

diately after the accident. The limb is still everted, but less abducted or advanced, and the head of the bone is plainly felt in its new position—in the absence of which evidence the shortening and eversion might possibly be mistaken for fracture of the neck." Now, in my case the boy was able to walk well after the accident for six days, which would have been impossible if the Y ligament was completely torn by the head being thrown further backwards and upwards, as in a very well-marked everted dorsal. There is also an admission in this quotation that the head may not be felt in this position, which is consolatory to me, this having been a great difficulty in the way of my diagnosis. The question of fracture of the neck occurred to me at the time, but I dismissed it, considering the age of the boy, the mode in which the accident occurred, the fact of his being able to walk without pain, and that after reduction there was no crepitus, and the bone resumed its normal condition.

That this "subspinous" or "sus-cotyloidienne" is a very rare form of luxation our English text-books amply testify. As a rule, it is not described, but we are told generally that the position of the head of the bone "has been found to range in different instances between the anterior inferior spinous process and the sacro-sciatic notch." (Sir W. Ferguson; see also Bryant and Holmes.) Of foreign writers, Malgaigne was only able to collect five cases in 1855, and these have formed the staple commodity of all later writers (who have copied them from book to book) until Hamilton, of New York, placed one other on record in his work published in 1871. In Malgaigne's work, "Des Fractures et des Luxations," which I consulted recently for the first time, the cases are briefly as follows. One described by Barrier, which, though undoubtedly subspinous or sus-cotyloidienne primarily, yet differs somewhat from my case. The next, in M. Gerdy's practice, died the day following the accident, when much injury about the hip was found. The third, a case treated in St. George's Hospital (LANCET, 1840-41, vol. ii., p. 281), although essentially "subspinous," differs. I find on carefully reading the original report, materially in the extreme rotation outwards of the limb until the great toe pointed somewhat backward. It also differed in the fact that the patient died shortly after admission, injury unreduced. The fourth is reported by Mr. Wormald in Lond. Med. Gaz., Jan., 1837, and corresponds in every particular with the case now described. I find that in the displacement of the head, the position of the limb, and the fact that the man was able to walk well after the accident, it is precisely the same. But it was unreduced until death. The fifth case was reported by Cruveilhier as only discovered after death, being mistaken for fracture of neck of thigh-bone. Since Malgaigne collected these in 1855, only one case more of "subspinous" dislocation appears to have been placed on record—namely, that by Hamilton, as occurring in his own practice. In every particular it appears to correspond to Wormald's and my own case, except in this, that after walking about with the unreduced dislocation for three years, the injury reduced itself during a sudden and violent exertion, when "at once the complete functions of the joint were restored," and that three months later, owing to a sudden wrench, the head again slipped out as before, after which he would not allow any attempt to be made at reduction.

Here, then, it would appear, we have the only six cases of "subspinous" dislocations yet placed on record, to which I now add a seventh. I have searched carefully for others, but cannot find them. My friend and former teacher, Prof. Busch, of Bonn, who has given much attention to the subject of luxations, and whose book is now before me, also describes this form as very rare, although as far as public dislocations go he has had four in his own practice. He, too, is obliged to go to the cases collected by Malgaigne. Among the other German observers I have looked in vain for any information on the point in Volkmann's "Neue Beitr. z. Path. u. Therap. d. Krank. d. Bewegungsorgane," and in Von Pitha and Billroth's "Handbuch d. Allg. u. Spec. Chirurgie" (a representative book). In Cooper's Surgical Dictionary also only the same stock cases are alluded to. Bigelow, too, is obliged to refer to Malgaigne for an instance of this form of dislocation, and quotes Wormald's case cited by him, not having seen anything of the kind himself. From the fact that these few cases are handed freely about from one great authority to another an impression appears to have arisen that this "subspinous"

dislocation is, on the whole, not so extremely rare. Indeed, the familiar way it is referred to in the works quoted justifies this conclusion of the general reader. Of course other cases may have been seen, but they do not appear to have been recorded anywhere, which is a matter for regret if they have occurred.

In conclusion I am much interested in finding that in the cases of Barrier and of Gerdy—the only two out of the six hitherto recorded in which reduction was effected by surgical aid—the means successful in their hands were precisely those which succeeded in mine in replacing the head of the bone, as will be seen from the following quotation from Malgaigne:—"La réduction pourrait être tentée sans doute par l'extension direct; cependant M. Barrier l'a essayée en vain. C'est par la flexion, jointe à l'adduction et à la rotation en dedans, qu'il reporta la tête dans sa cavité; la flexion, unie à la pression exercée d'avant en arrière sur la tête fémorale, avait réussi de même à M. Gerdy."

