

APPENDIX.

*Letter to DR. THOMSON from ANDREW SMITH,
M.D. Hospital Assistant, containing an Account
of Cases of Secondary Small-pox.*

DEAR SIR,

IN compliance with a wish which you expressed to me some time ago, that I would collect and arrange the evidence on record relative to the recurrence of small-pox in the same individuals, I have now to communicate to you the result of an investigation entered upon for that purpose, which I am sorry to say has, from my limited opportunities, been but very imperfect. The proofs which I have collected with regard to this point, consist, as you will perceive, partly of the opinions of medical men, and partly of matters of fact. In detailing these proofs, I shall state, *first*, those which are to be found previous to the introduction of small-pox inoculation into Europe; *secondly*, those which are mentioned by medical writers during the continuance of that practice; and, *thirdly*, those which have been collected since the employment of vaccination, observing as far as possible a chronological arrangement throughout the whole.

PERIOD I. *From the 10th Century to the year*
1720.

RHAZES, (*de Variolis et Morbillis*, p. 27, *et seq.*) the first writer on small-pox whose works have reached our times, evidently considered the recurrence of that disease as by no means unfrequent, particularly in those who had passed through it when young in a mild form, or in whom the disposition to the disease had not been completely destroyed by the first attack. When treating of the means to be employed for preventing an attack of small-pox, this author says, that blood ought to be taken away from children and young people who have either not laboured under small-pox, or who have had them at a former period, in a weak and mild form, and in another part of the same work, he observes, that the same individual does sometimes suffer a second, or even a third attack.

Shortly after the time of Rhazes, we find AVICENNA, another distinguished Arabian writer, lending his support to the same doctrine, He says, (*Opera Omnia*, T. ii. lib. 4. p. 73.) that a person frequently labours twice under small-pox when the matter is collected, so as to be expelled at two different times. This opinion seems to have been generally, if not universally admitted till the time of AVERRRHOES, who was the first to assert that a person could suffer an attack of small-pox only once in the course of life.

From Averrhoes till JOHN of GADDESSEN, none of the authors whom I have had an opportunity of consulting have made any observations with regard to the recurrence of small-pox. The last mentioned, however, (*Rosa Anglica*, p. 40.) says, that small-pox do sometimes occur a second time, when the cause of the disease has not been completely destroyed during the first attack.

FERNELIUS (*de Abditis rerum Causis*, cap. 12. liv. 2.) observes, that the two opinions which are entertained by some authors concerning small-pox, viz. that every person must

pass through them once in the course of life, and that none can have them more than once, are proved by his experience to be erroneous.

AMATUS LUSITANUS, (*Curat. Medicin. Cent. iii. p. 233.*) who practised in Italy, when speaking of an epidemic small-pox which prevailed at Ancona in the year 1551, says, that some old people who had formerly suffered an attack of that disease were seized with it a second time.

FRANCISCUS DE PIEDMONT, (*Messuæ Opera, Supplement, p. 138.*) who published a copy of Messua's work with a supplement, mentions a second eruption among the varieties which small-pox occasionally present.

FABRICIUS, (*Vogel Praxis, vol. iii. p. 12.*) mentions, that during the prevalence of an epidemic small-pox, some people who had undergone that disease before, suffered a second attack.

MAYERNE, (*app. Pract. Med.*) mentions the case of a person who had a general and copious eruption of small-pox, yet who after the scabs had fallen off, underwent a new eruption not less severe than the first.

BOREL, a French author, after observing, (*Hist. et Observat. Medico-phy. Cent. 8, obs. 10, p. 203.*) that it is generally believed that a person can only labour under small-pox once, tells us he had seen some who had been affected with them two or three times, even in their old age; but that nothing concerning this had occurred to him, so worthy of notice as the case of a certain French woman who had had them seven times, and at last perished of the eighth attack, in the hundred and eighteenth year of her age.

SYLVIUS DELEBOE, (*Opera Medica, cap. 9.*) informs us, that many individuals labour twice or thrice during their lifetime under small-pox, and sometimes twice in the same year, a circumstance which, he says, he remembers frequently to have happened.

REGIUS, (*Craanen, Observat. Art. Variola, p. 741.*) in a commentary on the works of Craanen, remarks, that we generally see the human constitution suffer only once from small-pox and measles, which is a sign that all the peccant matter had been discharged the first time; but should any of it re-

main, the disease may be excited anew, and differs from the first attack only in degree.

DECKERS, (*Exercit. Practicæ Leyden.*) tells us that he had seen individuals who had had the small-pox two or three times; and he then mentions the case of a female who, fifty years after she had had a severe attack of variola, by which she was much marked, suffered a second infection.

DIEMERBROECK, (*Opera Omnia Medica et Anatom. Hist. i. p. 290.*) in describing an epidemic small-pox which prevailed at Utrecht, during the months of July and August, 1640, mentions, that at that time there were many patients who had had a very copious variolous eruption, and had scarcely recovered when they suffered a relapse of the same disease, and that the second attack was often more copious than the first; nay, some were seen, who within the space of six months suffered three very copious eruptions, which he adds rarely happens in so short a time. As examples of such secondary attacks, he relates the cases of four children of his own servant, Isaac Schorer. The disease in this family commenced with the oldest, and went gradually down to the youngest, and about the time when this child was convalescent, the disease re-attacked the oldest, and then went over the others again in the same succession as during the first attack.

WILLIS (*De Febris*) mentions, that it is usual for small-pox to attack an individual only once, but that when a part of the miasmata remains after the first infection, the patient may experience a second or a third attack.

FORTIS (*Consult. et Resp. Med. tom. ii. cent. 4. p. 604.*) says, that we are not to believe, with Fernelius, that the constitution of the atmosphere is the sole cause of small-pox, for many suffer from them not only one, but two attacks.

BLANCARD, (*Traité de les Maladies des Enfants, Part 2.*) states, that there are some people who pretend that a person can only suffer an attack of small-pox once, which opinion, he adds, is erroneous; for, in the first place, a great number of young, and even old people, die without having had that disease; and, in the second place, there are many who, before death, pass through it two, and even three times, and certain-

ly not in a slight manner, but each time so severe as to produce blindness during the disease.

DOBZENSKY DE NIGRO PONTE, (Ephemer. German. Dec. 2. An. 4. Obs. 29.) details the case of a boy seven years old, who caught the natural small-pox from exposure to the contagion of that disease, by being near a child who had died of it. This boy had a severe attack, and a copious eruption, but got well and remained so ten years, when upon being again exposed to the contagion of small-pox, he suffered a second attack, which was more severe than the first.

SCHWEINSBEER, (Ephemer. German. Dec. 2. An. 6.) states, that he saw a robust boy suffer five attacks of small-pox, and happily survive them all.

STALPERT VANDER WEIL (Obs. rar. Med. Anat. Chir. tom. ii. par. 1. Obs. 42. p. 424.) mentions the case of an infant who had a severe attack of small-pox three weeks after it had passed through that disease in a mild form.

HOYER (De Haen, Refut. de l'Inoculation) says, he has often seen individuals suffer even three attacks of small-pox.

HARVEY, (Treatise on small-pox and measles,) in treating of the causes of small-pox, says, "it is agreeable with universal experience that three fourths of those northern regions do once or oftener in their life pass that sort of purification, many once, some twice, and some, very few, three times.

ETMULLER (Opera Omnia, tom. ii.) says, that he has seen many old people die without ever having had the small-pox or measles, and, on the contrary, some examples of others who had had them more than once.

HAGGENDORN (Obs. et Hist. Med. Pract. Cent. 1. Hist. 66.) tells us, that examples are known to him which occurred in practice, of the same individual suffering a second attack of small-pox, either in the course of a year after the first infection, or after a longer interval; he then relates the case of a noble lady, who, many years after she had undergone that disease, was attacked by it a second time very severely.

BERHENS (Acta Physica, Med. N. C.) asserts, that it is no extraordinary thing in Germany, for a person to suffer several times from the small-pox; thus, he says, I had them myself

three times in my youth, and each time with considerable danger.

BOERHAAVE, (*Praxis Medica*, t. v.) says, that a person who has had the distinct small-pox, may afterwards suffer from the confluent, but that he who had had the confluent small-pox first, can never be again affected.

PERIOD II. *A. D.* 1721 to 1799.

Mr. MAITLAND, who first called the attention of English practitioners to the practice of inoculating the small-pox, remarks, (*Account of Inoculating to Small-pox Vindicated*, 1722,) that some think the genuine disease is not produced in that way, and that consequently it is not a certain preventive of the natural small-pox, which opinion he considers as erroneous, and adds, that he believes the patient who has laboured under inoculated small-pox as safe from a future attack of that disease, as if he had had the natural small-pox themselves, which, he remarks, is not even an absolute preventive of a second infection.

In a tract published at Boston, in New England, in 1722, (*London Medical and Physical Journal*, vol. xvii.) entitled, "Inoculation of the Small Pox, as practised at Boston," the author declares "that those who were inoculated, often had the small-pox afterwards in the natural way."

