ON
SLOUGHING PHAGEDÆNA.

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IN soliciting attention to the subject of sloughing phagedæna, I should feel exempt from any charge of haste or presumption, if, in addition to the many and melancholy records of so severe a malady, I could add but one solitary fact that could tend to elucidate its nature. There are few diseases that, on account of the insidiousness of their origin, the torturing devastation of their progress, or the fatality of their termination, can demand a more anxious vigilance from surgery. In adverting first to the local characteristics of this affection, I shall describe it as I have myself seen it extending progressively from some small point of ulceration or abrasion; although a similar, and as I believe, from the perusal of military authors, an identical form of disease has at once attacked the entire surfaces of stumps and other large solutions of continuity, under the denomination of hospital gangrene*.

* I may refer those who are interested in a more full consideration of this point to the works of Blackadder, Thomson, Hennen, and Delpech's *Mémoire sur la complication des plaies et des*

I have, for the most part, had occasion to observe this malady in the lowest class of prostitutes. It announces itself, as far as can be ascertained from their somewhat uncertain evidence, in the form of a highly irritable and painful papula or small boil, surrounded by a halo of dusky red inflammation, and much elevated; the patients in general having mucous discharges from the vagina, and a diffused redness of integument in the vicinity of the pudenda. The disease is generally situated in the cleft of the nates, in the groin, or at the inner and upper part of the thigh. The elevated point of inflammation vesicates, and being broken either accidentally, or by design of the impatient sufferer, assumes immediately those characteristics which are only more developed by the progress of the malady. The disease at all periods is attended with severe darting pains, at first occurring at intervals, but gradually establishing themselves as a more constant symptom, with occasional exacerbations. The earlier appearance of the exposed surface is often merely that of a stratum of adherent straw-coloured flocculi, with a glairy viscosity of secretion that gives to many of the diseased portions the resemblance of a thick puriform discharge; this is, however, for the most part mottled, and interspersed with darker points of

ulcères connues sous le nom de Pourriture d'Hopital, Paris 1815. With the admirable reports of the latter author, I have so repeatedly identified the progress of sloughing phagedæna, that I do not hesitate often to adopt his descriptions.

reddish brown and grey tint generally. As the surface gradually enlarges, with aggravation of the attendant symptoms, the centre becomes somewhat depressed ; nor can this appearance be referred to the mere elevation of the surrounding edges, which are abrupt, but thickened, frequently everted, and sometimes even presenting the appearance of a red and flattened lip. Around the sore, the form of which is for some time circular or oval, is extended a circumscribed thickening, with an encreasing halo of a dark red inflammation ; to this is often added a puffy and less limited tumefaction of the cellular substance. Occasional hæmorrhage soon occurs from the darker points. As the disease advances, a peculiar and foetid odour becomes sensible on approaching the patient : a reddish brown or chocolate-coloured discharge may be pressed from different points of the sodden slough. The sensation produced to the finger is that of a yielding pulpy substance ; the degree of sinking being commensurate with the encreasing thickness of the sloughy stratum. It may now be readily observed, that the surface of the sore is below even the general level, and yet has this apparent loss of substance taken place without the actual separation of any solid portion of the disease. At last, however, as the putrescence of the slough advances, we observe a great quantity of foul secretion ; and shreds of pulpy matter are detached by the removal of poultices, or the local applications. The sloughs are sometimes grey or ash-coloured, but

in many instances, and particularly at the more advanced periods, when they are very deep and large, they become of a dark brown, and even resemble coagula retained by threads of cellular substance. The disease may continue to deepen, although the edges sometimes become clear, the pain becomes constant and agonizing, and considerable hæmorrhage not unfrequently attends the latter stages. The patient generally lies upon her back, with the thighs abducted and bent upon the pelvis. The parts most readily subjected to the devastations of this malady, are the cellular and adipose tissue; the rapidity and extent of its progress, when situated in the groin, upper part of the thigh or nates, are sometimes terrific. It seems that it is only in textures moderately supplied with vessels and nerves, or claiming only a medium degree of importance in their functions, that the disease can most speedily establish its destructive agency. Parts of high or low organization are best able to resist its progress; the one by their indisposition to admit, the other by their powers of supporting the morbid excitement if established. Thus, when we read of muscles perishing, or arteries corroded, we must consider that they have been partially dissected, or even insulated by the destruction of parts surrounding or connected with them; in this manner I have observed the skin at the edges mortify by the extension of disease beneath it. That parts of low organization resist the disease, is manifested by its comparatively slow progress,

