of the substance of the brain itself, and in cases of simple congestion of the brain, the total amount of phosphates is certainly not increased. Acute inflammation going on in the neighbourhood of the brain, and chronic inflammation producing most extensive softening of the brain itself, and local congestion of parts of the brain, do not manifestly increase the amount of phosphates in the urine. Hence, therefore, from the examination of the urine in such cases, when doubtful, no conclusion can be drawn for or against the existence of any inflammatory action. I have already stated in a previous paper, that in chronic disease of the substance of the brain, I think it probable that a different mode of proceeding with the analysis might obtain a more valuable result; but until the difficulty of being sure of the whole quantity of urine secreted in exactly twenty-four hours, in these cases of disease, is overcome, it must be admitted, that in chronic diseases of the brain there is no proof of an increase in the amount of earthy phosphates excreted. This is best seen by the following table of these cases:—

	Earthy phcsphates.	Specific gravity.	Alkaline phos.	Total.
Case 1.—Scalp wound and inflamed membranes.				
3rd day of inflammation . . .	,56 per 1000 urine	1022,4	3,94	4,50
4th „ „ „ „ „	,58 „ „	1020,1	5,07	5,65
5th night, died.				
Case 2.—Scalp wound ; inflamed membranes.				
About 6th day of inflammation	,15 „ „	1025,3	6,17	6,32
7th day, died.				
Case 3.—Scalp wound ; inflamed membranes.				
9th day of diffuse inflammation	,10 „ „	1011,5	2,70	2,80
11th „ „ „ „ „	,09 „ „	1008,0	1,96	2,05
12th „ „ died.				
Case 4.—Chronic disease of the membranes.				
For two years „ „ „	1,25 „ „	1007,4	2,60	3,85
Case 5.—Chronic softening of the brain.				
About 30th day „ „ „	,27 „ „	1021,3	,69	,96
35th „ „ „ „ „	,33 „ „	1010,1	,27	,60
54th „ „ „ „ „	,74 „ „	1015,2	2,33	3,07
71st „ „ „ „ „	,56 „ „	1006,0	,32	,88
82nd „ „ „ „ „	,13 „ „	1010,0	1,30	1,43
89th „ „ „ „ „	,93 „ „	1011,2	2,42	3,35
359th „ „ died.				
Case 6.—Slight paralysis of the fifth nerve.				
4th day „ „ „ „ „	,76 „ „	1012,6	,46	1,22
Case 7.—Recent hemiplegia.				
4th day „ „ „ „ „	,75 „ „	1010,2	1,14	1,89
Case 8.—Recent hemiplegia.				
3rd day „ „ „ „ „	1,84 „ „	1027,0	4,50	6,34

Original Papers.

A BRIEF

TOPOGRAPHICAL AND HISTORICAL NOTICE

OF CALCUTTA.

WITH A SKETCH OF THE RISE AND PROGRESS OF SANITARY

IMPROVEMENT IN THE EAST INDIES.

By J. R. MARTIN, Esq., F.R.S.

PART FIRST.

A RECORDER of the events of the day ascribes to the following circumstance the name given by the English to their eastern emporium:—"The villages of Chuttanuttu, Govindpore, and Kalicotta, which, in virtue of the Princes Nishân, had been purchased from the Zumeendars with their districts, extended about three miles on the eastern side of the Bhagirathi river, (or sacred branch of the Ganges,) and one mile inland. The latter of these villages takes its name from a temple dedicated to Kallee, the Hindu Goddess of Time; and from it the English called their town Calcutta."

The modern city, with its citadel of Fort William, stands in lat. 22° 33 N., and in long. 88° 20 E., the distance from the sea being about a hundred miles.

Viewing the city as depicted on the map, it may be described as occupying a space, north and south, along the left bank of the Hoogly, of four and a half miles, and of one mile and a half from west to east—that is, from the river-bank to the "Circular Road," which follows the line of the ancient "Mahratta Ditch."