DWIGHT (*De Variolis et Morbillis*, 1722.) says, that one must not be astonished at finding some individuals who have laboured twice, or oftener, under small-pox; and he then mentions the case of a nurse whom he knew die of that disease, after having formerly suffered two attacks, by each of which she was much marked.

WAGSTAFFE (*Letter to Dr. Friend*, showing the danger of inoculating the Small-pox, 1722.) observes, that the rule that none who have had the natural sort can catch them by

inoculation, has been contradicted by one in St. Thomas's Hospital, on whom the pimples appeared pretty fairly, though the pits in his face to a great degree were sufficient testimony that he had suffered before from this distemper.

MARESCOT (De Variolis, 1723.) gives the cases of two infants, one of whom had the small-pox twice, and the other three times.

HELVETIUS (Dissert. sur la Petite Verole, 1727.) remarks, that few who are versant in practice will not recognise the truth of the following observations, that many people never suffer from small-pox, and that many also suffer from them oftener than once.

KRISCH (De Inoculatione Variolarum) asserts, that many old men suffer an attack of small-pox after having undergone inoculation for that disease in their youth. He then mentions that it is stated in the *Acta Medica Berolin.* 6 Dec. 2. that a London physician of the name of Edlington, was sent for to see a patient labouring under true small-pox which proved fatal, a year after this patient had passed through variolous inoculation.

JUNKER (Pratique Medecin) details the case of a person whom he actually treated for a second infection of small-pox, after the first had left many marks.

WICHMANN, in his notes on the works of Werlhof, mentions, that small-pox do sometimes attack the same individual a second time, which he considers as a rare occurrence, unless those which occur in nurses and other people from contact, be admitted, which are certainly common. He then refers to the history of a curious case given by Spigelius of a young man who had three attacks of intermittent fever, and after each of them was seized with small-pox. Werlhof, also, according to Wichmann, had lately seen two cases of secondary small-pox.

DEERING (An Account of the Improved Method of treating the Small Pox,) says, "I was an eye-witness of the inoculation of a little boy, who, notwithstanding the great care there was taken in the choice of the pus, had the confluent

kind severely, and twelve months after, had them naturally, and of the favourable sort."

The editors of the *Leipsic Commentaries* (vol. ii. p. 722.) state, that they had heard from a friend in Holland, that the small-pox had been prevailing extensively throughout Zealand, Gilderland, and Holland, and that many individuals had suffered a second attack, which excited suspicions, and forced many to confess that a person who had not suffered an attack of confluent small-pox might have them again.

THEBESIUS (*Acta Physico-Med. Acad. Cæsareæ*, vol. x.) relates the case of a girl who had small-pox twice in the course of two months. The first attack was very mild; the eruption in the second was general, attended by considerable swelling of the palpebræ; the pustules went through their regular stages.

Dr. VAN LEENDT (*Disput. Medica Inaugural. de Variolis*,) remarks, that every person does not undergo an attack of small-pox, nor do all who have once had them, remain, during their life-time, free from a second attack; for there are every where examples of men who have had them twice, thrice, and even oftener, as testified by Blancard, Diemberbroeck, Sylvius Deleboe, &c.

CANTWELL (*Dissert. sur l'Inoculation*) makes the following observations on the subject of the recurrence of small-pox in the same individuals, viz. Professor Josnet, treated in 1736, or 1737, a young gentleman labouring under variola, who had been inoculated in London some years before. M. Molin knew an instance in which small-pox attacked a person very severely, and disfigured him much, after he had passed through a regular inoculation many years before. Heister says he had seen small-pox twice or thrice in the same person. M. Molin assured him (Cantwell) that he had treated twice the same person with small-pox, and that he was much marked by them each time; the second attack was more severe and dangerous than the first. M. Seron mentions the case of the Rev. Peter Burlette, who, after having had small-pox six times, died of a seventh attack. Boyer,

says his sister had small-pox seven times, and was much marked by the two last attacks; also, that he saw a lady labouring under confluent small-pox, although she had had them severely when a girl; and that Miss Perion, who died the same year of that disease, had had it so severely in her youth that her life was thought in danger. Cantwell then observes, that there are few practitioners who have not met with examples of such recurrences; and a great number are to be found in authors. He relates the case of a gentleman who, after a regular inoculation, suffered an attack of the natural disease. The pustules were very large, and almost touched each other, although without confusion; also that Lord Montjoy, who died of that disease at Paris, was said to have passed through it artificially in England.

MOSCA, a Neapolitan physician, tells us, (*Dell Aria et de Morbi dall aria depend. Trattato, Tom. 2. Part 2. Diss. 2.*) that it is a vulgar error to believe that the human constitution can be only once affected by small-pox, for observation proves that it may suffer a second or even a third attack.

SCHACHT, (*Instit. Medicinæ Practicæ, cap. 13.*) a celebrated professor in the university of Utrecht, when speaking of small-pox, says, that they but rarely attack those who have already passed through them; and afterwards he adds, that his father saw an individual who experienced three attacks of small-pox; one of them was so violent at the age of 36, that the patient recovered with difficulty.

VAN JUCHEM, (*Dissert. Med. Inaug. de Variolis, &c.*) when attempting to explain the rapid appearance of a new variolous disease, after small-pox, by the absorption of pus, observes that in that way a man in the space of a fortnight might labour twice under small-pox. Such a case is related by Morton; sometimes others, after a longer interval, have been observed to fall again into small-pox.

Dr. HOSTY (*Journal de Médecine, tom. iii.*) mentions that he was told by Mr. Ranby, Surgeon to the King of England, that he had only seen one case of natural small-pox succeed the inoculated disease when regularly performed.

Dr. Cox (*Letter to a friend on inoculation*) admits that

small-pox do sometimes attack the same person a second time ; but he adds not more frequently after the inoculated than the natural disease.

J. G. ROEDERER, in his Inaugural Dissertation, printed at Gottingen in 1757, relates the histories of seven cases of secondary small-pox.

MACQUART (*Journal de Médecine*, tom. viii.) describes the case of an individual who laboured twice under small-pox ; the second attack occurred seventeen days after the first. The first infection was ushered in by fever, followed by a pretty abundant eruption ; the pustules went through their regular stages in both attacks.

RAZOUX, (*Tables Nosolog. et Méteorol. tres étendues dresses à l'Hotel Dieu de Nimes*) mentions the case of the daughter of M. Baux, who, on the tenth day after inoculation for small-pox, was seized with slight fever, which was followed by a scanty eruption of pustules which remained out for a short time, yet, fifteen months afterwards, this girl was attacked by a confluent small-pox, of which she recovered.

TISSOT (*Lettre à Mons. De Haen en réponse à ses questions sur l'Inoculation*) admits, that those who have laboured under natural as well as inoculated small-pox, may again, although rarely, suffer a second attack.

M. GAULARD (*Journal de Médecine*, tom. x.) refers to four cases of secondary small-pox. The first was a boy who had a well marked attack of variola after he had been sometime before inoculated. The second occurred in an infant who passed through small-pox twice in the course of a month. The third was the case of a person who, after having been marked by a former attack of small-pox, suffered from that disease again in its confluent form ; and the fourth is stated upon the authority of Astruc.

KARONEGIESSER (*Acta Physico-Medic. N. C. vol. viii.*) informs us, that a girl who had had small-pox two years before, was attacked a second time in a form so terrible, that nobody thought she could recover ; however, after these pustules were dried, she survived another fresh attack of small-pox.

A writer in the *Journal des Savans*, (tom. ix. l'an 1759.) relates a case of the recurrence of small-pox in a young woman who bore the marks of a previous attack of the same disease. She appeared to have caught it by sleeping in a bed in which a child had been confined who died of that disease.

FRANCISCUS, (*Dissert. Epistol. in Variol. Inocul.*) when mentioning the blood as having considerable effect in producing small-pox, says, that unless that fluid be purged, how can he who has undergone the artificial disease remain free from a relapse, or who can promise that no person will again labour under the same disease after he has been cured of it? for it may be appealed to experience, that men have been affected twice, thrice, or even oftener, with small-pox.

OLIVIER (*Journal de Médecine*, tom. ii.) describes the case of a woman who, bearing the marks of small-pox on her face, was seized, after being exposed to the contagion of that disease, with fever, and had an eruption of variolous pustules, which went through the regular stages and course of a mild distinct small-pox.

The Editors of the same *Journal*, in a note, remark, that variola does rarely attack the same individual more than once; but they admit that there are some incontestible proofs on record of second infections, as that given by Macquart. They add, that they knew a similar observation had been made by a famous physician in that city (Paris); but that these facts are so rare, that they scarcely injure the cause of inoculation.

KIRKPATRICK (*Analysis of Inoculation*) admits that small-pox do sometimes attack an individual a second time, and he then relates the case of a young man, who, when he was inoculated, had slight fever and a few pustules, in consequence of which he was considered safe by Mr. Lee, the inoculator. About four years afterwards, upon being exposed to the variolous contagion, he was seized with violent fever, and died of a confluent small-pox.

