pulse 112. Fresh crop of eruption over both legs, ankles chiefly, and both wrists; again much pain in umbilicus. Both legs exhibit slight general anasarca. Bowels have not acted for four days. Urine 35 ounces, acid, sp. gr. 1023, no blood-cells; small, finely granular and hyaline casts. Ordered eggs, with four ounces of milk, oranges, and imperial—i.e., bitartrate of potash—drink.

Twenty-fourth day.—General condition less satisfactory; vomiting has returned; tongue red and denuded of epithelium in patches; bowels open twice; still has much epigastric pain. Urine dark-coloured; quantity 36 oz., separately; albuminous.

Twenty-fifth day.—Temperature 98°8'; respiration 20; pulse 112. Urine 40 oz., sp. gr. 1020, acid, containing blood-cells and albumen.

Twenty-sixth day.—Temperature 99°6'; respiration 28; pulse 104. Urine 60 oz., sp. gr. 1018, blood and albumen.

Twenty-seventh day.—Temperature 98°8'; respiration 24; pulse 108. Urine 60 oz.; as before.

Twenty-eighth day.—Temperature normal; respiration 24; pulse 96. Feels generally better, but complains of pain in the left iliac region.

Twenty-ninth day.—Complained of sudden sharp pain under the left arm in the axilla; was observed to start forwards in bed, became suddenly pale in the face, and died as the nurse reached him.

No post-mortem was allowed; no persuasion could induce his friends to consent to it.

Remarks.—The cases which von Schönlein has described as Peliosis rheumatica are probably cases of chronic nephritis, occurring sometimes in syphilitic subjects, often in those of old malarial poisoning, attended with purpura and rheumatic pains. But pains alone do not constitute the rheumatic process of disease, or justify the application of this term. In all his cases there is an anterior chronic renal affection of some standing, with general marasmus, purpuric ecchymoses, and gangrene.

When the blood is imperfectly depurated by chronic renal disease, when the coats of the bloodvessels are degenerated, and the arterial system is generally dilated, as in aortic regurgitation, the proclivity to localised disorders of the circulatory channels, blood stasis, capillary burstings, extravasations, and purpuric rashes, is very great. Erythema nodosum, from the pain and tenderness of the local peritonitis, from the aching in the limbs that both precedes and succeeds the rash, is again often mistaken for rheumatism.

M. Couland points out, in the *Archiv. Gén. de Médecine*, Jan., 1874, the relations which occasionally obtain between erythema papulatum and rheumatism. Devrécaix describes a mild form of articular rheumatism, attended by a scarlatina-like general exanthema. But the case which I have recorded above agrees too closely with some others which have been described to make me doubt the existence of a purpuric or hæmorrhagic form of rheumatism quite apart from erythema with aches. M. Borins, in the *Gaz. des Hôpitaux*, 1874, Nos. 76 and 82, describes the case of a sailor, aged seventeen, who had acute rheumatic pains and articular swelling, and at the same time developed an abundant purpuric rash, which came out first of all upon the extremities, and subsequently, in two successive crops, invaded the trunk and face. M. Féréal (*Gaz. des Hôpitaux*, 1869, or '70, No. 61) relates a case of acute rheumatism—fourth attack—complicated by double pleurisy, purpura hæmorrhagica, miliaria, and hydroa pemphigoides. The rash here was general, and came out in crops of deep violet-red spots varying in size from flea-bites to a centimetre in diameter; the spots were a little raised in their centres, gradually fading off at their edges, becoming paler upon pressure with the finger, but never disappearing altogether. There was no scorbutus, and the gums were neither swollen nor affected. The rash was general, but occurred chiefly about the *alæ nasi*, upon the face, shoulders, legs, and ankles. Complete recovery followed at the end of six weeks under strengthening and stimulant treatment.

H. Laub relates the following case which happened in the Almindelicht Hospital, and of which I saw the abstract in the *Jahresbericht* for 1869, 2te Theil, s. 266. A girl of fifteen years, who had had pleurisy in the previous spring, followed by flattening and sinking-in of the affected side, and lateral spinal curvature, was attacked in October, 1867, with general acute rheumatism. The patient was anæmic, and the joints remained swollen after the rheumatic pains sub-

sided. The attack was of the long relapsing type, complicated by endocarditis and hæmoptysis. Livid readily-bleeding sores formed upon her legs. The fever was inconsiderable; the urine became albuminous. She improved under hospital treatment up to December, when the sores upon the legs commenced bleeding afresh; she further had epistaxis, hæmoptysis, and hæmaturia. Again she improved awhile, then had a bed sore, relapsed, and a series of rashes, some purpuric, made their appearance, others entitled pemphigus, zona, seborrhœa; some left sores behind them. Next ensued frequent and serious hæmorrhages from various mucous surfaces, ecchymoses upon the skin, some of which gangrened; general anasarca, delirium, death on Feb. 17th, 1868. The post-mortem showed chronic parenchymatous nephritis; collections of viscid yellow synovial fluid in excessive quantity in the affected joints, with thickening and infiltration of their capsules.