when it has extended to the compact and fibrous texture of fasciæ and aponeurotic expansions. The surrounding thickening and inflammation have been considered specific ; to me sloughing phagedæna seems a disease that has a power of extending itself by its acrid and stimulant secretions, but at first provoking in its vicinity only the actions of common inflammation more or less in degree. Such parts, however, as have been inflamed from contiguity, being enfeebled by continuance of the unceasing excitement, are finally subjected to the influence of the local stimulant, whose peculiar actions sooner or later, in proportion to their vitality, they assume. It is interesting to see the rapidity with which these sores, at the highest point of irritation, lose their halo of inflammation and surrounding thickening, on the application of measures calculated to destroy their secretory surface and discompose their secretions. Again, when general constitutional disturbance supervenes from the increased extent of the local malady, and unites in alliance doubly subversive of healthy processes of resistance, the latter stages of this disease are progressive in a degree that surgery itself may shudder at. The fact of its earlier stages being attended with little or no disturbance, would further seem to advocate the local nature of the malady. It is also highly contagious; and I am informed by Mr. Earle, that the diffusion of the malady when committing unusual ravages in the foul wards of St. Bartholomew's Hospital, was traced to an in-

advertent use of the same sponges for different patients. I have frequently seen a part of the diseased surface clear off and granulate, while the mischief continued progressive at the opposite edge. I may also mention that under constitutional treatment, the pulpy slough will sometimes separate in the circumference, exposing large and florid granulations; while the impatience of our hope is scarcely repressed by the continued pain, which, in conjunction with other symptoms, attends the progress of destruction at the base and centre. It may be further observed, that the symptoms of general disturbance that supervene, are promptly relieved by measures that control the agency of the local virus.

The constitutional disturbance is gradually effected and may be readily accounted for, by the unremitting and progressive increase of local irritation, the occasional pains becoming more frequent in point of interval, severer in degree, and at last constant. Nocturnal exacerbations are established, and the patient knows no rest but that of short dozings; the appetite fails, the tongue becomes white or furred, the epigastrium tender, a peculiar expression of anxiety is manifested, the eye is dull, pain is felt about the forehead, temples, and not unfrequently at the back of the head, febrile irritation gradually supervenes, with acceleration of pulse, restlessness, and thirst, the skin is sallow, with more or less increase of temperature. Bilious

vomiting and diarrhœa are often attendant as the progress of the malady becomes rapid, and the pain is excruciating. Delirium rarely supervenes, and the patient retains a miserable consciousness of severe suffering, till the powers of life are no longer able to wrestle in their agonizing contest with the disease.

Whatever may be the original nature of the malady, whether local or constitutional, I most readily leave the uncertainty of speculation for the more interesting consideration of the treatment to be adopted, which appears to me to consist in measures that will most speedily destroy the local virus and its source*. Mercury has been constantly observed to exert a most malign influence on the local malady; and this fact appears to me explicable by the consideration that mercurial irritation of the system is subversive of the natural and healthy processes of resistance to the

* The principle of treatment I have ventured to recommend in submitting these observations, and even the practice of employing the mineral acids as escharotics, has been adopted by some military surgeons in cases of hospital gangrene with success. Although not ambitious of any claim to priority of suggestion in the treatment of sloughing phagedæna, I may observe, that before my knowledge of this circumstance, I was induced, after having repeatedly seen cases terminate fatally and after severe suffering, to apply undilute nitric acid with the mere hope of relieving the local pain by the destruction of the diseased surface; for I had observed bleeding points and nervous filaments evidently undestroyed, when I attempted to remove any portion of the sloughs.