The actual site of Calcutta—once a portion of the Sunderbunds, with here and there a patch of rice-ground—is a very slightly undulating surface, or *saucered*. It has a gradual and, to the eye, an imperceptible inward slope from the river-bank towards the great "Salt-water Lake"—a condition common to most of the river-banks in Bengal and Orissa, owing to the gradual silting from their turbid streams, during the rains, in a long succession of ages. The Salt-water Lake lies about three miles east of the city, extending upwards of four miles

north and south. It is composed of pits and shallows, and is nowhere of considerable depth,—the entire area comprising eighteen square miles and a half, or about 12,000 acres. A considerable portion of the area here described is left, at each reflux of the tide, exposed to a seething sun by day, and to the heat and moisture of the night, during nine months in the year; while the common borders of the Lake are hardly of better condition, being generally under rice-cultivation, with occasional patches of long reed-grass, both reeking with pestilential vapours. This may be truly termed "the Lake of the Dismal Swamp."

The average level of the ground in and around Calcutta is between three and five feet above the average of high water, both the upper and sub-soil being pervious to water, the general character being alluvial. A section of the several strata gives alternations of loose sand, blue and yellow clay, with here and there a stratum of peat, some of the beds being nearly 100 feet in thickness. At 357 to 430 feet, bones were found; and at 390 feet, pieces of wood. Brackish water is obtained at from eighteen to twenty feet; while at 480 feet no spring-water was reached.

More remotely, Calcutta has, to the south and east, extending for 180 miles along the sea, and covering a superficies of 20,000 square miles, the woody tract of the Sunderbunds, consisting of jungle and marsh, including the embouchures of the Ganges; while to the north and west it has the extensive tract of annual inundation, anciently called Beug—a great alluvial flat—"the work of the Ganges." This tract is intersected, like the Sunderbunds, with innumerable rivers, and in the rainy season is deeply covered over. No words, and no experience of other scenes, can convey an adequate idea of the oppressive gloom and desolation of the vast wilderness of the Sunderbunds—that huge labyrinth of jungle and rivers:—

"Here rocks alone and tasteless sands are found,
And faint and sickly winds for ever howl around."

It is sad to reflect that this desolation has been the work of man—of outlawed runaways, chiefly Portuguese, from their ancient settlements in Goa, Cochin, and Ceylon, aided by pirates and vagabonds from the neighbouring coasts. The wastes, now "the abode of tigers, rhinoceroses, and alligators—the seat of malaria," was described, three centuries back, as containing "beautiful cities and gardens," and as "fine isles well peopled."

"The unhealthy kingdom of Bengal"—the Delta of the Ganges—like Guiana, is below the general level of the sea at high-water mark; and like Guiana, also, it would be uninhabitable from continued stagnation, but for the silted elevation of the river-banks, and the fluctuating declivity occasioned by the retiring tides.

Of the surpassing fertility of the soil, in the country of the Great Rivers, nothing need here be said. It has been the theme of admiration of all travellers from the earliest times; and, according to Bernier, "gave rise to this proverb amongst the Portuguese, English, and Hollanders"—expressive at once of its luxuriance and unhealthiness—"that there are a hundred open gates to enter the kingdom of Bengal, and not one to come away again."

The very brief sketch here given will show, that in choosing the site of Calcutta, we have verified the remark, that of all European nations who have planted distant settlements, the English have invariably shown the least regard to the proper selection of localities for their colonial cities; and this must, in general, be ascribed to the commercial spirit taking the exclusive lead. A good harbour and soundings, or else the embouchures of great rivers, were the first objects of desire, and it generally happened that both led to the positions the most unfavourable to health. This has been almost universally the case in our West Indian colonies.

The first permission obtained in 1644, by the English, to trade with the ports of Bengal and Orissa, was through Gabriel Boughton, a surgeon, "through his skill in curing the disorders of the Mogul officers. His success gave the English an influence in the Mogul's court, which, in the sequel, we shall find to be the source of the valuable privileges which the London Company acquired in Bengal." The second boon was obtained in 1717, through Mr. William Hamilton, surgeon to the then infant settlement of Fort William.

"Ferrokshere had been some time engaged to marry the daughter of Raja Ajeet Sing, one of the Rajepoot princes; and the bride had arrived for that purpose at the capital; but the emperor being afflicted with a complaint, which all the skill of his own physician could not cure, was under the necessity of postponing the marriage. At length, in consequence of the recommendation of Khan Dowran, he permitted Mr. Hamilton, the surgeon of the embassy, to attend him; and

that gentleman having, by a judicious operation, restored the emperor to health, became, very deservedly, a great favourite with his Majesty, who, in addition to many proofs of the royal munificence, promised to grant any other favour he should ask. Mr. Hamilton, instead of requesting any further reward for himself, besought his Majesty to concede to the English ambassadors the object of their mission. The emperor, surprised at Mr. Hamilton's disinterestedness, promised, that as soon as the marriage ceremonies were over, he would take the petition into his serious consideration, and grant the English every indulgence he could, consistent with the dignity of his own empire."