It may also be worth noticing that, if we include a doubtful instance alluded to by Malgaigne as described by Palletta in 1781, out of these eight cases of "subspinous" or sus-cotyloidienne luxation, three were in children. Mr. Wormald's was a boy of fourteen years; Palletta's a child of twelve years; this last now recorded a boy of nine years.

Welbeck-street, Cavendish-square, W.

## UPON THE ARSENICAL ATMOSPHERE AND ARSENICAL HOT SPRING OF THE SOLFATARA AT POZZUOLI (NEAR NAPLES), IN THE TREATMENT OF CONSUMPTIVES.

By HORATIO R. STORER, M.D.,

FORMER VICE-PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION,  
HON. MEMBER OF THE DISTRICT MEDICAL SOCIETY  
OF SORRENTO, ITALY, ETC.

THE writer was continuously engaged for the four years 1872-76, and in part at the request of the American Medical Association, in investigating the relative claims of certain of the health resorts of Central and Southern Europe. The inquiry was made more particularly with reference to the needs of American invalids, who come out here in great numbers, and by no means always go to the localities best adapted for them. It is possible, however, that a brief communication upon one of the points indicated in the report that he has rendered, may also interest the English profession, to whom the question of a change of climate for their patients—though with Bournemouth, Ventnor, Torquay, and Penzance so near at hand—must often be an equally difficult one to decide.

In a series of letters published at Paris in 1874, and subsequently reprinted at Naples,<sup>1</sup> after speaking of the climatic and hygienic relations of the latter city, the writer discussed the respective merits of its neighbouring and subordinate health resorts, dismissing several of these with the brief remark that they are "hardly fitted for the residence of invalids, for the reason that as yet they are not provided with sufficiently comfortable hotels." Among these was Pozzuoli. It was well known in Naples during the past two years that his attention had been forcibly drawn to certain of the special characteristics of Pozzuoli, and it may have been partly in consequence that a comfortable hotel-pension, under English management, and especially for invalids, has been established there.<sup>2</sup>

One of the objections most frequently made, and with most reason, against Southern Italy as a health resort, has been the fact that, save in specially sheltered and usually very limited localities, its winter climate is a changeable one, and, therefore, particularly unfitted for chest affections,

<sup>1</sup> Southern Italy as a Health Station for Invalids (Naples, R. Margheri; 1875), p. 70.

<sup>2</sup> This house is under the same control as the similar establishment, already favourably known to invalids, at Vico Equense, midway between Castellamare and Sorrento, on the other side of the Bay of Naples.

while the points both within Naples and outside it most resorted to by English and Americans for winter residence are some of them directly exposed to the harsh and snow-chilled easterly wind—as, for example, the favourite Strada Santa Lucia, in Naples, and the whole of the town of Castellamare. Delightful and safe though the latter place may be during the late spring and summer, it is hardly to be recommended during winter for any class of invalids.<sup>3</sup> Till now, the only places in Naples and its neighbourhood that have been at all fit for consumptives during winter have been, in Naples, the Riviera di Chiaja, and the westerly extremity of the new Corso Vittorio Emanuele above it, the respective merits of which, so far as concerns the chance of enteric and malarial fever, the writer has elsewhere discussed; and outside the city, Amalfi, Pozzuoli, and the islands of Ischia and Capri, to which latter invalids, who go during winter, often do so with fear and trembling over a stormy sea, while Pozzuoli till now has been unprovided for their reception. Amalfi, on the Gulf of Salerno, is nearly four hours away from Naples by rail and carriage. The two hours' drive from the nearest station, Vietri, upon a cliff-road far above the sea, is very attractive, fully as much so as the best part of that from Castellamare to Sorrento, or the Corniche road on the Riviera; the town seems, at first sight, well sheltered, and there is so much of beauty and novelty about one that the visitor is always charmed. Directly down through Amalfi, however, there comes from the mountain a little river, and its course serves as the channel for at times fierce winds, while the town itself is filthy and ill-kept. Pozzuoli, on the other hand, is better sheltered, lies equally to the south, and is very much more accessible from Naples. Till now the question has been decided, so far as their equal sun and warmth are concerned, by the fact that there were two quite comfortable hotels at Amalfi, and nothing whatever available by invalids at Pozzuoli. It will be seen that the writer is quietly ignoring certain very positive assertions adverse to Pozzuoli, that must have been made without personal knowledge or sufficient reflection on the part of their authors. For instance, mention is made in the latest edition of "Tanner's Manual," by Dr. Broadbent, of "the fatality of phthisis at Pozzuoli."<sup>4</sup> Now patients already moribund may be carried to a place to breathe their last, as is yearly done at Mentone, without justly causing its condemnation; while for a native Italian, once down with pulmonary disease, in that country considered contagious, and to which their damp houses render them peculiarly prone, to hope to recover under purely Italian nursing and hygiene is something ordinarily out of the question. That Pozzuoli lies on the road, though on the Naples side, to "the undrained swamps in the neighbourhood of Baiae," is as much to the point as to speak of Hampstead in the same breath as the discharge outlets of the Thames sewage. An invalid may drive to the one, as he may to the other, if he chooses to do so, but it is not necessary in either case.