LE CAT, in a letter to Pouteau, (*Journal de Méd.* tom. xvi.) asserts that inoculation has no more power in preventing a recurrence of small-pox than the natural disease itself; and he then mentions the case of a man who died of a second attack,

fully nine years after he had been inoculated ; which operation had been followed by a very severe disease.

HENSLER (Dissert. de Morbo Varioloso) furnishes us with the histories of the cases of nine individuals who had suffered two or more attacks of small-pox: *Case 1.* A woman who, when a girl, had a mild distinct small-pox, caught that disease again when nursing an infant affected with it. The pustules were most numerous on her breasts and face; went through their regular stages, attended and preceded by a good deal of fever, and left some marks about the *alæ nasi*. *Case 2.* A woman who had small-pox when a girl, of which evident marks yet remained, when nursing her child under that disease was seized with fever, followed by an eruption of pustules, which were filled with pus about the ninth day. *Case 3.* A girl became sick, and on the following day a distinct variolous eruption appeared, the pustules suppurated properly, and scabs and spots remained for a considerable time afterwards. About a month from that date she sickened again, and papulæ appeared over the whole body, which rose well, although they were small, and did not suppurate freely; the scabs soon became detached. *Case 4.* A boy fell sick, and on the seventh day papulæ appeared, which became filled with pus about the thirteenth; yet nearly three months afterwards he was again seized with fever, upon being exposed to the contagion of small-pox, and suffered a copious eruption; the pustules became filled about the seventh day with a purulent matter, and went through their different stages regularly. *Case 5.* The brother of the last patient had a scanty eruption at the same time with him, and again, about three months afterwards, papulæ succeeded to fever of one day's duration, which suppurated a little, and then dried. *Case 6.* A boy who, four years before, had gone through small-pox inoculation, caught the natural disease from his sister. The pustules amounted to about one hundred, were distributed over the whole body, but did not suppurate freely, and by the seventh day were all gone, when a new eruption appeared, and about three months afterwards a third. *Case 7.* The brother of the foregoing child also suffered a second attack, the pustules were less numerous, and there was only one erup-

tion. *Case 8.* A girl who, four years before, had laboured under a very mild small-pox, which scarcely left marks, upon being exposed again to the contagion of that disease, when prevailing epidemically, was seized with slight indisposition, followed by an eruption of papulæ, which, on the fifth day, contained a whitish serum, began to dry on the sixth, and on the eighth the small scales, or scabs, which had formed, began to fall off. *Case 9.* In a note, the author mentions that he himself, after having had a mild small-pox, which left marks, suffered a second attack, when his sisters were labouring under that disease, which proved mild and propitious.

TIMONI, (*Dissert. sur l'Inoculation,*) a physician at Constantinople, and a zealous promoter of small-pox inoculation, mentions two cases in which it had failed of protecting from the natural disease. One of them was the case of his own sister, who was inoculated when six months old, and considered safe, but when about twenty-two years of age she caught the natural disease from her inoculated sister, and died of it on the thirteenth day. The other was a boy who, seven years after inoculation, caught the natural disease from his brother, and had it pretty severely, but by proper care recovered.

KRAUSE, (*Dissert. Med. Inaug. de Extirp. Variol. insitione Suestit.*) when advocating the cause of inoculation against those who said that it was not a certain protection against the natural small-pox, affirms that it is generally so, and that the natural disease itself does sometimes recur, as he knew of a girl who had it four times, twice true, once conoidal, and once crystalline.

ROBERT (*Rescherches sur la Nature de l'Inoculation de la Petite Verole*) says that small-pox may occur a second time, when the cause of the disease had not been entirely destroyed during the first attack, or when an imperfect cure had taken place.

LE HOC (*l'Inoculation de la Petite Verole renvoyie a Londres,*) asserts that he had seen many individuals labour twice under small-pox, as instances of which he gives the cases of two of his own sons.

WEBER (*Obs. Med. Fasc. 1.*) says, that a case was commu-

nicated to him by the celebrated Werlhof, in which, on the eighteenth day, when the small-pox were all dried, the patient was seized with a fresh fever, and another variolous eruption, which also dried.

M. GATTI, (*Reflexions sur les Prejuges qui s'opposent aux Progres et la Perfection de l'Inoculation*,) in supporting the cause of inoculation, says, that small-pox do rarely occur in the same individual, and that not oftener after artificial than after natural infection.

CALURIUS (*Comment. de rebus, Lip. vol. 12.*) mentions the case of a boy who was inoculated, and had a scanty eruption, which went through the regular stages of small-pox. When this boy had recovered, he was seized with a fresh fever, followed in three days by an eruption of small-pox, which also observed the usual course of that disease.

HAUTESIERCK (*Recueil d'Observat. de Med. des Hosp. Milit. tom. 2.*) remarks, that during the prevalence of an epidemic small-pox at Challon, on the Soane, in the year 1764, towards the commencement of July, the disease became so general that some who had already had it, either mildly or severely, were attacked a second time. He gives the case of a young man who, six years after having had small-pox, was attacked with fever, followed on the fourth day by a general variolous eruption, which became pustular about the ninth day, began to scab on the tenth, and by the twelfth some of them had fallen off.

DE HAEN, (*Ratio Medendi, vol. ii. cap. 7.*) when treating of the inoculation of small-pox, mentions five cases of that disease occurring for a second time in individuals who had previously passed through it. *Case 1.* A girl, after inoculation, had fever, and a scanty eruption of pustules, which suppurated; nevertheless, about two years afterwards she caught the disease again, and had a very heavy load. *Case 2.* A person, after fever, had a scanty eruption on his body, but copious on the face; this, after secondary fever, became pustular, went through the regular stages of small-pox, and left marks. This same individual, some time afterwards, caught the same disease again, and had it so severely, that nothing could save him.

Cases 3. 4. and 5. The daughter of Dr. Krap was seized with fever, which was followed by an eruption on the third, that became pustular by the seventh day. At this time also his two sons, Xeverus and Leopoldus, were likewise seized with variola. His daughter again, nearly four months afterwards, had a second attack, the pustules matured and dried regularly; the eruption was seven times more numerous than the first time. About two months after her, Xeverus was attacked with fever, and on the third day had a confluent small-pox, more severe than the first attack; the eruption became pustular about the eighth day, and went through the regular stages of small-pox. Leopoldus at this time, likewise, underwent a second attack, which was also more severe than the first.

This author, in another work, (*Refutation de l'Inoculation*) brings forward the testimony of eighteen authors in favour of the possibility of the same person suffering a second attack of small-pox, and then relates five cases of that description. The first came under his own observation, and the four others were communicated to him by respectable individuals, two of them medical men. *Case 1.* A young man had small-pox very severely in his infancy, by which his face was much marked, yet, nevertheless, he caught them again, and had a very severe attack. *Case 2.* The brother of the young man whose case has just been detailed, also bearing marks of a former attack, caught the small-pox a second time from his brother, and had a most violent disease. *Case 3.* A young woman, while nursing a child affected with small-pox, was seized with severe fever, followed by a general variolous eruption, which went through its regular stages. The face of this woman was marked by a previous attack of variola. *Case 4.* A person of the first rank was displeased with his physician, for saying that a person could not have the genuine small-pox twice, because the definition of the spurious small-pox given him did not accord with the three severe attacks of small-pox which he had suffered at different times of his life, and which he remembered well. *Case 5.* A boy was brought to me who had an abscess in his breast, which supervened upon an attack of small-pox; nevertheless, some weeks afterwards he was seized with fever, which was followed, on the fourth day, by an eruption, which became

pustular, and began to dry about the eighth day, and in about four days more the scabs began to fall off.

SIDOBRE, (*Tractatus de Variolis et Morbillis*,) when attempting to trace the cause of small-pox to a viscosity of the blood, remarks, that the Swedes, Danes, English, and even the Parisians, sometimes labour under them twice, thrice, or even four times, whilst the Italians, Spaniards, and Portuguese, never more than once, which circumstance he attributes to the difference in the temperature of these countries.

STRACK, (*Journal de Médecine*, tom. 22.) in defending the cause of inoculation, says, that the having had small-pox does not infallibly guard against a second infection; and then mentions six cases of individuals suffering second attacks. The three first were said by their father, a man deserving of credit, to have passed through that disease before. Two others were well marked by the first attacks; and the sixth had a copious eruption, after being much pitted by the first affection.

In the report of the Faculty of Medicine of Paris on Inoculation, made to Parliament in June, 1765, (*Journal de Médecine*, tom. 22.) we find a number of authors referred to who had witnessed the occurrence of small-pox a second time, upon the authority of M. de l'Épine. M. Pouse, the father, they said, saw one case; M. Pouse, the son, three; Bouvart, two; Bourdelin, one; Petit, the father, one; Bone, one; Boyer, one; Cochu, one; M. Dalby, two; and nine others were known to Cantwell; and that M. de l'Épine himself knew an instance of a person who had passed through variola two different times.