Thus, despite powerful opposition, was confirmed to the British the possession of thirty-eight villages; in short, just as the embassy was about to return, hopeless of success, the noble conduct of Hamilton procured for his countrymen the realization of their best wishes, and laid the foundation of that empire which, ere long, was destined to extend to the Indus and the Himalayahs. In clearing away the ground, for the foundation of St. John's Church, in Calcutta, more than forty years ago, the tombstone of Mr. Hamilton was discovered, which, in addition to an English epitaph, bore a Persian inscription, thus translated by Gladwin:—"William Hamilton, Physician in the service of the English Company, who had accompanied the English Ambassador to the enlightened presence, and having made his own name famous in the four quarters of the earth, by the cure of the Emperor, the Asylum of the World, Mahommed Ferrokshere, the Victorious; and, with a thousand difficulties, having obtained permission from the Court, which is the refuge of the universe, to return to his country; by the Divine decree, on the 4th of December, 1717, died in Calcutta, and is buried here."

"For the honour of human nature," says an old chronicler, "be it remembered, that this is the second time the Honourable Company were eminently served by that learned body. The memory of Boughton and Hamilton ought to be a standing toast at the polite tables of Calcutta." Nor, since those "brave days of old," have the claims of the medical officers of India been less deserving the consideration of their countrymen, or of the ruling power.

Their skill, labour, and activity, have never been confined to professional duties only, but have always extended to the development of the resources of the empire at large, and to the moral and intellectual improvement of its vast population. In these respects, no class of public servants in India has a higher or a more just pretension.

The earliest special notice we have of the climate of Calcutta, is derived from the travels of Captain Hamilton, who visited various parts of India, between the years 1688 and 1723. He says:—"The Company has a pretty good hospital at Calcutta, where many go in to undergo the penance of physic, but few come out to give account of its operation." "One year I was there, and there were reckoned, in August, about twelve hundred English—some military, some servants of the Company, some private merchants residing in the town, and some seamen belonging to the shipping lying at the town; and before the beginning of January, there were four hundred and sixty burials registered in the clerk's book of mortality."

That the climate of Bengal generally was not less fatal to our Mahomedan predecessors, is rendered evident by the following translation of Gladwin's from the Persian:—"In former reigns the climate of Bengal, on account of the inclemency of the air and water, was deemed inimical to the constitution of Moguls and other foreigners, and only those officers who laboured under the royal displeasure were stationed there; and this fertile soil, which enjoys a perpetual spring, was considered a strong prison—as the land of spectres—the seat of disease, and the mansion of death." "The Mussulman invaders," says a native writer, "of the west of Hindustan, who afterwards established themselves on the throne of Delhi, considered this country, Bengal, to be Dojakh, or an infernal region; and whenever any of the Ameers, or Courtiers, were found guilty of capital crimes, and the rank of the individual did not permit their being beheaded, while policy at the same time rendered their removal necessary, they were banished to Bengal. The air and water of Bengal were considered so bad as to lead to the certain death of the criminal."

Very early in the British occupancy of the country so dreaded by the Mahomedan, the same baneful influences were observed to afflict the European soldiery; and so early as 1768 it was recommended that none should be stationed lower down the course of the great rivers than Kassimbazar, "the climate of Calcutta being so unfavourable to Europeans."

As regards the Sepoy—the native of Hindustan—our present experience also confirms that of our Mahomedan predecessors. "The native soldiers," says Major Henderson, "on the Bengal establishment are particularly healthy under ordinary circumstances. It has been found by a late inquiry, embracing a period of five years, that only one man is reported to have died per annum out of every hundred and thirty-one on the actual strength of the army. So injurious, however, is Bengal Proper to this class of natives, in comparison with the Upper Provinces, that although only one-fourth of the troops exhibited are stationed in Bengal, the deaths of that fourth are more than a moiety of the whole mortality reported." After details such as these, with their load of gloomy retrospects, we are prepared to admit that, as regards the sanitary improvement of Bengal Proper in general, and the site of its capital in particular, it demands, from us Europeans, all the aids which science and art can bring in support of experience.