progression of the disease: even the alterative dose during the active stage, has seemed to act as a prejudicial stimulant to a state of digestive organs, rendered highly susceptible by the constant excitement of the general system. Venæsection may be adopted with advantage at early periods, while the disease is yet superficial, and the constitution not much disturbed. In plethoric habits particularly, it has appeared to me that a temperate abstraction of blood lessens the susceptibility of the general system, and relieves the throbbing darting character of the local inflammation. But while we hope that the local irritation may be thus beneficially counteracted, and the exhaustion likely to ensue from long continuance of severe excitement obviated, yet must we be cautious how we ourselves render the system feeble in its contest with the local disease. The local application of leeches is inadmissible, as all wounds in the vicinity are prompt to assume the morbid actions. The exhibition of narcotics is beneficial by diminishing the excitability of the nervous system, and I have observed a most irritable state of stomach improve rapidly, and a foul and furred tongue clear off on the administration of large doses of opium at regular intervals. Bark is generally contra-indicated by the disposition to diarrhoea, a symptom not unfrequently attendant upon the advanced stages. Finally, I have now employed nitric acid as an escharotic, with uniform and immediate success in a great variety of instances; in three cases the

application has been made to the penis with prompt relief to the sufferings of the patient, and the progress of the malady. The method from which I have derived most benefit is as follows: if the disease be not far advanced, I at once apply the undilute acid, after cleansing the surface with tepid water, and absorbing the moisture with lint. Where, however, there is a thick and pulpy slough, it is better to remove as much as possible, with forceps and scissors before the application is made. The surrounding parts being then protected by a thick coating of lard or cerate, I proceed to press steadily, and for some minutes a thick pledget of lint previously immersed in the undilute acid on every point of the diseased surface, till it appears converted into a firm and dry mass. The parts may be then covered with simple dressings, and evaporation kept up externally by cooling lotions. As the application occasions more or less pain from half an hour to one or two hours, I have generally given twenty or thirty drops of laudanum at the time of using it. It is always prudent, often necessary, to remove the eschar at the end of sixteen or twenty hours, when such further measures may be adopted as the case seems to require. Where the patients have become perfectly free from pain, and the parts below the slough, on its removal, appear healthy and florid, the sore may be treated as a common wound or ulcer, though I may observe that stimulant dressings are generally most advantageous. I have myself generally employed

the ceratum lapidis calaminaris, or applied occasionally or constantly a solution of argentum nitratum in the proportion of two or three grains to an ounce of distilled water. If, however, the patients have suffered any recurrence of pain, referred to some particular point, or to the general surface of the sore; if the affection be slight or severe, and the remaining slough deep or superficial, I would advise the re-application of the undilute acid. Dilution only weakens the remedy, and protracts the duration without diminishing the severity of the pain attending the application. The result is, that patients who have known no reprieve from suffering for weeks, and whose constitutions have become greatly disturbed in consequence, within a very short space of time sleep soundly and tranquilly, their fever subsides, and in a few days we should with difficulty recognize the individuals whom we had before seen subjected to the painful progress of a malignant and too often fatal malady.

To avoid trespassing too much on the attention of the Society, I have selected eight cases only for their consideration, two, of whose torturing progress and fatal event I was myself witness, without at that period any knowledge of means by which it could be arrested, four of later date successfully treated by the application of acid, while making rapid progress, one illustrative of a

slow form, and one in which the penis was the seat of the disease. For permission to lay these cases before the Society, I am indebted to the liberality and kindness of the surgeons of St. Bartholomew's Hospital.

CASE I.

Frances Bryant, aged twenty-one years, admitted into St. Bartholomew's Hospital, in the beginning of March 1819, with discharge from the vagina, and small foul ulcer at the inside and upper part of the left thigh; no peculiarity of health or constitution requiring notice. In the course of a few days my attention was directed to the severity of pain referred by the patient to the situation of the sore. This symptom was at first intermittent, but soon became constant, with exacerbations, a peculiar foetor, the mottled and extending slough, occasional bleedings, and great constitutional disturbance soon marked the presence of a malignant disease. Bilious vomiting, diarrhoea, fever, and ceaseless pain preceded its eventual termination in death in the course of three or four weeks. Every variety of local or constitutional treatment in which any promise of benefit could be suggested, was anxiously, but in vain, adopted. Among the local measures I observe, bread and water poultice with opium lotion, very dilute washes of nitric and

muriatic acid, arsenic wash, containing a considerable proportion of spirit, weak solutions of lunar caustic, linseed and yeast poultices, and the compound tincture of benzoin. In the constitutional treatment is noted, sarsaparilla, alterative doses of mercury, nitric acid, bark, and camphor mixture, with tincture of opium. On subsequent examination of the abdominal viscera, no appearances were observed that were not referable to temporary irritation.