L. A. Duhring, in the *Philadelphia Medical Times*, May 31st, 1872, describes two cases of purpura rheumatica. A. K—, a young woman of twenty-two years, had been thin and pale, and complaining of weakness, loss of appetite, and headache for three months; she was then seized with violent pains in her limbs, which came on of an evening, and kept her awake at night. A week later, while engaged at her work, a purpuric rash suddenly appeared, in the shape of small, red spots, several of which were slightly raised above the level of the rest of the skin. They were chiefly situated upon the arms and backs of the hands. Two days later the same kind of rash appeared upon the shins and backs of feet. When the purpura came out, the aching pains of limbs subsided, and there was a slight menstrual flow, although not at the ordinary catamenial period. The eruption was in part purpura no doubt, but there were some raised papules, and many of the spots entirely resembled, from the description, ordinary syphilitic erythema. A week later she had a second crop of eruption of similar character, which remained out only for two days, and a week later had a well-marked erythematous rash, without purpuric spots at all.

Duhring's second case is equally unsatisfactory, the rheumatic symptoms not being sufficiently well marked to justify the name attached.

My own case, and others which I relate here, serve, I think, to establish a variety of rheumatism which either occurs in the subjects of chronic nephritis or is sooner or later complicated by an acute renal affection. The leading feature of the cases is a purpuric rash, a hæmorrhagic tendency, and hæmaturia; the latter being prone to terminate in fatal nephritis.

Through the courtesy of Dr. Gibert, of Havre, I have quite recently seen another of these remarkable cases; which appear especially prone to occur in low malarial districts. He has promised to publish an account of it.

THE TREATMENT OF ANGULAR CURVATURE OF THE SPINE BY A GUTTA- PERCHA MOULD.

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THE appearance in THE LANCET of the 9th ult. of Mr. Barwell's paper on the treatment of angular curvature of the spine by Dr. Lewis Sayre's plaster-of-Paris bandage, has induced me to publish the following notes advocating a similar plan. The gutta-percha splint which I employ, and the use of which I some time ago recommended, appears to me to fulfil the objects of the treatment—namely, removing the weight of the superincumbent part of the body from the diseased vertebræ, and fixing those vertebræ so as to favour anchylosis as efficiently as the plaster-of-Paris bandage, and with less inconvenience to the patient; while the method of applying it, by means of the many-tailed bandage, as the patient lies on his back, avoids the stretching of the spine, which most surgeons would regard

as an evil, at the same time that it prevents the bones being fixed in the compressed position in which they would be if the splint or bandage were applied while the patient was standing or sitting.

Avoiding occupying valuable space with the remarks which I made on the necessity for some addition to the usually employed means of treating angular curvature of the spine, and the uselessness of the various mechanical appliances, &c., I quote *verbatim* only the rules which I laid down to enable others to apply the bandage as successfully as I had done. I said, "The desiderata in an apparatus which is to aid the object aimed at in laying the patient recumbent seem to be these:—1. Such an apparatus must relieve the diseased vertebræ of the pressure caused by the weight of the trunk and upper limbs. 2. It must tend to fix the bones of the spine, and prevent all movement, whether rotatory or of any other kind, such as that implied in raising the body from the bed to perform any office of nature, or in the movement implied in carriage exercise, &c. 3. It must be light and comfortable to the patient, and it should be obtainable at a cost which brings it within reach of the poor, among whom we are less able to enforce the treatment by recumbency, and who are consequently more dependent upon such mechanical contrivances." Pointing out that the thorax being more or less barrel-shaped, its lower part forming a portion of an inverted cone—an instrument resting firmly on the hips and presenting upwards, as it were, a conical cup into which it received the trunk, would carry the weight of the chest, head, and shoulders, I said:—"The most efficient splint thus will be one which approaches as nearly to this form as is compatible with the health and comfort of the patient; a complete girdle of solid material forming a section of an inverted cone fitted to the lower part of the thorax would, however, be so confining that it could not be borne, and as the girdle must have a certain amount of elasticity, and must not be solid throughout, it is necessary that that part which is solid should be adapted with absolute accuracy to the chest, fitting close to any irregularities of the surface, such as the margin of the ribs, &c., which give additional points of support. All the points indicated as desirable are, I think, possessed by the simple gutta-percha splint or corset, which I have employed with the greatest benefit in almost every case of angular curvature of the spine which I have treated since 1863. The points to be attended to in its construction, and on which its utility will depend, are the following:—1. The material must be sufficiently strong. 2. The size of the splint must be such that it is (a) supported on the hips, not by its edge, but by being moulded to the pelvis; (b) it must extend upwards so as to reach quite to the upper dorsal vertebræ, being cut away under the axilla; and (c) it is quite essential that it should be so wide as to lap round and embrace the sides of the thorax beyond the angles of the ribs (the front edges should be separated only by two or three inches); unless it does so it will merely act as a splint applied to the back, and cannot be regarded as a section of an inverted cone, in which character alone, as I have already stated, can it be looked upon as in any measure relieving the spine of the weight of the shoulders. 3. It must be very accurately moulded to the body, especial care being taken to press it well in at the waist, so as to ensure the conical form of the upper part. 4. The splint, when finished, must admit of being well laced in front, so as to make it act as a complete girdle."