We come then, at length, to a more promising era—a stage in the history of sanitary improvement in the East, in which the efforts of the British authorities were no longer confined to making roads "to see through your bounds into the country of the neighbouring Zumeendars, who attacked you some time before, as to facilitate the march of your soldiers"—a time when a second attack on and capture of our eastern capital, had become as improbable as the capture of London—a stage in our advancement, when our "outmost outguards" had gone forth from the petty suburbs of our once petty factory to the imperial city of the Moghuls.

The Marquis of Wellesley, who knew how to make and to secure conquests, knew also the still greater office of a governor-general—that of promoting internal improvement. "It is a primary duty," he says, "of the government to provide for the health, safety, and convenience of the inhabitants of this great town, by establishing a comprehensive system for the improvement of its roads, streets, public drains and water-courses, and by fixing permanent rules for the construction and distribution of the houses and public edifices, and for the regulation of nuisances of every description. The appearance and beauty of the town are inseparably connected with the health, safety, and convenience of the inhabitants, and every improvement which shall introduce a greater degree of order, symmetry, and magnificence in the streets, roads, ghauts, and wharfs, public edifices, and private habitations, will tend to ameliorate the climate, and to secure and promote every object of a just and salutary system of police."

The ever-memorable governor-general who penned these noble sentiments soon after quitted the scene of his greatest service to his country, but not before he had ordered a commission of competent officers to inquire into, and report upon, the best means towards securing the ends in view. But the master spirit had departed, while sickness and death so dissolved the commission, that within a few months but three remained in Calcutta, out of some ten or twelve members. Nothing was done, consequently.

Years elapsed before another measure for the improvement of Calcutta was framed, and then it took the form of lottery! Its profits were applied, under direction of a well-constituted committee, to the opening out chiefly, and widening, of certain thoroughfares; and thus it proved very serviceable so far. But yet, "the comprehensive system, and the fixing permanent rules" of Marquis Wellesley were wanting. It was more than thirty-five years from the date of the departure from the shores of the Ganges of Marquis Wellesley, when the writer of this notice made the attempt, and it succeeded.

The author had served three years in India, and chiefly on active field service, in the hilly districts of Orissa, bordering on the Chilka Lake and Northern Sircars, and in those of Gundwana, on the Mahanuddy River—countries nowhere surpassed for unhealthiness. In those regions, tropical disease in every form, and in every degree of concentration, spreads its "black, unmoving wings" over the camp. There also the author witnessed great blunders in the health arrangement of command, and corresponding results, fatal to military efficiency. In 1821, he was directed to assume charge of the governor-general's body-guard, then at its head-quarter station, one of the suburbs of Calcutta.

The writer was yet wanting in years; but he had seen much, and had suffered so severely in his own person within that short time, as to have become painfully aware of the terrible power of external causes in the production of disease. He did not expect to find such causes in full and destructive operation almost within cannon-shot of the Government House of Calcutta. But so it was: fever had its "local habitation" firmly established there. The diseases of the jungles,

and of the most unhealthy districts of India, were rife in the permanent cantonment of the body-guard.

He considered it his duty to represent the greatly neglected, marshy state of the immediate and surrounding grounds, the bad situation and construction of the trooper's lines of huts and of the hospital, the bad quality of the water in use by the men, &c. &c. The Marquis of Hastings, the then governor-general, was pleased to approve and confirm all the suggestions submitted to him, and to order a large body of convicts to labour on the works required; and the result, during the whole after-residence of the author in India, was most marked. Fever had diminished in frequency and intensity, as compared to previous years, to the benefit not only of the native soldiers of the body-guard, but to that of the inhabitants around the cantonment—European and native. Referring officially to this circumstance, several years afterwards, the author states:—"I had intended to have brought the details to the notice of the authorities, but I lost my papers in a shipwreck on the coast of Pegue, when proceeding thither, during the late Burmese war, with the body-guard. The fact, however, is as I have stated." Ten years after the date here referred to, and when the author had been some time presidency surgeon, and surgeon to the Native Hospital, Calcutta, he believed that, by careful and repeated observations, he had become acquainted with many important and interesting local circumstances materially affecting the health of the native and European community; and these he communicated to the governors of the Native Hospital in a memoir, dated April 9th, and which was taken into deliberate consideration at a special general meeting of that body, held on the 20th of May following, 1835. The memoir comprehended two principal and leading suggestions—the preventive and the curative. It required the removal of all the local defects pointed out—the structural improvement of Calcutta in conformity to modern science in sanitary affairs, and the establishment of a fever hospital for the reception of natives suffering from fever and the other diseases endemic to the climate of Bengal.