CASE II.

Ann Lincoln, aged thirty-one years, admitted into St. Bartholomew's Hospital at the latter end of April 1819, on account of a sloughing sore that had extended in the course of six or eight days from the lower part of the sacrum to the labia pudendi. She had also a foul and circular sore on the inner part of the left thigh at its upper part; she complained of occasional severe pain in the situations of the disease; the surface of the sores was irregular, and covered with a foetid, pulpy, and thick slough, sodden with a dark brown discharge, and strongly contrasted with a halo of deep red inflammation: the edges were abrupt, and in parts everted. The constitution had become affected; she complained of fever and restlessness, and the countenance appeared sallow and expressive of great anxiety; some febrifuge and aperient

medicines were prescribed, and lint moistened with tepid opium lotion kept constantly applied to the diseased surfaces. In the course of a very few days the local and constitutional malady was much increased; the sore had deepened, and bilious vomiting with diarrhœa had supervened; an aromatic draught containing ten grains of the opiate confection was now taken every four hours, and a pint of red wine allowed daily. Under this treatment a very great improvement at first was observable; the sore became easier, the pulse less frequent, the sickness was relieved, and the countenance gave promise of returning tranquillity; the sloughs had separated from the edges, exposing red but large granulations, and the fœtor had become much less; pulpy shreds also came completely away. These advantages were, however, only temporary, and although the gradual increase of the opium at subsequent periods again appeared to be attended with corresponding benefit, yet notwithstanding this and other occasionally advantageous suggestions, the disease progressively deepened in the cellular and adipose substance of the nates, till it terminated at last, after three weeks, in death. A grain of opium every three or four hours procured no relief even from pain.

CASE III.

Catherine Ball, aged eighteen years; admitted into St. Bartholomew's Hospital, October 21, 1819,

with discharge from the vagina, and a sloughy sore at the inner and upper part of the left thigh. The latter disease was painful, and had existed three weeks, during which period it had acquired the size of a half-crown piece, under the use of local stimulants and the internal exhibition of mercury, to a slight extent. The circumference of the sore was elevated, hard, and of a deep red tint, and beyond this the general vicinity puffy and tender on pressure; the centre was depressed, though no slough had separated, and there was occasional bleeding from points of the surface. The constitution as yet had suffered no disturbance requiring notice; the pain gradually increased, and appeared to be aggravated by two cinnabar fumigations. In four or five days the characters of sloughing phagedæna were distinctly developed; the compound decoction of sarsaparilla and five grains of Dover's powder were prescribed night and morning without any relief. Becoming daily more assured of the nature of the disease, I determined upon adopting measures that, by destroying the whole surface, might at least produce a relief from the agonizing pain. With this view, on the 30th of October, I applied equal parts of the nitric acid and water; a temporary aggravation of pain, which lasted three-fourths of an hour, was succeeded by a repose and ease which the patient described as "being in heaven." In about twelve hours the pain recurred, and was again relieved as before, and she fell into a sound sleep. On the third day from the first application, as she still appeared to suffer a slight

recurrence of the pain, I removed the eschar with forceps and scissors, and re-applied the acid to the whole surface, in which I observed several sodden and sloughy points; the results were as on the first application. Still, apprehensive of relapse, I directed that some lint wet with ʒj. of acid in ʒiv. of water should be kept applied. On the sixth day the sore required no treatment but that of a granulating ulcer, and the patient was afterwards discharged from the hospital cured.

Mr. Langstaff, who had the kindness to see this case with me, was of opinion that under more lenient measures it would have proved fatal.

CASE IV.

