matic cord. There is a good sized cyst, lined by a membrane, polished and a little wrinkled, filled with a soft, tawny-looking, granular matter, resembling the altered coagulum of blood which I have observed in ordinary hematocele after long maceration in spirit. The tissues around the cyst are thickened and indurated, just like those around an old hematocele of the testis. There is a hernial sac immediately above it, and a hydrocele below, with the sac open for some distance up the cord as far as the cyst of the hematocele, which does not communicate either with the tunica vaginalis or the hernial sac."

SOME
GENERAL CONSIDERATIONS OF CLIMATE,
WITH
REFERENCE TO HEALTH AND DISEASE.*

By T. WILKINSON KING.

A few authentic facts, of a rare and curious kind, which I have set down, may serve to render these pages of interest, even to those who are unprepared for, or disinclined to, a careful and a complete professional reasoning.

It is one chief object here to enforce general principles, along with those which relate to the influence of temperature, with reference alike to physiological and pathological states.

I must premise that my readers should be familiar with, or at least that they must in a measure allow, the following general laws:†—

Firstly, That health is a certain necessary correlation of the whole corporeal functions, the innate irregularities or disproportion of which constitute the peculiarities of temperaments; and,

Secondly, that the functions oscillating within the limits of health demand correlative actions in all parts and of various kinds.

These ideas of fluctuating actions and corresponding or compensatory functions in all parts, belong both to physiology and pathology, and they form the basis of the following remarks:—

The heat of our summer has its peculiar effects and many distinct secondary consequences, and I presume that the influence of the tropics corresponds to these, without any great differences beyond those of degree. Certain functions are excited, and others, in consequence, become depressed. A warm climate operates especially on the surface of the body, exciting the excretory and nutrient functions; the follicles every-

* These reflections were in part read before the Physical Society of Guy's Hospital in 1840. I ventured to introduce them thus: After spending nearly half my life in that great school, divided pretty equally between observation, reading, and reflection, I confess that I thought myself in a measure fitted to study the medical peculiarities around me when I first landed in a tropical region. I certainly anticipated to corroborate and extend, and, perhaps, to correct my physiological views of disease; and I now hope that a brief account of some of my conclusions will not be deemed useless, whether in relation to climate, or the nature of the human constitution.

† The doctrines here referred to I have taken some pains to explain in a little book, "On some of the First General Laws or Fundamental Doctrines of Medicine and Surgery," London, 1840; and, again, in a paper "On Variable Diseases," in the October Number of Guy's Hospital Reports, 1840.

where become enlarged, the heat of the body is augmented, and the perspiration copious and habitual. Many diseases of the skin indicate the tendency to hypernutrition. In Africa the lengthened ear-lobe, the pendulous breasts, and other excesses, are almost natural.

Along with simple cutaneous hypertrophy, in the form of moluscum, I have even seen the breasts of a male negro assuming the roundness and prominence of the young female (and that without any discoverable masculine defect).

I was greatly struck on another occasion to find the cicatrix of an injury (I believe a burn) in the male not contracted as with us, but presenting a globular sepile tumor, the size of an orange, soft, flexible, and equable in feel as the skin itself of the negro lad on whom it grew, and of the same color and aspect altogether. This effect, I was informed, was not very uncommon.

Here, by the way, we have a hint as to the treatment of cutaneous contractions, and I may add that the negligent exposure of persons who have been burnt or scalded (as if they wanted no more heat for months) is one great cause of death in these cases by visceral inflammation.

Mr. Edward Menzies, of Kingston, Jamaica, informed me that he had seen at least three examples of a cutaneous prolongation in the place of the umbilicus, and about the size of the little finger, in negro boys between the ages of eleven and fourteen years. This adventitious formation seems so common as to have obtained a distinct name, which is "pim." The like formation has been spoken of as occurring in Paragua (*Med. Gaz.*, vol. i, p. 167). Dr. Arbuckle, a very intelligent physician, who has lately returned from a seven years' residence in Maranham, near the mouth of the river Amazon, informs me that he has seen instances of the umbilical prolongation, as also one of rugous hypertrophy on the loins, which he attributed to the individuals having been flogged. Integumental masses about the face, and common elephas were by no means rare with him. He has noticed the breasts of males too full, and once those of the female much hypertrophied. Cancer he found rare.