In reporting further on the medical topography of the British Indian capital, the author stated, "That there are causes constantly in operation here, and *which may be easily removed*, that tend to produce great public unhappiness, by abridging both usefulness and the term of life, any one may see; that it is the duty of the government—the only moving power in India—to obviate and remove all these causes, no one can reasonably doubt."

The various sources of unhealthiness actually existing at the time, are stated, in a very able article in the *Calcutta Review*, vol. v.—

"By the report presented by Mr. J. R. Martin, and printed by order of government, on the Medical Topography of Calcutta, it appears that the following are the chief causes assigned by that gentleman for the unhealthiness among the native inhabitants of the town and suburbs:—

1. The over-crowded population; the crowded and ill-ventilated state of the houses; the great number of decayed habitations.

2. Their ill construction, and being built on the ground instead of being raised off it, as habitations ought always to be in countries subject to inundation, like Bengal.

3. The close, narrow, and ill-ventilated state of the streets; their want of water-courses and pavements; their dustiness and general want of cleanliness; their want of proper direction, in reference to prevailing winds.

4. The imperfection of drainage and sewerage: this is a great source of unhealthiness.

5. The deficiency of good tanks, and the general want of a supply of good water; the number of decayed and half-dried tanks affording unwholesome water, and yielding noxious exhalations.

6. Crowded, filthy, ill-ventilated, and unpaved state of public markets.

7. Neglected and ill-arranged condition of public tatties, (necessaries.)

8. Bad state of the native burying-grounds, and their vicinity to the town.

9. The very neglected state of all surrounding suburbs. The number of salines and marshes.

10. The construction of canals, and the heaping of their banks so as to prevent the drainage eastward, along the natural inclination of the soil.

11. The vicinity of rice cultivation.

12. The quantity of low jungle-tree obstructing ventilation, and the great extent of irregularity of ground, admitting lodgment of impure waters, &c., giving off exhalations. These are chiefly to be found in the suburbs.

13. Great immorality of the natives; polygamy.

14. 'The institution of caste is of itself an enormous injury to public health, because prejudicial to public happiness.' Here the author's words are quoted.

15. The sedentary and indolent habit of the natives; their irregular hours of rest; their long fasts; their improvidence and common practice of borrowing; their exposure and irregularities at fairs and festivals of religion.

16. Their defective diet, clothing, bedding, and fuel.

17. The knavery and ignorance of the native practitioners in medicine and surgery.

18. The misuse of the cold bath under circumstances of impaired health, and especially during the cold season.

19. Neglect of vaccination.

20. The want of hospitals.

21. Defective education and physical management of children."

"It is convenient," says the reviewer, "to put this abstract thus in the front of our details relative to the state of Calcutta, as it presents to view a remarkable complication of prejudicial influences, and must prepare the reader for almost anything that may follow. A greater and more appalling array of fatal causes, both moral and physical, could not be found probably in any other town in the world—no, not in Africa or in Turkey."

To the enlightened zeal and enlarged humanity of the gentlemen assembled on the occasion above referred to, much of what has followed is due. They appealed at once to the governor-general, Sir Charles, since Lord Metcalfe, who gave full operation to all that was suggested.

Lord Auckland soon followed, taking great personal interest in the subject, and adopting the humane and liberal views of his predecessor. He ordered a commission of inquiry to be formed, and that the author should be a member of it. The inquiry took two years in the completion. The labour of the commission was gratuitous, and it was immense. It is due to Sir John Grant (one of the judges of the Supreme Court of Judicature in Bengal) to state, that as yet his report, prepared, as chairman of the commission, from an enormous mass of valuable materials, stands second to none that has appeared on the question of public health, whether at home or abroad. He never lost sight, during years, of his duty as chairman. When external wars averted the eye of power from internal improvement, he acted in silence; but only to become more energetic when peace should come round.