During 1873 and 1874 the writer's attention was chiefly given to the ordinary considerations of local climate, and a study of the Neapolitan chain of mineral springs extending from Meta, adjoining Sorrento, through the whole circuit of the gulf, and ranging in temperature from 15°C. or thereabouts at Meta, Vico Equense, and Castellamare, through from 17°C. to 21°C., in the springs of the city of Naples, to from 30°C. to 90°C. at Pozzuoli, Baiae, and the adjacent island of Ischia. He then became aware, and he thinks it was from a chance statement of his friend, Dr. J. A. Menzies, of Naples, that several of the more noted Neapolitan physicians were commencing to claim for Pozzuoli an exceptional excellence of a wholly different character, asserting that a portion of it had an atmosphere of its own, perceptibly charged, not with sulphur merely, but with arsenic from the semi-extinct volcanic crater known as the Solfatara, which, from but slightly rising above the level of the adjoining country, is easily accessible on foot, or by donkey or sedan chair, to the most feeble invalid. The breathing of this arsenical atmosphere, it was stated, not only theoretically promised to be of benefit in cases of threatened or actual pulmonary tuberculosis,

after repeated visits to the crater, extending over a longer or shorter period, but had in fact been proved so by actual experiments.

Such statements, in such a country, were naturally to be received at first with incredulity; but occasion offered for the writer to make a practical test of the matter during the winter of 1874-5. A lad of eighteen, extremely tall for his age, feeble and ill-nourished, had passed the preceding two winters at Mentone, under the supervision of Dr. Henry Bennet, and at Sorrento. He had gone constantly from bad to worse, so that his friends, including the writer, had become extremely solicitous as to the result. The patient was now confided to Dr. Menzies, by whose directions, after the latter portion of the autumn of 1874 had been spent on the westerly extremity of the Corso Vittorio Emanuele, at Naples, he was removed, still failing, to Amalfi. He passed some weeks at this place without appreciable benefit. It was therefore determined to make trial of Pozzuoli, despite the difficulty of obtaining a passably comfortable lodging. An apartment, such as it was, was obtained, was furnished, and a cook carried out from Naples. The patient was unable to walk even the short distance from the house to the Solfatara, and was therefore carried into it by a couple of porters, breathing its atmosphere for a gradually increasing period. Almost immediately he commenced to improve. In addition to the prolonged respiration of this special atmosphere, he drank quite regularly in minute quantities the Solfatara water, which springs directly from the crater, and unlike the prevailing mineral sources of the neighbourhood, which are alkaline, is sharply charged with sulphuric acid and in use requires large dilution. This spring, and also the atmosphere of the greater vent of the crater, contain arsenic. Other and ordinary measures, demanded by the alarming exhaustion of the patient, were meanwhile pursued, and a certain amount of the improvement which now set in and became continuous, was no doubt attributable to them. There could, however, be no question that this improvement initiated from, and was perceptibly rendered uninterrupted by, the special influences of the Solfatara. In the case reported, marked physical signs were wanting. All the rational symptoms, however, had long been those of pulmonary disease.

Though now greatly interested in the subject, the writer could as yet—in view of a possible relapse in the instance referred to,<sup>5</sup> the impossibility of forming a conclusion from so limited an experience, and the total unfitness of Pozzuoli for the residence of invalids who had been accustomed to average American and English comforts—only say the following, in his Report to the American Medical Association, made in the spring of 1875: "Regarding the Solfatara at Pozzuoli, which has been recommended as a residence for certain classes of invalids, the Neapolitan physicians are of opinion—and the question is one worth considering—that the arsenical and other emanations given out by the still smoking crater sensibly and beneficially modify the neighbouring atmosphere in a medicinal way."<sup>6</sup>

One of the first attempts thus to utilise the local atmosphere of the Solfatara seems to have been made by Dr. Abele Franza, and is recorded by him in a paper quoted by Professor Sebastiano De Luca, of the University of Naples.<sup>7</sup> Franza's patient, a Russian, was attended in consultation with Professors Manfré and Lauro, and the diagnosis was of advanced tubercular disease. He had been treated in Naples for four months without benefit, and the case had been pronounced a hopeless one. He was removed to Pozzuoli, and remained there for six weeks, being simply from time to time carried into the Solfatara and respiring its vapours. This was in 1871. The improvement is declared to have been immediate, and to have remained permanent.