The mal de San Lazaro, Coco bey, and Elephas, are common tropical diseases, and they indicate various dispositions, of which excessive superficial nutrient action is always the first. I regarded the embrowned skin of white settlers as an instance of cutaneous hypernutrition. Distressing "prickly heat" and erythema in new-comers seemed not less so, although evidence of other disturbances in addition.

The first effect of increasing warmth, whether of our own spring or the visit to the tropics, is a very agreeable sensation of ease arising from the facility with which the animal functions are performed. It is to numbers a most joyous perception of life. The appetite is good, and the mind clear, and the body active, and this is only too transitory; it is the sign that the internal functions are losing somewhat of their natural stimuli. The warm bath and the operation of shampooing have analogous results.

The European infant flourishes for three or four years with the greatest promise between the tropics; but soon the digestion and nutrition seem to fail, as the sunken eye and sharp contracted features too well

express.* We can hardly err in imputing the decline of the internal processes to the excessive activity of the surface. The copious transpirations diminish the circulation, digestion, and nutrition, and beyond this absorption is in excess. The body wastes, the face grows pale. Languor indicates enfeebled muscles, and the more indolence increases the more it drags on the mischiefs of defective nutrition to the body and mind. Certainly some internal organs tend to become more and more inert and more and more incapable of excitement.

In a warm country a man awakens languid, just as in our winter we may rise too little refreshed from a too warm and luxurious bed; and so, again, the feeble complain of the oppression of clothing, and, as well as the sick, find temporary refreshment in exposure. The consideration of the balance of the capillary functions will go far to explain, and I hope rectify these feelings. Excessive actions of the surface prevent the due nutrition of the muscular as well as of the nervous and other organs, but the artificial reduction of the superficial functions, which seems and which should be salutary, must be very cautiously conducted, for even in the tropics chronic as well as acute affections are in a high degree subject to the effects of exposure and without existing disease, especially in milder climates; the disturbed balance will always be to the prejudice of the weakest or most susceptible organs. It needs not to be said that immediate feeling is not a safe criterion, yet still men die daily from trusting to the treachery of grateful feelings.

My readers may, perhaps, spontaneously recur to the well-known facts concerning the inertness of medicines, and the large doses required in hot countries, as additional proofs of the tardy dispositions of many of the organs. It is to be continually remembered that the warmth which facilitates and expedites development, ultimately deprives internal organs of their due share of stimuli, but perhaps some organs are deprived in less proportion than others. Doubtless, too, this is not the whole, though a very necessary part of the study before us.

I believe truly it should be made to appear that the decline of the internal functions is not equal or uniform. Probably the action of the kidneys fails most considerably, and that of the stomach is most under casual control, as by diet, condiments, and drinks.

The function of the liver I suppose to be for a period excited by the mingled fluids of the Portal veins, and even the activity of the lower intestines seems materially to be governed by the nature of the ingesta.

The generative organs, with all the rest, attain their development early, and when the judgment is feeble; and this, together with the evils of indolence, may involve the chief points of peculiarity in their functions. Of course I do not exclude the influence of wines or the like.

It has already been hinted that the cutaneous parts of the genital apparatus are not to be considered as free from a tendency to hypertrophy. Mr. E. Menzies tells me it was nowise uncommon for the surgeon to send away applicants for trusses, whose complaints

were pretty certainly not adapted for such treatment; and yet that true herniæ were still very common, and often large, as many are aware.

The activity of the surface is, I think, calculated to account for the completeness or great degree of reparation which I every now and then observed abroad, on dissection after severe inflammations.

A few weeks since I noticed the heart of a young person rendered nearly white in consequence of severe inflammation, and I pointed it out as altogether new to me and said, I should not have anticipated seeing such a change in this country. There was afterwards reason to conclude that it was in the West Indies that this pericarditis had arisen and subsided.