November 6, 1819, Jane Brown, aged twenty-six years, had a painful and sloughy sore with elevated edges, inflamed and hard in its circumference, and the general vicinity swollen and tender on pressure. The surface was mottled and slightly depressed towards the centre; there was occasional oozing of blood from points, and a frequent recurrence of darting and severe pains. Its first appearance had been that of a small boil, attended with heat and pain, till the surface was abraded, when it assumed the above mentioned characters. The patient had had discharge from

the vagina nearly two years ; the sore had acquired the size of a half crown piece in a fortnight, and was situated at the inner and upper part of the right thigh, near to the labium pudendi. The patient was of a sallow bilious complexion, and had had more or less sickness for some days ; mouth dry, but without thirst ; pulse ninety-two, and regular. The constitutional treatment adopted, was an alterative dose of pilula hydrargyri and the compound decoction of sarsaparilla twice a-day, with small quantities of bread and milk for diet three times in the day ; and the local measures employed night and morning were, dressing the inflamed edges with simple cerate, covering the surface with lint immersed in tepid opium lotion, and externally a bread and water poultice, the moisture of which was maintained by occasional additions of opium lotion. Under this treatment the disease continued progressive for four days, when the local pain and constitutional disturbance were so great, that it became necessary to give a pill composed of extract of hyoscyamus and conium three times a-day ; the only advantage derived from this and the other measures, appeared to be a procrastination of the constitutional excitement. To such an extent, however, had the general and local malady increased by the 17th, that the application of the undiluted acid was made to the surface ; in one hour and a half she became quite relieved from pain, and slept soundly. A dilute lotion was afterwards employed as a preventive. On the third day there remained

nothing but a healthy granulating sore, and in the next month the patient was discharged cured.

Mr. Vincent and Mr. Stanley both saw this case, and were of opinion that such a disease, under ordinary treatment, would have terminated fatally.

CASE V.

Jane Nash, aged twenty-one years, admitted into St. Bartholomew's Hospital with severe scabies purulenta over the whole body, and a pale and thin discharge from the vagina, unattended with ardor urinæ about three weeks from the present date, July 5, 1820; at that period she had also irritation and chaffing of the skin between the nates, referred by her to the discharge; these latter symptoms got well under the use of lotio calcis cum calomelane and tepid bathing. About ten days since, a vesicle formed upon a boil situated at the posterior part of the cleft of the nates; this, on breaking, exposed a sloughy surface, disposed to bleed, and attended with great pain, reaching to the lumbar region; this pain was nearly constant and darting. The sore had now acquired the size of a tea-cup, was slightly depressed, and surrounded with elevated and inflamed edges; surface pulpy, tender, and of a dark brown mottled appearance; viscid discharge of reddish brown colour; constant pain,

with occasional severe exacerbations. The constitutional and local treatment hitherto-adopted was useless, except that the foetor had been corrected by the use of charcoal poultices. The patient had had little or no sleep from first appearance of the disease. July 5, the undilute nitric acid was applied, and produced aggravation of pain for half an hour, after which period, the patient slept, completely relieved from her sufferings; the eschar was removed the next day, and a process of sloughy cellular membrane unaffected by the acid exposed. A dilute lotion, containing half a drachm to an ounce of water, was now applied constantly, but there were suspicious points that required the re-application of the undilute acid for security in a few days. The patient suffered no relapse, and the large cavity that extended down to the sacrum was in one week rapidly filling, with florid granulations, and in three weeks from the first application of the acid, the patient was discharged cured.

CASE VI.

Anne Mac-Intosh, aged nineteen years, admitted into St. Bartholomew's Hospital, November 30, 1820, had had great discharge from the vagina, during a fortnight previous to her admission. On examination, great chafing and redness were observed in the vicinity of the pudenda; and irregu-