The directions which I give for the application of the splint are as follows:—1st. To ensure sufficient strength, employ a sheet of gutta-percha of the thickness of about a quarter of an inch. 2nd. Take the following measurements: (a) from the sacrum to the vertebra prominens, for the height of the splint; (b) round the back of the pelvis from a point about an inch anterior to the spine of the ilium to the corresponding point on the opposite side, to give the width at the lower edge; and (c) round the back of the thorax from about the situation of the nipple to the corresponding point on the opposite side, to give the width of the upper part of the splint. Cut out the gutta-percha in accordance with these measurements, allowing a margin for its shrinking when warmed, and cut away the top edge so as to admit of its passing under the arm. 3rd. To ensure an accurate mould, the patient should be stripped and seated at the edge of a feather bed; three or four strips

surround the patient's body and cross in front, are to be arranged like a many-tailed bandage, their edges overlapping about an inch, and laid across a feather bed, so that when the patient lies down he should rest upon them. The gutta-percha, softened in water at a temperature of about 135°, should be lifted out of the water on a sheet of wash-leather, and laid carefully on the strips of flannel, the uncovered surface downwards and the chamois-leather upwards. The patient, who should be seated on the edge of the bed with the lower edge of the gutta-percha close to his hips, is now laid down with his back upon it, care being taken that the spine corresponds to the middle of the splint, and that its lower edge is as low as the sacrum. The gutta-percha must then be rapidly folded round the hips, waist, and chest, being, while still soft, pressed well in at the waist; the strips of flannel are brought round and fastened tightly with pins down the front of the body, the strip round the waist being drawn specially tight. All these steps must be taken very promptly, as the gutta-percha, of course, rapidly cools. 4th. When the splint is hard, the pins are removed, the splint taken off and trimmed up where it may be required, a front attached to it with eyelets on each side, so that it may be tightly laced down the front of the body, and to the middle of the top edge of the splint are attached two brace-straps, which cross over the shoulders and buckle in front."

I wish to add to the remarks with which I have prefaced the above quotations, that by careful attention to the somewhat minute details which I have enumerated, any medical man can readily apply this apparatus, and that the position of the patient on his back while the splint is applied does all that suspending the patient for the plaster-of-Paris bandage can safely and beneficially effect. I believe, then, that the gutta-percha support, open down the front, is preferable to the complete girdle of plaster-of-Paris advocated by Mr. Barwell; but should the latter be selected, I would suggest that the best mode of applying it would be by placing a many-tailed bandage such as I use, but several folds thick, well soaked in gum and chalk, on a soft bed; on this the patient should lie as I have directed for the application of the gutta-percha case, the tails of the bandage being folded closely over, and allowed to set before the patient moves.

RUPTURE OF THE UTERUS WITHOUT SYMPTOMS.

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MRS. G— began to be in labour with her ninth child about 2 P.M. on Feb. 26th. About 10 P.M. I was sent for by the midwife who was attending her, on account of the labour not progressing, as, according to her account, the child had been in the same position for about five hours. On examination, I found the breech of a female child presenting at the brim of the pelvis, the pains strong, yet failing to cause any advance. Placing my hand upon the abdomen, I was surprised to feel an arm of the child, as it were, beneath the abdominal wall, the fingers even being quite distinguishable, so plainly could it be perceived. The probability of rupture of the uterus immediately presented itself to me, although there were no symptoms of collapse (save the pulse being small), the pains continuing vigorous. I attempted to bring down a foot, but the strength of the pains and the position of the child—wedged, as it were, in the brim of the pelvis—prevented my succeeding. Dr. Pierce (whom I had sent for) therefore administered chloroform, and I then succeeded in bringing down first one foot and then the other. There was some little farther difficulty in bringing down the arms, which had passed up on either side of the head; and, finally, the forceps had to be applied and considerable force used to deliver the head.

The pains continued good to the termination of labour, and the placenta came away easily. On now examining, a rent in the lower and anterior part of the uterus was found, through which the hand could easily be passed and the uterus grasped in the abdominal cavity. The rupture was