The most marked old remains of arachnitis that I have ever dissected occurred to me among the inspections that I performed in the Kingston Hospital: in a young man who had no disturbance of mind. I observed, too, a similar state of the whole liver, which seemed to me at the time unique. The organ was uniformly diminished, tough, and flexible, and membranous beyond what I suppose can ever happen here.

I do not doubt that this is the place to claim for warmer countries the power of subduing many settled and severe complaints of temperate regions.

These last statements concerning reparative action will not, of course, be thought applicable to the period of extreme decline of any necessary function. They are intended as proofs of a preceding stage, which happily is often an enduring one, and which, being understood, offers the best assurance to all medical views.

The great degrees of reparation after severe phlegmasiæ, &c., are in correspondence with a remark which was occasionally made to me, and of which I witnessed good illustrations. I think it is quite certain that at least in the West Indian islands severe injuries and operations have in the main a more favorable issue than in Europe; indeed, I think the course of some was devoid of the least excessive disturbance, notwithstanding, I may add, that the physician's aid may have been sometimes too ready, or too tardy, or not quite right.

Again, the kinds and forms of diseases seem to me to offer evidence of the same controlling force. The rapidity of recovery is not less remarkable than that of the accession or the relapse. Strumous and many other chronic diseases are little known. Ascites is a protracted disorder, and often intermits for months or even years. Also, it is often probably more of a simply peritoneal than a visceral disorder, as with us.

It must not be lost sight of, however, that all these specific examples show the general state of the tropical constitution (if I may so speak), and are not designed more for pathological than for physiological illustration. It must be sufficiently plain that the approaches of disease will depend in some degree on actions like these; yet a certain equipoise of functions is maintained, and often for a long period, and not seldom in spite of the most excessive and varied disturbances with which man dares to try his frame.

To many persons, under favorable circumstances, the whole series of tropical influences is found to be only and altogether advantageous. How the constitutions of men become happily adapted to the severest changes of climate, is much more wonderful than

* This was the first fact that struck on disembarking, in the persons of three slender embrowned children, who stood listless on the jetty of a little out-port of Jamaica; I may say that such wasted physiognomies are never seen in our streets.

explicable; yet I suppose that a truly philosophical expression of the fact is involved in the theory of the functions which I have stated—their balance, oscillations, and various compensatory efforts. On many points of this topic my own theoretical views might be extended, but I have not thought that the exposition of them would be welcome at the present time, nor do I imagine that delay will render them less crude.

Now, with respect to general etiology, I think it fair to assume that the organised covering of our bodies is nearly the largest organ we possess. That which is subject to the influence of climate most directly, most severely, and especially most variably, is scarcely less in absolute weight than the whole muscular system. It is also pretty evident that the functions of the skin and its appendages are allowed the freest limits, the widest range between depression and exalted activity.

We have previously dwelt upon the evidences of excited cutaneous actions and their consequences. Need we inquire what must be the degree of mischief when this great function, long exaggerated, finally becomes impeded? It is a tropical proverb, "If you are ill and cannot perspire, write home to your friends"—that is, solemnly, set your "house in order."

Acute tropical disorders are truly rapid, and this at a glance seems analogous to the rapid progress of vegetable and animal development; but this I regard only as an instance of false analogy. The decay of old age is very gentle even under the equator, and chronic diseases are abundant. The explanation of the rapid changes lies, probably, in the reflection on the long decline of many functions, and the sudden perversion of the great enveloping organ in the height of its activity.

There does not appear to be a necessity for supposing any peculiar causes of disease in the tropics. Both the predisposing and exciting agents—the remote and direct causes—may be allowed to be of the same nature everywhere; their differences consist in degrees and combinations.

The weight of evidence with respect to cold in every climate is far above what can be produced with reference to any other morbid excitant. Solid authority, common experience, and the records of facts, place cold before all the causes of disease in point of certainty and frequency. Testimony is as conclusive on this subject for the tropics as for the temperate zone, and I find it especially defined in relation to the very common relapses of the acute tropical affections.