lar points of ulceration in the same situation. These sores proceeded with regular enlargement to aggregate themselves into one surface of sloughing phagedæna, with no relief from poppy fomentations, cold washes and other remedies, local and constitutional. In one week, the disease had so extended itself in every direction, with increasing pain and the supervention of great constitutional disturbance, that on the 7th of December, she was bled 18 oz. by which the febrile excitement was somewhat diminished, but the local pain remained undiminished; effervescing salines were prescribed, but it was judged necessary to repeat the blood-letting to 20 oz. the next evening. These measures gave no relief to the local malady, which was now spreading with increased activity. On the 9th, I was requested to see her; she had now ceaseless pain with occasional severe exacerbations; a large sore was seen on the inside of the right thigh with everted edges resembling on one side a lip, and having all the characters of sloughing phagedæna, and throughout the cleft of the nates was a diffused dusky red inflammation with points of the same malignant character as the sore on the thigh; she had had little or no sleep for ten days, and appeared to suffer extreme pain. I applied the undiluted acid, and in three quarters of an hour she slept soundly. No recurrence of pain was noticed till three days after, when, on removing the slough, points of undestroyed disease were exposed, and the acid re-applied. This gave the usual relief, and on the fifth day from the first

application, the sores required no treatment but that of granulating ulcers.

CASE VII.

Sophia Blandon, aged twenty-four years, about three months ago had profuse discharge from the vagina; some highly inflamed pimples formed about the lower commissure of the labia pudendi. As she neglected cleanliness and rest, these points became excoriated, and soon extended into a sloughing sore on one thigh at first, and then on the other. The sloughy surfaces alternated from better to worse, while they slowly, but gradually acquired a size rather larger than the palm of the hand; they bled at points, and were very painful; the whole surface was extremely irregular, and a various degree of abruptness at the edges indicated where the disease was most active. By the duration of the malady for so long a period, the whole system had become disturbed; she complained of general and severe pains in the limbs, was palid and emaciated, and had a small and frequent pulse. She had received no benefit from a great variety of measures.

February 12, 1820. Suspecting from the glairy appearance of the surface in general, that it was in points only that the disease had deepened to any great extent, and apprehensive of applying the strong acid to so large a sore, with such a de-

pressed state of general system, I contented myself with directing the constant application of a lotion containing ʒj. of strong acid in a pint of water, and giving five grains of conium three times a-day. This caused severe smarting at first, but soon produced great relief to the pain; in three days nearly the whole surface was red and healthy; a solution of lunar caustic was ordered for the granulations, and the nurse omitted to continue the acid wash. In about eight days, having an opportunity of again seeing the case, I found that one point of sloughy appearance, whose situation the patient had described to me accurately, though before not larger than a sixpenny piece, had now acquired the size of half a crown, with increasing pain; the rest of the surface florid and cicatrizing. The strong acid was now applied to this descending process of the disease, and at once arrested its progress. The patient still required medical assistance, but was eventually discharged cured.

CASE VIII.

Samuel Cooke, aged twenty-one, about eight days ago, after the subsidence of a slight febrile affection, felt considerable uneasiness behind the corona glandis. This sense of uneasiness gradually encreased to a darting pain, and he observed thickening and inflammation in the point described.

Connecting the vesicular appearance that was now evincing itself upon the elevated and thickened part with the intermittent but severe darting pain, I anticipated a sloughing sore, in which prognosis, I felt confirmed by the opinion of my friend Mr. Stanley, who also saw the case with me. This opinion was subsequently verified; the vesicle broke; a slight sloughy excavation manifested itself, and in eight days a grey, pulpy, rugged, sodden slough was visible, attended with severe pain and oedema of the prepuce. Mottled points from oozing of blood were also seen in the general surface; a belt of extreme induration surrounded it, and was very tender on pressure; he received no benefit from sarsaparilla drink with tartarized antimony. May 11, 1820, ordered five grains of compound powder of ipecacuan night and morning, a grain of tartarized antimony in a pint of barley water for drink daily, twelve ounces of blood taken from the arm, and tepid opium lotion applied locally. On the 14th, the size and attendant symptoms of the sore had encreased; he was again bled twelve ounces with as little benefit as before. On the 16th, as the sore now threatened to continue its phagedænic progress, I applied a dilution of the nitric acid in the proportion of one part to three of water; this caused severe pain for three hours, after which the patient was quite relieved. On the 18th, finding no injurious effect from the above application, and yet apprehensive of relapse from the sodden appearance of the eschar, I again applied the

acid, but now undiluted. This produced great oedema of the prepuce, which could not be retracted, so as to expose the sore. The absence of all pain convinced me of the benefit I had derived from the application, and in six days I was able to expose a healthy granulating ulcer. In the course of a few weeks the patient was discharged cured.