TRILLER, (*Epist. 2. ad Doctiss. Hahn*,) when mentioning that the plague does sometimes return, says, it is exactly the same with small-pox, as there are some people who have them only once, and others who have them twice or thrice. He then details three cases, two of which were seen by himself; in one of them the second attack was most severe; the third was communicated to him.

CASIMER (*Comment. de rebus*, vol. 13.) agrees with Tissot, that one person in a hundred may suffer a second attack of small-pox, which would make, in Germany alone, in the course of a year, 211,200 instances of such recurrences.

LANGTON (Observations on Inoculation) transcribes a letter of Mons. Gatti's, in which the case of the Duchess of Bouffliers is detailed, who, two years and a half after regular inoculation, suffered an attack of natural small-pox, of a distinct and favourable sort.

Dr. RUSTON (Essay on Inoculation for the Small-pox) mentions the case of a lady whom he inoculated, after which she had fever, and several pustules round the wound, which induced him to consider her safe from a future infection; yet about three weeks afterwards, upon being exposed to the contagion of small-pox, she caught that disease, and had an eruption of about three or four hundred pustules, which matured regularly.

VAN DOEVERN (Comment. Souet. Scient. Harlem. tom. 12.) says, that variola may attack the same individual more than once, proofs of which have occurred in his own practice, as well as in that of other practitioners worthy of credit. His own wife was an instance of that occurrence, for about nine years after she had had a confluent small-pox, she was seized with fever, followed by an eruption, which at first he was inclined to believe was the spurious small-pox, but the progress of the complaint caused him to alter his opinion. She was seen by Camper, Brill, Grunner, and Swighausen, who had also seen her during the first attack, and they all allowed her's to be a case of genuine variola. A second case was that of a boy, who was seized with fever, followed by an eruption of small-pox, which went through the regular stages of that disease, five years after he had had it, according to the testimony of the celebrated Eding. A third case was communicated to him by Swighausen, who was previously a strong opposer of the possibility of a second attack; but he never afterwards entertained any doubt concerning such an occurrence.

ERNEST. A. NICOLAI (Pathologia seu Scientia de Morbis, t. 2. p. 286.) relates the case of an individual who passed twice through small-pox.

SERVANS VAN DE CAPELLO, (Comment. de Rebus, Lep. vol. 17.) in a paper on the occurrence of variola in individuals who had previously gone through it, relates three cases of that

description. The first was that of an infant who, seven weeks after having had a mild small-pox, suffered a second attack, attended by a pretty general eruption, which went through its regular stages. The second and third were in the same family; both attacks were mild; and the last infection in each after an interval of sixteen years.

DRYFOULT (*Comment. de Rebus, Lep. vol. 17.*) gives the case of his own daughter, who, nine years after inoculation, caught the natural disease from her husband, which went through its natural stages, as was witnessed by the celebrated Hovius.

C. R. HANNES, in an *Essay on the Practice of Inoculation for the Small-pox*, (*Nova Acta Phys. Med. t. 5. Ob. 72.*) admits the possibility of the secondary occurrence of small-pox, and relates the history of two cases of this kind which had been communicated to him, the one by Bruningium, and the other by Burggravius. He quotes also Wolfius, and some older authors.

DE MAN (*Nova Acta Phys. Med. Acad. Cæsar. tom. 7.*) informs us, that he had seen five cases of secondary small-pox in his practice: the histories of two of them he has detailed. 1. A boy, fourteen days after he had had a distinct small-pox, was seized with fever, and on the fourth day from that time an eruption came out, which went through its regular stages, attended by secondary fever. 2. A boy, who had not been long recovered from variola, by eating of some cakes which had been handled by a person whose hands were covered with small-pox crusts, caught that disease a second time, which proved fatal.

MARESCHAL DE ROUGERES, (*Journal de Médecine, tom. 39.*) when stating that Tissot considers a second attack of small-pox as very rare, says, daily experience contradicts that opinion, and that he himself knew of more than twenty individuals who died of secondary small-pox in Lamballe, and who bore the marks of the first attack.

In the 4th Volume of the *Memoirs of the Medical Society of London*, Dr. WITHERS has related the case of Mr. R. Langford, who was infected with the small-pox at a very early

period of life, and was much marked from the severity of the disease. Many years afterwards, he was again infected with the small-pox, which were of the confluent kind, and proved fatal on the twenty-first day from the attack.

CAMPER (Dissert. de Emolumentis et Optima Method. insit. Variolarum) believes that small-pox attacks but rarely the same person a second time; but, he adds, many worthy men, and most excellent physicians, have confirmed, by examples, the possibility of such occurrences.

An anonymous writer, in the Gazette de Sante, (No. 33, August 1776,) relates four cases of the recurrence of small-pox in the same individuals.—*Cases 1. and 2.* The Marquis and Viscount of Coigny having been inoculated, were considered safe from future infection, so that some years afterwards they exposed themselves, without reserve, to the contagion of the small-pox under which Madam Coigny then laboured. Both caught them a second time, and the Marquis died.—*Case 3.* An apothecary's boy by chance applied some variolous matter to the nose of a dog which was in the constant habit of caressing its mistress, especially about the face. By this means she was variolated, and had the disease again, after having had formerly a regular and well marked attack.—*Case 4.* Miss Laporte had delivered into her charge some linen which had been employed about inoculating a prince of the blood, with strong injunctions not to open it: her curiosity, however, prevailed, and the consequence was, that she caught a second attack of small-pox.

JOHN ALOYSIUS TARGIONI of Florence relates, (Avvis Sopra la Salut. Uman. Ann. 1775, et 17.) the histories of two cases of secondary small-pox.

DOMINICUS JUVANELLI (Idem liber. Ann. 1776. No. 9. p. 71. and No. 10. p. 79.) mentions that he saw three sisters who passed twice through small-pox. And LILIUS (Avvis Suddett. Ann. 1777, p. 167. and 1778, No. 36. p. 281.) relates the histories of two similar cases.

Dr. BAYLIES (Facts and Observations on Inoculation) gives the cases of Luisa and Elizabeth de Goetzen, who were ino-

culated by Dr. Meckel of Berlin; their arms inflamed, and an eruption came out in each, most numerous, however, on the oldest; they all broke and disappeared without leaving crusts or pits. The following winter, the natural small-pox being epidemic, they caught them very severely; the fever run very high, and the pustules were numerous, matured properly, then scabbed, and fell off, leaving marks behind them.

GASTELIER (*Gazette de Sante*, No. 8. l'an 1777) says, were there not sufficient proofs on record to establish the possibility of the same person suffering more than one attack of small-pox, he himself could add a great number more, which, however, would only be superfluous.

M. D'ARCET (*Journal de Médecine*, tom. 49.) details the case of M. Harcourt, who, after he had been inoculated, and had had a copious eruption which was well marked, was seized with fever, followed by a general and pretty copious eruption over the whole body. The pustules were filled with pus about the fifth day, and on the sixth they began to dry.

MEZA (*Compend. Med. Pract. Fasc. 1st.*) says, that he and Dr. Buchwald attended a woman labouring under secondary small-pox, whom Dr. Buchwald himself attended during the first attack. The same author, in his description of an epidemic small-pox (*Acta Havniensis*, vol. 3d.) which prevailed in Elsingore in 1768, mentions that a widower, whose child was under his care during an attack of that disease, constantly asserted that his daughter had formerly small-pox.

VOGEL (*Praxis Med.* tom. iii.) refers to a number of instances of secondary small-pox which are contained in the works of Hensius and other authors, and then adds, that five cases of that description had appeared in the family of Professor Meissner.

MUMSEN (*Acta Med. Havniensis*, tom. iii.) informs us, that a young woman was seized with fever, followed by an eruption of papulæ, which became pustular; they were scanty on the face, more numerous on the body, and confluent on the left side; began to dry about the ninth day, and left marks behind them. Three years afterwards, when her brother was inoculated, she submitted to the same operation, which was

followed about the usual time by fever, and the other symptoms of small-pox, which left her convalescent about the eighteenth day.

ASHEIM (*Acta Med. Havniensis*, tom. iii.) relates a case of small-pox in an individual who had previously undergone inoculation. The eruption was at first vesicular, but about the seventeenth day it became pustular, and had not completely gone before the thirtieth day.

