elevations throughout the world) ; and the second, the more alarming one, previously spoken of, which proved so fatal to Bolivar's army at the crossing of the Andes, as recorded in the interesting "*Memoirs of General Miller*." The first is known in Peru by the name of *punya*, and the second by that of *soroche*, in consequence of a belief that

* It is said, however, that when Humboldt ascended Chimborazo, to the height of 10,798 feet, blood issued from his eyes, lips, and gums.—*Ed. Gaz.*