No one attempts to oppose the opinion that the causes of derangement in the temperate zone are not in full operation to the equator, and I am not aware that any conditions remain to be accounted for besides those which are specific—*i. e.*, partial and local.

The frequency with which each of the great organs is liable to derangement, in the way of excitement, cannot be fairly stated without especial reference to localities, which is apart from my present aim; but it is manifest that the susceptibility of parts to disturbance is very much in accordance with the exposition I have made of their proportionate disposition to activity. After the skin, the intestinal canal, and

then the liver, is the part subject to acute and other changes.

I have before adverted to the urinary organs. I have concluded that they become too far removed from a tendency to diseases as from a proper activity. With respect to the lungs, physiologically, I can say nothing, but their disorders are numerous enough wherever sudden and serious alternations of temperature occur. As to the brain, I cannot speak satisfactorily.

The manner in which I have treated this subject must not induce any one to suppose that any set of affections is not to be met with in the warmest countries. I think, however, that the frequency of all, and certain modified characters, will ever be found to depend mainly on the causes which I have brought forward.

The circumstances of limited and peculiar localities must, I presume, bear a similar kind of interpretation in any part of the earth. In the tropics, however, the indolence of the master, and the oppressions of the servant, have not yet allowed any material amelioration of these states, which, for this reason, have a peculiar force, although I know nothing of their specific actions.

Habits are too well acknowledged, if not well understood as morbid causes, to demand a comment here. I shall, however, conclude with a remark on this subject.

The contrast of the African and the European in the West Indian isles forms a very available illustration of the powers of the constitution and the influence of habit. From a more oppressive clime, with activity, a vegetable diet, and simple habits, the negro flourishes in body, mind, and progeny. Indolent, indulgent, and too often addicted to excess, the white men fade away, and often in a single generation.* But if any one will contend too far for the radical differences of the two races, I have this to say, that the venerable and simple dignity of one aged Christian negro is more than a denial to all who dispute that "God hath made of one blood all nations of the earth." My opinion is, however, that with better spirits and conduct, the equator itself is designed for the happy abode of any race. Almost all the real difficulties seem rather to apply to particular constitutions. We may well believe that if man were as he ought to be, no blessing would be withheld.

The following is too short to be called a *recapitulation*:—

We have seen a great function accelerated to the extent of its natural limits; we have seen others assuming various compensating states of depression, and finally, even of insusceptibility. Next we find the chief excited action liable to disturbances of another and opposite kind, and the consequences were an unexpected and insupportable burthen to other parts. And now, lastly, without supposing that this is all that can be said, or that it is any more than a partial

* It is not designed to say that all the blacks, or only the blacks, are just. The errors of a slave are too likely to be in the way of cunning, pilfering, deceit, and malice; but this is scarcely his shame more than his masters. The virtues of Christian men may now be found in men of every complexion, and these call themselves brothers.

and even corrigible view, what are the inferences that must be admitted?

Supposing the superficial functions too little active, too little capable of resisting the influences of varying cold, too susceptible of perversion by it, will not a milder climate assist to obviate the difficulty?

Will not a warmer climate always tend to relieve excessive internal actions?

Will it not always accelerate the evil when these internal actions have already begun to decline?

My readers may readily reflect on the converse of these inquiries. Finally I would add, that I think I know something of the exceptions to the above conclusions, but, as far as I understand them, they only illustrate the principles I have advanced.

36, Bedford-square, May 18, 1843.

ON FRACTURES AND CONCUSSION OF THE SPINAL COLUMN.

By JONATHAN TOOGOOD, Esq.