BURSERIUS (*Inst. Med. Pract.* vol. ii.) says, "they also entertain an erroneous opinion who think, that, after once having the genuine small-pox, the disposition of the body to receive them is destroyed; for it appears from undoubted facts, and the investigations of medical men of unquestionable authority, that not a few, after experiencing the complaint in the natural way, or by inoculation, have afterwards been infected a second, and even a third time." He then goes on giving the observations of several authors which have already come under our notice, and then adds, "For the sake of brevity, passing over the numerous testimonies of foreigners, I shall only touch upon a few of those of the Italian physicians, that I may not seem to lose sight of such as are afforded by our own writers. It is not an uncommon thing in Naples, as we are informed by Sarcon and Mosca, for the same person to be attacked twice or thrice with small-pox, and of the confluent kind. In Florence the same observation holds. Targioni, in the year 1775, saw a woman twice attacked with small-pox in the natural way, and in the following year he published another account of the return of small-pox: Dom. Juvanelli attended three sisters affected with small-pox at the same time, who on a former occasion had laboured under the genuine complaint, as it was acknowledged to be by the physicians who attended them. In like manner Lilius, in order to establish the fact, published two complete histories of the return of small-pox in the year 1777. I find nearly the same opinion entertained by the ingenious Azzouguidi, Professor of medicine at Bologna, who, not contented with having mentioned two instances of the return of the complaint, adduces the case of an old woman, who, we are informed by Borel, at

the age of one hundred and eighteen, died of the eighth attack of small-pox. Lastly, to crown the whole, he mentions the case of Louis XV. who, after experiencing the complaint at the age of fourteen, was afterwards attacked with it at sixty-four years of age. I might confirm the fact by the published observations of Michael Girard, then residing in Padua, as well as by other testimonies, were I not restrained by a great controversy which shortly afterwards arose concerning them."

HUFELAND (Bemerkungen uber der Blattern) relates two cases of the recurrence of small-pox which came under his observation, the subjects of both of which he himself had inoculated. The operation on both of them was succeeded by fever, and a scanty eruption, with a variolous smell, yet one of them, in the course of eight weeks, was seized with a violent natural small-pox, and the other also caught the same disease again in the progress of the epidemic.

Under the head of intelligence, (HUFELAND'S Journal der practischen Arzneykunde und, &c. Band, 3.) are mentioned two cases of small-pox occurring after inoculation, one after an interval of two weeks, and the other three weeks after the pustules consequent to inoculation had dried. The second attack in both was copious.

PERIOD III.—*Since the Introduction of Vaccination to the present time.*

DR. JENNER in his "Further Observations on the Variolæ Vaccinæ," says, (p. 54.) "Happy it is for mankind that the appearance of the small-pox a second time on the same person beyond a trivial extent, is so extremely rare, that it is looked upon as a phenomenon. Indeed, since the publication of Dr. Heberden's paper on the *varicella* or chicken-pox, the idea of such an occurrence, in deference to authority so truly respectable, has been generally relinquished. This, I conceive has been without just reason." He then quotes the case recorded by Mr. Withers in the Memoirs of the Medical

Society of London, as a striking example of the occurrence of secondary small-pox. He has related also the case of a nurse who, though she had previously passed through small-pox, was again attacked with them when nursing a child labouring under the disease from inoculation. The same author, in his "Continuation of Facts," &c. informs us, that many facts had been communicated to him in corroboration of his opinion, that "the human constitution frequently retains its susceptibility of the small-pox contagion, both from effluvia and contact, after previously feeling its influence;" and he has related at length the case of Mr. Miles who passed through small-pox twice; the second time from accidental inoculation.

Mr. RING, in his Treatise on the cow-pox, has instanced many cases of the recurrence of small-pox in the same individuals. Mr. Earl, he says, witnessed four cases of secondary small-pox in individuals whom he had previously inoculated; and the same gentleman also had inoculated three children twice, and each time they laboured under fever and eruption. Mr. Leighton had a case in which the number of pustules amounted to some hundreds, although the patient had been inoculated by himself three years before, and had at that time the disease regularly. Dr. Aubert had a woman under his care with a scanty eruption of small-pox, contracted by nursing a child affected with that disease in a confluent form; she had been previously regularly inoculated at the small-pox hospital. A young woman, six years after regular inoculation, caught the natural small-pox, and had them very severely. A child was inoculated and had an eruption of a few pustules, yet two years afterwards it caught the small-pox in the natural way. A young lady, previous to going abroad, was inoculated, yet some time afterwards, when she returned to England, she caught the natural small-pox and died of them.

Maria Hunt (Lond. Med. and Phys. Journal, vol. v.) had the small-pox severely when five months old, as the marks they left sufficiently testified, yet some time afterwards she caught the disease a second time; the fever ran high, the eruption was copious, and went through its regular stages. Mr. Pur-

ton, who relates this case, remarks, that he had been told by an elderly lady of respectability that she knew a person who certainly had the small-pox twice, and her statement was so very accurate and circumstantial, that it was sufficient to stagger the firmest sceptic, but he confesses that his opinion remained unchanged, till the case which is mentioned came under his observation.

In the 6th volume of the same journal two cases of secondary small-pox are recorded; the first, by Mr. Rolfe, occurred in a woman whom he attended during the second attack, the eruption of which was copious. She had passed through the small-pox previously when twelve years of age. The second case, which is related by Mr. Pythian, occurred in a girl whom he had inoculated twice with variolous matter; both inoculations were followed by general indisposition and eruptions; the latter inoculation, however, it is stated, produced the most perfect disease.

In the 14th volume of Hufeland's Journal, 1802, Dr. OSWALD, in describing the case of a lady who was affected with puerperal fever, incidentally mentions, (St. I.) that he was assured by her ordinary medical attendants that she had passed twice through small-pox.

In the 12th vol. of the Lond. Med. and Phys. Journal six cases are recorded; two of these are related by Mr. Cusson as having occurred in children who had been inoculated with genuine small-pox matter, and had fever and eruptions in consequence, with the appearance of which the medical gentleman was satisfied, yet caught the disease afterwards in the natural way. A third case is related by Mr. CROCHFORD of Lewes, of a boy twelve years of age who had been inoculated for the small-pox, and though no eruption of pustules followed, he was supposed to have had the disease, and had afterwards been repeatedly exposed to the contagion of small-pox with impunity. About ten years after the first inoculation he was re-inoculated, and a copious eruption of small-pox pustules appeared, which ran their usual course and left marks behind. The three remaining cases are related by Mr. TYRE of Gloucester; in one of them the disease was produced by inoculation, about twelve months

subsequent to the first inoculation, and in the other two cases the disease was caught by natural infection several years after inoculation.

Mr. LITTLE, of Plymouth Dock, in a letter to Mr. Dunning, relates the case of Mrs. Rogers who had passed through inoculated small-pox when an infant, and had frequently been exposed to the contagion of small-pox with impunity, till lately, when she caught them naturally, had a large crop, and got through them with difficulty, having been in great danger under the disease. Mr. Embling of Knackers-hole, in a letter to Mr. Dunning, details the case of a child of the name of Andrews whom he himself had inoculated with variolous matter, and declared safe from future infection. Some time after this, the child, upon being exposed to the contagion of small-pox, was attacked with the disease in its confluent form, and died on the ninth day. M. E. likewise mentions that of five children who were inoculated, two of them, four weeks afterwards, caught small-pox in the natural way, and the other three, when re-inoculated, passed through the disease in a very satisfactory manner.

Mr. STEWART, of Plymouth, in a letter addressed to Drs. Remmett and Woolcombe, (See Postscript to Dunning's Minutes, &c.) has related the case of his eldest daughter who passed twice through small-pox by inoculation after an interval of six years. From the first inoculation she had nearly 200 pustules, and though the eruption which followed the second inoculation was more scanty than the first, the eruptive fever was much more violent. In the same work Mr. Dunning has inserted the following communication which he had received from Dr. M'Gennis, physician of the Royal Hospital, Plymouth. "A young woman who had formerly *passed the small-pox*, was some years ago bled with a lancet charged with variolous poison, and this accident was followed in the usual way by the symptoms attending the commencement of small-pox, and, as nearly as can be recollected by eleven pustules."

Mr. DUNNING, in his "Short Detail of Circumstances," &c. mentions the case of a son of Captain Forshall, who passed

through inoculated small-pox in 1796 and in 1798 had an attack of severe natural small-pox, during the course of which he was blind for five days.

Dr. MERRIMAN, in his Observations on Vaccine Inoculation, in speaking of the appearance of small-pox after vaccination, says, “ the failure of small-pox inoculation, under similar circumstances, in preserving the habit from subsequent infection, is universally known and acknowledged ; repeated instances of the kind have been published, and further inquiry would bring more to light.”