Sir John Grant remained in India to witness the passing of a series of legislative "acts," having for their prospective object the rendering Calcutta both healthy and commodious. The inhabitants of that great capital owe to Sir John Grant a lasting debt of gratitude. The inquiry into the sanitary history and present condition of public health in Calcutta, has attracted the notice of the British legislature, and of men of science in England. The Marquis of Normanby, the author of some of the best measures having reference to public health in England, has twice spoken in his place in the House of Peers on the subject, and that with much commendation; while Mr. William Farr—the very most competent authority in England—writes as follows:—"We look upon the well-conducted sanitary inquiry commenced in Bengal, as one of the most important undertakings of the age in India, useful to science, to England, and creditable alike to Mr. Martin, (with whom it originated) to the committee of inquiry, and to the government." This is great praise, and a great honour, as coming from the author of the parliamentary reports issuing annually from the office of the registrar-general. It is well deserved by the Calcutta Commission generally, and by the lay members of it especially.

As regards the author, he takes no more of the merit than may attach to the zealous and persevering discharge of his duty to the government he served, and to the community of Calcutta, Native and European, which has ever treated him with a marked kindness.

"The Fever Hospital" is in rapid progress. It is "calculated to receive three hundred and fifty patients at a time, and capable, at the average of twelve days for duration of treatment in cases usually received in a Fever Hospital, of receiving in the course of a year about 10,500 patients."

"It is explained to the chairman that the lower story is proposed to be vaulted for circulation of air, and that the lowest wards for the reception of patients will be ten feet above ground."

"The expense of the Fever Hospital is estimated at a trifle above one lack of rupees, (£10,000,) which sum is already collected."—*Minute of Sir John Grant, 1st April, 1847.*

The progress of this much needed institution is most gratifying.

The author, before leaving India, submitted separate and distinct memoirs, one "On the Draining of the Salt-Water Lake," with a view to bring its extensive area of 12,000 acres under cultivation, and thereby to improve the climate of Calcutta; the other, "On the re-occupation of Negrais Island, an ancient British settlement on the coast of Pegue, with a view to its advantages as a place of resort to the European sick of Calcutta and Madras."

The political, naval, military, and commercial advantages of Negrais were shown to be of no less consequence than its importance as a sanitary position in the bay of Bengal.

To enter into the subjects comprehended in the memoirs just named, would, however, be foreign to the objects of this sketch.

Grosvenor-street, Grosvenor-square, Sept. 1847.

ON INFLAMMATION AND ULCERATION OF THE NECK OF THE UTERUS IN THE VIRGIN FEMALE,

AND ON ITS CONNEXION WITH LEUCORRHOEA AND DYSMENORRHOEA.

By HENRY BENNET, M.D.,

OBSTETRIC PHYSICIAN TO THE WESTERN GENERAL DISPENSARY, ETC.

(Continued from p. 68.)

In a former paper, I described at some length the symptoms presented by inflammatory ulceration in the virgin, and pointed out the peculiarities which the disease offers in them, when compared with the same disease in married women. I also insisted on the very important fact, that severe and intractable dysmenorrhœa and leucorrhœa is often the result of inflammatory ulceration of the cervix uteri in the virgin as well as in the married female. As I have already stated, within the last year I have seen and treated seven severe cases of this disease in the virgin, and shall now lay before my readers two of the most instructive, as illustrations:—

Extensive Inflammatory Ulceration of the Cervix Uteri in a young person, aged Twenty-four, accompanied by partial Prolapsus of the Uterus, and much aggravated by the use of a Pessary.

CASE 1.—April 2nd, 1846, I was consulted by a lady from the North of England, respecting her daughter, a young person, aged twenty-four, who she stated had been suffering for some time from falling of the womb. On questioning the mother and the daughter, I elicited the following details:—Menstruated early in life, she had always been so regularly every four weeks; the secretion usually lasted four or five days, and was generally accompanied by more or less pain during the first two. She had often the whites a day or two before and after menstruation, but not at other times; health generally good. At twenty-two the whites became more abundant, and she began to suffer from increased pain during menstruation. She had also experienced from that time considerable pain in the lower part of the back. Her general health subsequently flagged; she became low, nervous, dyspeptic, and thin. About nine months previously, she began to feel great dragging and bearing-down in the pelvic region. This sensation was more especially felt when standing or walking. The vaginal discharge had then been yellow for some time, and the back and other pains were much increased; the general health had also become worse. Under these circumstances, her mother, being alarmed, consulted an experienced accoucheur. The young lady was examined digitally, and told that the womb was very low down, owing to laxity of its ligaments; that there was no other disease, and that she would soon feel quite well if the womb were properly supported. In order to effect this, a small boxwood ring pessary was introduced into the vagina, although with great difficulty, and pushed up against the cervix. She was promised that she would soon be able to walk out,—which for some months she had been nearly unable to do,—if she persevered in using the pessary. The wooden supporter thus introduced was regularly pushed up once a week, for a period of three months. The introduction of the pessary was immediately followed by a very great increase in the local pains, as also by an increase in the vaginal discharge, which from that time was frequently tinged with blood. For some weeks previous to my seeing her, the pains in the back and lower abdominal and ovarian region had often been