A similar case, of even more interest, was recorded at about the same time by Dr. Annecchini.<sup>8</sup> The patient was

<sup>3</sup> If the writer correctly recollects the opinion expressed by Dr. Maclean, of Netley, a year or so ago, concerning Castellamare, he is compelled to differ from that gentleman, who would, however, have probably modified his views as to this place, and, perhaps, even Naples also, after a more prolonged residence.

<sup>4</sup> An Index of Diseases and their Treatment (London, 1867), p. 442.

<sup>5</sup> No relapse, however, occurred. The patient was able to pass the winter of 1875-6 continuously in Naples, living upon the Vomero, above the Corso Vittorio Emanuele; and he has now returned to America, convalescent. For the sake of other invalids, it may be well to state that the house occupied in Naples—Castello Monjoujou, the private residence of Prince Palagonia, but still sometimes available—is altogether the most desirable in the whole city for a consumptive stranger, alike for sheltered and sunny situation, cheerful outlook, dry and spacious gardens, and internal comfort.

<sup>6</sup> Ibid., p. 70.

<sup>7</sup> Ricerche Sperimentali sulla Solfatara di Pozzuoli (Naples, 1874), p. 13.

<sup>8</sup> Ibid., p. 43.

seen in consultation with Prof. A. De Martino of Naples, and the case considered clearly one of acute tuberculosis (*tisi galoppante*). A year after this lady commenced to inhale the air of the Solfatara, and, solely in consequence (*per virtù esclusiva della potenza medicatrice dell' aria della Solfatara*), she was pronounced to have been radically cured (*essa era in uno stato di salute il più soddisfacente, come se nulla avesse sofferto*).

The admirable work upon the Medical Geography of Italy, by Prof. Luigi Marieni of Milan, which, so far as the mineral springs of that country are concerned, must long remain a chief authority, was published in 1870,<sup>9</sup> a year before these facts were made known. In 1868 and 1869, Prof. De Luca had presented three papers to the Academy of Sciences of the Royal Society of Naples upon the Composition of the Thermo-Mineral Water of the Solfatara, and the Temperature of the Greater Throat (*fumarola*) of its Crater, whence the arsenical exhalations escape, and within a limited though constant radius of which they are appreciable by Marsh's test. Other papers, chemical and therapeutical, upon the same subject, have followed from this gentleman, to the number of twelve or more, and are to be found in the *Comptes Rendus* of the Naples Academy; still others have been communicated by him to the Academy of Sciences at Paris; and he has also published the brochure already quoted, entitled "Experimental Researches upon the Solfatara of Pozzuoli." The effect has been to widely attract professional attention in Southern Italy, guaranteed as Prof. De Luca's statements have been by the testimony of many of the physicians and surgeons to the great hospital *Degl' Incurabili* at Naples.

Whether the hopes of these gentlemen are well grounded can only be proved by continued experiment. They are now, however, even more sanguine than at first, and at the present moment, after, it is said, "the complete and radical cure" of quite a number of additional cases of advanced phthisis, who had been made to reside continuously for several weeks within the Solfatara, a branch of the *Incurabili Hospital*, by order of its council, is being constructed within the crater, for the special treatment of pulmonary disease. To make the collateral test upon English-speaking patients has, as already stated, now for the first time been rendered possible at Pozzuoli.<sup>10</sup> It is not unlikely that in the future the crater of the Solfatara may become as famous for its effect upon the prolongation of life as the neighbouring Grotto del Cane has been for imperilling it.

It will now be interesting to test for arsenic the atmosphere of the various "stufes," or volcanic vent-holes of steam or dry air, existing upon the island of Ischia, which does not seem to have yet been thought of, though they were studied with care by the late Dr. Chevalley de Rivaz, of Casamicciola;<sup>11</sup> and it would be equally well that the same should be done with those at Calistoga and the Geysers, already noted for other reasons in the treatment of disease, in the vicinity of San Francisco, California.

To speak of cases besides phthisical, such as certain uterine affections &c., for which the strongly astringent water of the Solfatara is both indicated and employed, would be beyond the limits of the present paper.

Queen-square, W.C.