In the 13th volume of the Lond. Med. and Phys. Journal, Mr. Ring has recorded twenty examples of the secondary occurrence of small-pox, some of which had come under his own observation, and others had been communicated to him by other practitioners.—*Case 1.* Mrs. Smith was inoculated, and had the regular disease, yet about twenty years afterwards, upon being exposed to the contagion of the small-pox she caught them again, and had a copious eruption.—*Case 2.* Mrs. Skittleworth went through regular variolous inoculation when a child, but upon coming to London some time afterwards she caught the natural disease, and had a very heavy load, which marked her much.—*Case 3.* Mr. Wood, though he had the small-pox when a child, had lately that disorder again in rather a severe form.—*Case 4.* A young woman after having undergone regular inoculation, was attacked two years afterwards by natural small-pox, which terminated fatally.—*Case 5.* Mr. Geary was inoculated, and had regular small-pox, attended with considerable constitutional indisposition ; and three years afterwards a natural attack, the eruption of which was copious, and left many marks.—*Case 6.* A child, two years after inoculation, had a very severe attack of the natural disease.—*Case 7.* A gentleman had the small-pox when young, yet afterwards caught them from his children, and had a very heavy load.—*Case 8.* A child after having been inoculated for the small-pox, and declared to be safe from future infection, had the disease a second time.—*Case 9.* Dr. Glass knew a person who underwent natural small-pox after regular inoculation for that disease.—*Case 10.* A young man was inoculated, and an eruption

followed, which led his medical attendant to consider him safe from future infection; yet after an interval of four years he died of a second attack.—*Case 11.* Mr. Chamberlane was attended by two eminent physicians while labouring under a disease which they declared to be small-pox; yet some time afterwards he had that disease again in a most unquestionable manner.—*Case 12.* A similar instance occurred in an aunt of Mr. Hurlock, Surgeon, of St. Paul's Church-Yard. The first and second attack were such as to leave no room for doubt that she really had the small-pox twice.—*Case 13.* A child was inoculated by a most respectable practitioner, and considered safe from future infection, yet sometime afterwards he had the disease again.—*Case 14.* Mrs. Chamberlane had confluent small-pox when a child, yet when nursing two children ill of that disease, at different times afterwards, she each time had a variolous eruption, accompanied with fever of considerable severity.—*Case 15.* A daughter of Mrs. Chamberlane's suffered an attack of small-pox after being exposed to the contagion of that disease, and a year afterwards passed through them again.—*Case 16.* A young lady was inoculated, and considered safe from future infection, yet three years afterwards she caught the disease from her sister and died of it.—*Case 17.* Mrs. Thomson suffered an attack of small-pox at South Bolton; and some time afterwards, on coming to London, she suffered a second and confluent attack, by which she was much marked.—*Cases 18. and 19.* Mr. Bell of Wigton mentions the cases of two individuals who passed through natural small-pox after having previously had the disease from inoculation. In one of these cases the second attack was very severe, and attended with delirium.—*Case 20.* The son of the Earl of Westmeath, after having been inoculated by an eminent inoculator, and considered safe, was attacked with natural small-pox; the eruption was so copious that he was covered over from head to foot. Mr. Forbes mentions the following case. Three children were inoculated at the same time; the pustules were perfect, though unaccompanied by constitutional symptoms, and they were all declared to be secure from subsequent small-pox by several medical men who saw them. These children were

however re-inoculated, when one of the three only took the disease. He mentions also another case which occurred under precisely the same circumstances in another family.

In the 14th volume of the same journal, Mr. Ring has recorded twenty-four additional examples of secondary small-pox.—*Case 1.* Communicated by the Rev. Mr. Jenner. A young lady of the name of Price was inoculated when an infant, and had the disease in a satisfactory manner. Some time afterwards she sickened with the natural small-pox, and had a pretty full eruption; it is added that she had also had the chicken-pox when a child.—*Case 2.* Mrs. Young had twice laboured under small-pox; the second time she caught them when nursing a child ill of the disease.—*Case 3.* Mrs. Cottis caught the small-pox from a child whom she nursed affected with that disease, although she had formerly suffered an attack of it.—*Case 4.* Mrs. Read also caught the small-pox from nursing a child affected with them, after she had the natural disease; the second attack was attended with high fever, and she was almost blind for three days.—*Case 5.* Mrs. Watts had had the small-pox severely when four years old; nevertheless, when nursing her child, she again underwent an eruption, accompanied by much constitutional indisposition.—*Case 6.* A child of Mr. Hookman's, in Old Bond Street, was inoculated for the small-pox, and supposed to be safe from future infection, but it afterwards had the disease in the natural way.—*Case 7.* A child of Mr. Butts, when three months old, passed through inoculated small-pox, which left pits behind. Nine months afterwards it caught the natural small-pox, and recovered with difficulty.—*Case 8.* A young woman passed through inoculated small-pox, at the Small-pox Hospital in London. She afterwards lived in the service of Mr. Twigg, in Gutter Lane, where she caught the small-pox and died.—*Case 9.* A young woman who had been inoculated in the country also fell a victim to a secondary attack.—*Cases 10. and 11.* Dr. BECU, Professor of Physiology at Wilna, when in London, informed Dr. Jenner of two cases of secondary small-pox. The patients were attended each time by the same physician, who was a man of the first eminence.—*Case 12.* Mrs. Ro-

binson had the small-pox very severely, and was much marked by them, yet, many years afterwards, when waiting upon a young lady under that disease, she had an eruption of about 100 pustules, with great general indisposition.—*Case 13.* Mr. Waschel saw a woman who had had the small-pox before, suffering under a variolous eruption of about 300 pustules, in consequence of nursing her child labouring under that disease.—*Case 14.* Mrs. Briggs had the small-pox by inoculation, yet when nursing her child affected with them, she had a scanty eruption, with severe constitutional indisposition.—*Case 15.* Mrs. Downing went regularly through inoculated small-pox; yet many years afterwards, upon being exposed to the contagion of that disease, she experienced a general eruption, which left several pits behind it.—*Case 16.* A gentleman was inoculated, and had an eruption, which made the medical attendant pronounce him safe; sometime afterwards, however, he experienced an attack of the natural disease.—*Case 17.* Mrs. Miller, after having had the small-pox when young, suffered a second attack while nursing a child labouring under that disease.—*Case 18.* Communicated by Mr. Plowden of Arundel. A man of the name of Birt, who in the year 1739, when eight months old, suffered a severe attack of small-pox, from the marks of which he was deemed secure against future infection, was therefore appointed to attend on variolous patients in the pest-house. On the 28th February, 1799, he sickened, and an eruption appeared on the fourth day, which proved to be confluent small-pox, of which he died on the twelfth day.—*Case 19.* Mrs. Norris was inoculated for small-pox, which was followed by an eruption which left marks behind; yet ten years afterwards she caught the natural small-pox; the eruption was moderate, but the fever ran high.—*Case 20.* Miss Browne was inoculated, and experienced a regular eruption; but about four years afterwards she had the small-pox severely in the natural way, which left many marks behind.—*Case 21.* Miss Albert was inoculated by Mr. Broomfield, and the disease which was produced was by him considered as genuine small-pox, yet she afterwards

caught the natural disease from her brother, and had a heavy load.—*Case 22.* A postillion was inoculated, and had an eruption of small-pox with fever, yet sometime afterwards he was attacked with the same disease, and had it very severely.—*Case 23.* A man, after he had been regularly inoculated by Mr. Mudd, a surgeon, was seized with the natural small-pox, and had them in so violent a form that he narrowly escaped with his life.—*Case 24.* Major Dode suffered two attacks of natural small-pox, both of which were very severe. Mr. LEESE mentions the case of a Mr. Pidgeon, who was inoculated for small-pox, and had a general eruption in consequence; yet about thirteen years afterwards he was again seized with a very confluent small-pox, which proved fatal.

Dr. CLUTTERBUCK (Med. Chirurg. Review, vol. xi.) relates the following case. William Butler, six years old, was inoculated for small-pox four years ago by Mr. Pope of Hanley. The appearance of the arm was such as to satisfy the inoculator, though no scar is now to be perceived. The mother says she recollects that a few pimples appeared, but never came to any size or head. April 4th, 1806, he sickened for small-pox, and had a very copious eruption of the confluent sort; having caught the infection from his brother who was under inoculation. In the same Review, Mr. FREAKE gives the following account from his notes taken at the time the events occurred. On the 8th July, 1784, he was sent for to attend a child of Mr. Waters, milkman, of Kentish-Town, when dangerously ill with fits; during the continuance of which it died: it had been attacked three days previously with the symptoms usually preceding small-pox. On the 18th of the same month another child sickened with small-pox, of the confluent kind, and with difficulty got over them. On the 3d August, a third child of the same family sickened with small-pox, had the distinct sort, and got through them very well. The above three children had been inoculated by Mr. Weatherall, of Highgate, about eighteen months before, who, on inquiry, declared they were inoculated with small-pox matter, and all had eruptive fever, and a fair shew of pustules.

The editors of the *Bibliothèque Britannique* (t. 88.) remark, It is well known that a person may have the small-pox more than once, as a great number of respectable authors testify.

Mr. JONES (*Vindication of Vaccination*) allows that the small-pox have sometimes followed what had been supposed to have been complete vaccination, but they have also followed complete inoculation. Every experienced medical practitioner, he adds, can testify this; and cases might be quoted on each side, if any useful end was to be obtained by it.

Mr. MOORE (*Reply to Antivaccinists*) says, that he had the honour of being acquainted with a lady who had had the small-pox in her infancy, yet who since that time had had a variolous affection at six successive periods, when suckling her children when under inoculation. The pustules during each attack filled, and were not distinguishable from ordinary small-pox.