In the last volume of the "Transactions of the Provincial Medical and Surgical Association" there is an interesting paper on fractures of the spine—an accident generally considered so hopeless, that no effectual attempt is made to relieve the sufferer, who is left to linger out a miserable existence. It has always appeared to me wrong to abandon a patient under such circumstances, but public opinion, in which the profession acquiesced, seemed to forbid any other treatment than palliative. I have never ceased to regret that no effort was made in the following case, which, since I have read Mr. Crowfoot's paper, I am more inclined than ever to believe offered a fair chance of success:—

Fracture of the two last Dorsal Vertebrae.

Thomas Ash, a remarkably strong man, aged forty-six, was run over by a heavy waggon, which fractured the two last dorsal vertebrae. The division was so evident that two fingers could be laid between the broken ends of the bones. The parts below the injury were immediately paralysed; he had constant vomiting, and his case appeared altogether so hopeless, that his friends refused having anything more done than dressing a most extensive laceration of the scalp; and, as there did not appear to be a chance of his surviving many hours, I was requested not to visit him again unless they applied to me. As, however, he appeared rather better on the following morning, I was desired to repeat my visit, when I found the abdomen greatly distended, the bladder very full, and a complete deprivation of the power of voluntary motion and sensation in the lower extremities. The bladder was emptied by the catheter, and the bowels by glyster, after which the fæces, but not the urine, passed involuntarily. In this state he lived six weeks, during which period he had occasionally considerable fever and frequent vomitings, whilst at times he made such efforts to recover that I proposed giving him the chance of a more determined mode of treatment, but in this I was overruled by his friends, and the opinions of other surgeons.

Fracture of the Spinous Process of the Third Cervical Vertebra.

William Cooling, aged eighteen, a very fine young man, fractured the spinous process of the third cer-

vical vertebra in the following singular manner:—He was carrying a heavy gate on his back, between the bars of which his head became so tightly jammed that he fell backwards on it with great violence, in the attempt to throw the gate off his shoulders. He lay in this state for some hours before he was discovered, and, when removed, it was ascertained that he had the power of moving his head only, all the parts below being paralytic, and totally insensible. His pulse beat only thirty-seven strokes in a minute, and his breathing was very laborious. He had priapism. On the following day he had violent fever and great thirst; the pulse had risen to 100, but the priapism had ceased. He was bled, and took some opening medicine, which afforded some relief, and after a few days these symptoms gradually ceased, and he sunk into a state of quiet. He lived a month after the accident, during which time his appetite was good, and he slept tolerably well. For some time the water was drawn off by the catheter, but occasionally it was discharged involuntarily, as were the fæces. About a week before his death he began to have some feeling in his feet, but previously to that time his friends convinced themselves that he had none, by running pins into his legs and thighs.

Concussion of the Spine.

James Harris, aged thirty, fell from the top of a waggon very highly loaded with beans, and alighted with great force on his back. As he remained motionless, and without any feeling of his lower extremities, the surgeon who saw him believed the spine to be fractured, and, considering the case hopeless, nothing was attempted for him. When I visited him on the following day, he had recovered slight motion and feeling in his legs. The abdomen was greatly distended, and he was suffering acute pain, with inability to empty the bladder. He had priapism. Having drawn off the water, I satisfied myself that there was no fracture of the vertebrae, and directed local bleeding, absolute rest, and afterwards counter-irritation, under which treatment he perfectly recovered.

My opinion of the propriety of making extension in cases of fractures of the spinal column is more strongly confirmed than ever by the successful result of Mr. Crowfoot's case, who deserves the thanks of the profession for making it public. It affords another strong illustration of the great advantage of recording and publishing the experience of practical men. Society, as well as the profession, derive more substantial advantage from the faithful relation of cases, accurately noted at the bed-side of the patient, than from half the books and systems which are written.

My conviction, that the case of James Ash offered a reasonable chance of a happy termination, is strengthened by the knowledge of the extraordinary tenacity of life which other members of his family exhibited.

His father recovered from a disease of the bladder and prostate gland after the age of eighty-four, notwithstanding a false passage had been made in the urethra by the catheter, sufficiently to enable him to take active exercise on horseback, and lived until nearly ninety.

His mother, at seventy, was attacked with chronic hepatitis, for which the usual remedies were employed.