agonizing, especially during the monthly periods. The hypogastric region was painful to the touch. She could scarcely walk across the room, could not sit upright, and had an abundant yellow vaginal discharge, generally mixed with blood. She was sallow and emaciated; became hot and feverish every afternoon, and was very weak and hysterical; the appetite was bad, the bowels constipated; her nights restless, and the urine loaded with lithates. Notwithstanding these symptoms, and although the pain experienced when the pessary was pushed up, or even touched, was indescribable, her medical attendant kept repeating to her that she must be better, and would soon get well. The impression, however, on the mind of her friends was, that he had given her up as incurable—an impression confirmed by his having, of his own accord, all but ceased his attendance.

On passing the index into the vagina, I found both the external and internal parts very lax and moist. The pessary was low down, but wedged, as it were, in the soft parts, so that I had to use some force to extricate it. On then examining digitally, I found the cervix low, very voluminous, and presenting a certain resistance to pressure, without being indurated; the hypertrophied lips were very open, so much so as to admit the first phalange, and presented a soft mossy surface, both internally and externally. The uterus was rather enlarged, especially posteriorly, and very sensitive to pressure. Posteriorly, where the cervix passed into the body of the organ, there was a groove, or sulcus, in which the posterior circumference of the ring pessary had been lodged, and which had been formed in the inflamed uterine tissue. Here the pain on pressure was very great. The uterus was perfectly moveable. On introducing a small speculum, which I was able to do from the extreme laxity of the parts, and their previous distention, a really frightful amount of inflammatory and ulcerative disease became apparent. The vulva and vagina were painful to the touch, vividly congested, and covered with sanies. The cervix, low and voluminous, was of a livid red, covered with sanies, and ulcerated both around the open os, and as far within its cavity as the eye could reach, on the lips being separated with the bivalve speculum. The ulcerated surfaces were most unhealthy in their appearance, and bled on the slightest touch. It at once became evident to me, that the patient had been primitively affected with inflammation of the cervix; that the prolapsus of the womb, which had alone attracted the attention of her previous medical attendant, was merely the physical result of the inflammatory enlargement of the organ; and that the treatment adopted had aggravated twenty-fold the gravity of the disease. I began the treatment by applying the nitrate of silver freely to the ulceration, and by the application of eight leeches to the cervix uteri, which were repeated a few days later. She was confined to her bed, and cold linseed vaginal injections, with tepid hip-baths, ordered night and morning. The bowels were kept open by cold-water injections and mild laxatives, and a very light mild diet, without stimulants of any description, prescribed. Under the influence of these measures, the acute inflammatory symptoms presented by the uterine organs rapidly gave way, and in less than ten days there was already a considerable change for the better. The extreme sensibility of the vagina, cervix, and posterior uterine region, had much diminished, and she suffered much less in the lower part of the back, and in the abdominal and ovarian regions. The afternoon febrile attacks had given way, and she had become less restless and feverish at night. The ulceration, which was still very unhealthy, was then cauterized with the acid nitrate of mercury, and astringent (alum) injections substituted to the emollient ones previously used. A saline mixture only was given internally.

From this time forward, under the above treatment, and the periodical cauterization of the ulceration, either with the nitrate of silver, or the acid nitrate of mercury, my patient continued to improve, although slowly. It was nearly two months before the ulcerated surfaces of the cervix and its cavity assumed a thoroughly healthy appearance, and ceased to secrete more or less sanious discharge. Before this period, however, the process of cicatrization had commenced, and it continued to extend itself, the cervix at the same time gradually diminishing in volume. As this decrease in size progressed, the cervix rose in the vagina, and the sensation of falling became less distressing. The general health also rapidly improved, the rest became good, the bowels regular, the appetite returned, the urine ceased to be loaded with lithates, and the general nutrition began to rally.

It was not, however, until the end of August—that is, nearly five months from the commencement of the treatment