Dr. WILLAN (*Treatise on Vaccination*) remarks, the circumstances and appearances which have been repeatedly announced as proofs of the occurrence of small-pox after vaccination, cannot have much weight, because we find that similar symptoms take place after the small-pox, in persons who have been inoculated with variolous matter. He then refers to the case of Mr. Miles, communicated to Dr. Jenner, and mentions the cases of two medical students who had previously had the small-pox, and had them a second time severely, in consequence of scratching their hands while dissecting the body of a man who died of the small-pox.

In the 15th volume of the *Lond. Med. and Phys. Journal*, Mr. Ring has mentioned the seventeen following cases.—*Case 1.* Lady Morris was inoculated by Dr. Cowell, and declared to be safe from future infection; but she afterwards caught the small-pox at Bath, and died of them.—*Case 2.* Mrs. Frankham had the small-pox when young, and was considerably marked by them, yet she had a second attack of the same disease when suckling a child ill of it.—*Case 3.* Mrs. Dean was inoculated, and had a regular eruption of small-pox pustules on different

parts of her body, yet afterwards, when nursing a child ill of that disease, she suffered a second attack of small-pox, which was attended by considerable indisposition, and the pustules went through their regular stages.—*Case 4.* A young lady was inoculated, and supposed to have had small-pox in a most regular and complete manner; yet about seventeen years afterwards she caught the same disease a second time.—*Case 5.* Woodly had the small-pox when twenty-five years old, yet he suffered a second attack after an interval of fifteen years, which proved fatal.—*Case 6.* A woman was regularly inoculated at the Small-pox Hospital, and dismissed in the course of a fortnight, when she was attacked with fever, followed by an eruption of small-pox, in the course of which she was blind for several days.—*Case 7.* A young woman had two pustules on her knee, from contact, attended by the usual constitutional symptoms of small-pox; yet three years afterwards she again had the small-pox of a confluent kind, and with difficulty passed through them.—*Case 8.* A woman had the small-pox when seventeen years old, which was so severe as not only to produce pits, but even seams on the face; yet some years afterwards she again caught the disease, and had it in a very severe form.—*Case 9.* Mr. Wilson was inoculated, and had regular small-pox in consequence; yet twenty-one years afterwards, when that disease was prevailing epidemically, he caught it again, and had a regular eruption.—*Case 10.* A young woman was inoculated, and had an eruption of twenty pustules with fever. Five years afterwards, she caught the natural small-pox in a confluent form.—*Case 11.* Mr. Scott had the small-pox by inoculation, which proved to be of the confluent kind; yet he had them again twenty years after, with a considerable degree of severity.—*Case 12.* A boy was inoculated with variolous matter, and was covered with the eruption: about a year afterwards he caught the disease again in a confluent form.—*Case 13.* A black woman was attacked with small-pox after she had had them twice before. She remarked, when she felt herself unwell, that if it proved to be the small-pox, she would certainly die; that in India small-pox sometimes attacked the same person three times; but in

that case they always died. Her words proved prophetic, for she died of the third attack.—*Cases 14. and 15.* Elizabeth Everitt died of small-pox after having formerly undergone that disease. Dr. Geach related a similar case to Mr. Dunning, which happened to a nurse at the Royal Hospital, Plymouth, under his own observation.—*Cases 16. and 17.* Sarah and Mary Taylor were inoculated for the small-pox; the former had a few pustules, and was pronounced safe; the latter had a considerable crop, which went regularly through the different stages of small-pox. After a lapse of nineteen years, they both experienced a second attack; the eruption on Sarah was confluent on the face, but distinct on other parts of the body; she was blind three days. The pustules on Mary were more numerous, but distinct, and turned on the second day. Besides these, other five cases of secondary small-pox are recorded in the same volume of the Journal.—*Case 1.* Communicated by Dr. ROYSTON. Mary Feakens had the small-pox in their most severe form, yet about nineteen years afterwards, she caught them a second time. The fever ran high; the pustules on her face amounted to about 200, with a proportionate number on other parts of the body.—*Cases 2. and 3.* Communicated by Dr. SIMPSON. A boy had small-pox very severely by inoculation; yet seven years after, when that disease was epidemic where he lived, he caught it again, and had a very heavy load of pustules.—A gentleman had small-pox twice with an interval of two years between the attacks. The first time the disease was very severe, and the second attack, though not quite so severe, was by no means mild.—*Case 4.* Communicated by Mr. ARMSTRONG, occurred in a child who was inoculated when an infant, with its mother. Both were considered as safe from the small-pox; but about seven years afterwards, when another child of the same family was under inoculated small-pox, it passed through the disease for the second time in a favourable manner.—*Case 5.* communicated by Mr. William to Mr. Tyre, occurred in a man who was much marked by the small-pox, and who, at the time that three of his children were passing through inoculated small-pox, suffered a second attack.

Mr. HILL of Portsea, in the 18th volume of the same *Journal*, mentions the case of a child whom he had inoculated, and had the disease in such a manner as to induce him to declare it secure from future infection, yet ten years afterwards this child was attacked with a copious eruption of natural small-pox.

Mr. RING has recorded the seven following cases in the 17th volume of the same *Journal*: *Case 1.* Miss Lutridge was inoculated for small-pox, and had an eruption, yet three years afterwards she had an attack of natural small-pox.—*Case 2.* A girl was inoculated by Mr. Bliss, had several pustules, and was considered safe; but after an interval of five years, she had a full crop of small-pox, attended by much constitutional indisposition.—*Case 3.* Mrs. Turton, had small-pox twice, and was each time blind from the disease.—*Case 4.* Mrs. Jones was inoculated for the small-pox by Mr. Shedwick, who assured her the operation had succeeded, and that she was secure from future infection, yet about eleven and a half years afterwards she had a severe attack of the same disease, and was blind for two days.—*Case 5.* Mrs. Waller, after she had been inoculated for small-pox, caught the natural disease, and passed through it in the usual manner.—*Case 6.* A young woman was inoculated for the small-pox, and was supposed to be safe, yet she afterwards caught the natural disease, which proved fatal to her.—*Case 7.* A child was inoculated, and had fever with an eruption, yet upon being exposed to the contagion of small-pox, three years afterwards she caught that disease again, and had an eruption of about 500 pustules, which matured regularly. Mr. SCAMMELL mentions the following case: Robert Bartlett was inoculated, and the operation was succeeded by fever and a variolous eruption, but nearly eighteen years afterwards he caught the disease again, and had a pretty copious eruption.

The 18th volume of the same *Journal* contains the seven following cases recorded by Mr. Ring: *Case 1.* A boy who had been regularly inoculated for small-pox caught the disease afterwards in the natural way, and had it rather severely.—*Case 2.* Mr. SHARPNELL, surgeon of the Gloucester Militia, in a letter to Dr. Jenner, relates several instances of

secondary small-pox, particularly one which occurred in the wife of John Elder, who had had the small-pox twice, and at each time was blind during the course of the disease.—*Case 3.* Susannah Piper had the small-pox by inoculation, and was blind three days, yet several years afterwards, when nursing some individuals under the inoculated disease, she caught them again, and had a pretty copious eruption.—*Case 4.* Mrs. Quatermain had the small-pox so severely, that she was given up by two medical men, yet twenty-two years afterwards, when exposed to the variolous contagion, she had an eruption of about fifty pustules, with severe constitutional indisposition for several days.—*Case 5.* Ann Tolhurst was inoculated by Mr. Watt, and she had an eruption. Thirteen years afterwards she nursed her children in the small-pox, and then she underwent a second attack, of which the eruption was very copious.—*Case 6.* Mrs. Palmer, after she had had the small-pox, nursed a child ill of that disease, in consequence of which she was seized with fever, followed by a variolous eruption.—*Case 7.* Mrs. Martin was inoculated for the small-pox, and had a heavy load, yet six years afterwards, on being exposed to the contagion of that disease, she caught it again, and had an eruption of eight or nine hundred pustules, attended by fever.

Dr. LAIRD (Edin. Med. and Surg. Journal, vol. iii.) says, “It has been proved that the same individual may be twice susceptible of the specific operation of the variolous poison. I conceive the following to be a case in point. During the course of last summer, (1806,) one of my patients at the Public Dispensary, a boy thirteen years of age, had the natural small-pox very severely. It was regular in its progress and duration; and yet, when a year old, he had slept in the same bed with his grandmother, while she laboured under this disease, which proved fatal to her; and at that period he was the subject of an eruption accompanied with fever, considered not only by his friends, but by a respectable surgeon who attended him, to be genuine small-pox.”

In an anonymous letter to Dr. RUSH, (Lond. Med. and Phys. Jour. vol. xx.) we find the following paragraph; “Per-

haps it may be worth remembering that there are many instances where the infectious matter of the small-pox and kine-pox applied to persons who have before passed through these diseases respectively, have been capable of producing a representation more or less perfect of certain of these symptoms."