## INCISION OF THE CERVIX IN UTERINE HÆMORRHAGE.

By THOMAS SAVAGE, M.D., M.R.C.P.L., F.R.C.S.,

SENIOR SURGEON TO THE WOMEN'S HOSPITAL AND TO THE BIRMINGHAM LYING-IN CHARITY.

CASES occur to the practitioner not unfrequently where the prominent symptom is uterine hæmorrhage, and hæmorrhage of a character which will not yield to the ordinary local and general means, and is yet sufficient to make it desirable that it should be subdued. Such is sometimes

the case with intramural or submucous fibroids in which matters are not sufficiently ripe for attempting enucleation or other radical proceeding.

The following cases, which came under my observation in a comparatively short space of time, will show the nature and also the means which were used by way of treatment. In all of them, incision, more or less extensive, of the cervix had a beneficial effect; and it is to this procedure that attention is more especially directed, for, though not by any means a novel measure, it is not one which is very generally adopted.

CASE 1. — Mrs. H——, private patient, aged thirty-three. Has had two children and eight abortions; the last pregnancy an abortion six years since. Has latterly grown stout. Has had profuse periods for two years. Of late the intermenstrual interval has been getting less and less, until now her constitution appears to be much affected by the almost continual draining. Medicines had seemed to have no influence. Does not suffer much pain. On examination the uterine sound passes three inches and a half; the uterus feels bulky all round to the finger through the vaginal roof; the os is slightly open. The cervix was divided by scissors on Sept. 3rd, 1875. After this no loss occurred, and her periods are now almost quite natural—i. e., regular as to time, and scanty, rather than otherwise, as to quantity.

CASE 2. — Mrs. W——, aged forty; married eleven years, but has had no children. Was seen in consultation on Jan. 28th, 1876. Has been under treatment for flooding, more or less continuous, for twelve months; is pale, the loss at times being very excessive. On examination, the os is normal, closed; fundus anteflexed. The uterine sound passes three inches and a half. A mass is felt behind, and a nodule to the right side of the uterus; this last is small. Never had much pain. The point of the sound goes in front on introduction, and appears to raise up some of the swelling felt before its introduction. Ordered to take ergot for a week, when I saw her again, on Feb. 4th. The mass is felt more to the right side than at the first visit. A small sponge tent had been inserted the day before, which opened the os a little. She was well syringed with Condyl's fluid, and the cervix was incised on the right side, rather in front. After this date she had no hæmorrhage, and I heard she was quite free at least six months afterwards.

CASE 3. — Mrs. B——, aged forty-three, had had several children, the last nine years ago; seen in consultation 8th August, 1876. Three years ago first had a flooding when crossing the yard, and a clot passed which was thought to be "a false conception." Since then she had profuse periods with very short intervals of freedom between. She often passes large clots, and this is increasing. Uterine sound passes five inches; uterus feels to be much enlarged; os open. A small tangle tent was easily passed, and then another, which penetrated only a short distance, as the inner os appeared to be considerably contracted. The next day the tents were removed. A very tight constriction at the inner os had produced a deep indentation on the two tents, in addition to pressing them close together. Condyl's fluid was used with a syringe, and then the cervix was divided with scissors on the left side and a little in front, also the inner os, with a guarded bistoury.

She is now in a very improved condition. Mr. Bradley, who attends her, tells me that though she has some pain and passes a few clots at her periods, yet she has no intermenstrual discharge, and her periods are not excessive in quantity.

CASE 4. — Mary A. S——, aged forty-three, single, has been ill for nine months, the first symptom being stoppage of urine, which required the catheter. Has had three severe floodings during this time, the last occasion lasting for seven weeks, and is just over. On examination, the uterus is large, fairly mobile; uterine sound passes four inches and a half; the finger in the os feels a mass in the posterior wall, which is also felt in Douglas' space; has never suffered much pain.

She came first to the Women's Hospital on Jan. 12th, 1876. On Feb. 5th the cervix was divided with scissors posteriorly; I then passed my finger through the inner os, very easily dilating with the slightest pressure, and could feel the tumour, like a cocoa-nut, bulging into the cavity from the posterior wall. I then incised the capsule with a

<sup>9</sup> *Geografia Medica dell' Italia*, Notizie sulle Acque Minerali, pp. 665. Milan, 1870.

<sup>10</sup> His remarks may perhaps carry the greater weight if the writer mentions, what is not always the case with those calling attention to localised health resorts, that he is no longer stationed at Naples, and has no interest whatever in the diversion of invalids towards Southern Italy.

<sup>11</sup> *Description des Eaux Minero-Thermales et des Etuves de l'île d'Ischia*. Naples, 1869.