Mr. BRYCE, (App. No. IV. Practical Observations on Cow-pox,) after quoting several examples of the occurrence of secondary small-pox, observes, "There are now before me nearly one hundred cases on record, in which the human constitution has suffered more or less severely from a second attack of small-pox : in many of these the attack has proved fatal."

Dr. HEIM of Berlin (Horn's Archives, vol. 10th.) relates the cases of the two sons of Mr. Karbe, who were inoculated in 1797 with genuine variolous matter, in the opinion of all the physicians except Heim, who saw the eruption from which it was taken. This inoculation was followed by a general eruption and fever, yet in the following year, upon being exposed to the contagion of the small-pox, they both passed through that disease a second time. Dr. Heim, after mentioning that neither genuine small-pox nor perfect cow-pox can be any protection against spurious small-pox, and that this spurious small-pox generally attacks individuals once only in the course of life, though he had frequently seen them occur a second time, and in two instances in the same person a third time, says, "a son of Mr. Von Gerlach, who had been inoculated, and took the genuine small-pox very severely, was seized about four months afterwards with chicken-pox, in which he was considerably worse than in the inoculated small-pox."

MR. CAMERON has related the following case, (Lond. and Med. Phys. Journal, vol. xxiii.) John Skyrme was inoculated for small-pox, and passed through that disease to the entire satisfaction of his medical attendant; yet about eighteen years afterwards he was seized with fever, followed by an eruption, which observed the regular course of variola. The Editors of the same Journal have recorded in the 24th volume the two following cases.—Case 1. A boy caught the

small-pox, had a plentiful eruption, and was blind during the disease; yet three years afterwards he was again seized with the same complaint, and had a copious eruption, which matured regularly.—*Case 2.* A person after having had small-pox, which left marks behind, suffered a second attack of distinct small-pox, which was preceded by the usual eruptive fever.

In the Report of the Central Committee of Vaccination in France for 1810, two examples of the recurrence of small-pox in the same individual are recorded.—*Case 1.* A girl, nine years of age, who had had the small-pox in her infancy, was, at a subsequent period, when two of her brothers and sisters were labouring under small-pox, attacked with the confluent small-pox.—*Case 2.* M. Onslow was inoculated in 1794, and about fourteen years afterwards again suffered an attack of distinct small-pox, which left pits behind.

In the Lond. Med. and Phys. Journal, vol. xxvi. the Editors have recorded the six following cases.—*Case 1.* The Rev. Mr. Rowley was inoculated for the small-pox by Mr. ADAIR, Surgeon-General, and had a considerable eruption, yet about forty years afterwards he was seized with severe distinct small-pox.—*Case 2.* Miss Booth had been inoculated, and had all the appearances which were believed necessary to afford perfect security from a future attack of the disease; yet she was again seized with fever, followed by a variolous eruption, which went through its regular stages.—*Case 3.* A man, who had been inoculated for small-pox, was seized, after an interval of twelve years, with a confluent attack of the same disease.—*Case 4.* A young woman, who had had small-pox in the severest form, and by which she was much marked, about nineteen years afterwards suffered a second attack.—*Cases 5. and 6.* Two young women had had the small-pox to such a degree, that their faces were much marked, and indelible vestiges of them remained on their arms; yet some time afterwards, when the younger branches of the family were inoculated, they both caught the disease again in a severe form, and had a plentiful eruption. The Editors add, that they “could adduce a great number more

cases, in which small-pox, either casual or inoculated, had, within their knowledge, succeeded to former inoculations." In the same volume, Mr. STORER has related the case of Thomas Lingforth, who was inoculated, and had an eruption, with fever in consequence; yet about eight years afterwards was seized with fever, followed by a confluent variolous eruption, which went through its regular stages.

Dr. BATEMAN, in his Quarterly Report of the Carey Street Dispensary, (Edin. Med. and Surg. Journal, vol. vi.) informs us, that an instance of the *second occurrence* of small-pox in the same individual presented itself under circumstances which left no room for doubt as to the former existence of it, since the face exhibited *numerous pits*. The eruption appeared on the third day of fever. The pustules were somewhat less full than is often observed in the distinct variola, and began to dry on the eighth day of the eruption. In the Second Volume of the Medico-Chirurgical Transactions of London, the same gentleman has related the following case: Frances Bird, after having passed through the small-pox in her youth, in such a severe form that her life was despaired of, and several years afterwards, when attending upon a child who died of natural small-pox, she was attacked with fever, and on the third day an eruption made its appearance, which was scanty, but pretty generally dispersed over the body, and bore the evident variolous character. The pustules went through the regular stages of the small-pox.

Dr. SANDERS, in his Treatise on small-pox, amongst several other cases of secondary small-pox, has quoted the two following: *Case 1.* Peter Sylvester was inoculated by Mr Ring, and had the disease in the most perfect manner; yet, about ten years afterwards, he suffered an attack of distinct small-pox.—*Case 2.* John Godwin had the small-pox when six months old, and afterwards underwent the test of small-pox inoculation without effect; yet, after an interval of some years, he caught the casual small-pox.

Dr ADAMS (Dissert. Inaug. de Variola et Vaccinia) mentions that, when small-pox were prevailing epidemically in Forfar, some individuals who had formerly passed through

that disease, either naturally or by inoculation, were then attacked with fever, followed by an eruption.

Dr. REYNOLDS, (Moore's History of Small-Pox,) Physician to his Majesty, relates the following anecdote: "He was sent for by a lady unknown to him, and conducted by her maid, rather mysteriously, into a handsome bed-chamber, where he saw, lying in a splendid bed, a lady masked. Being a good deal surprized, the maid stifled a laugh, while her mistress, in a soft-toned voice, apologized for concealing herself even from a professional gentleman. This (she said) had become proper, from the peculiarity of her situation. At present she stood greatly in need of his superior medical talents, and was extremely anxious for his opinion on her case, which, she understood from others, was a very rare one. The doctor being thus put upon his guard, inquired minutely into all her symptoms, and examined critically a pustular eruption which was spread over the lady's person: He then pronounced the disease to be, without all doubt, the small-pox, on which the patient unmasked, and displayed features scarred with that disorder."

The Rev. Mr. COLERIDGE, (Lond. Med. and Phys. Journal, vol. xxxvii.) after exposure to the contagion of small-pox, sickened, and shortly afterwards an eruption appeared on various parts of his body, to the number of fifteen: these came to maturity, and fell off in the usual way. About twenty-seven years afterwards, when exposed to the infection of the same disease, he was seized with fever, followed by an eruption of pustules on different parts of his body, which went through the regular stages of small-pox.

Dr. PUGENS, (Petite Verole Observée à Milau, en 1817.) informs us that two examples of the same individuals labouring a second time, under small-pox, had occurred in the course of the epidemic which he has described.

FRANK (Praxeos Med. T. II.) admits the possibility of small-pox attacking an individual twice in the course of life.

Dr. BUCHAN (Domestic Medicine, 1818,) says, "I have known a nurse who had the small-pox before, so infected by lying constantly a-bed with a child in a bad kind of small-pox,

that she had not only a great number of pustules, which broke out all over her body, but afterwards a malignant fever, which terminated in a number of imposthumes or boils, and from which she scarcely escaped with her life."

It is stated in the Quarterly Report of the New Town Dispensary, (Edin. Med. and Surg. Journal, vol. xiv.) that the Medical Gentlemen of that Institution had seen one case of well marked small-pox, and that they had been informed, on unquestionable authority, of another in which there was evidence which appeared to them satisfactory, of both patients having gone through the disease before.

Dr. HENNEN, Deputy Inspector of Hospitals, in his account (Edin. Med. and Surg. Journal, vol. xiv.) of the eruptive diseases which appeared in the military hospitals of Edinburgh, relates the histories of four cases of secondary small-pox which occurred during the course of the epidemic. He also mentions that there was an officer of dragoons then in the neighbourhood, who was a living instance of the recurrence of small-pox in the same individual; and, in a note, he informs us that the son of Fracastorius, the poet and historian of Verona, suffered a repetition of small-pox.

Dr. MONRO (Observations on the different kinds of Small-Pox) says, he had lately had occasion to meet with four persons who had had small-pox twice in the progress of life, and three of these were very much marked by the first attack of the disease. He farther observes, that the second attack is sometimes mild, but in other instances malignant and fatal, and that of both instances he had lately had occasion to see examples.

In the Report of the National Vaccine Establishment for 1817, the Board remark, "The small-pox occur occasionally twice in the same individual; and since the last report, twelve cases of small-pox occurring after small-pox, in this country, were communicated to the Board by medical practitioners. Two of these cases were individuals who had had small-pox from inoculation, and who caught the second attack from being in houses where mitigated small-pox after vaccination had appeared. Both of them, and one in particular, had the

disease more severely than those who had been vaccinated."

In the "Correspondence of the Directors of the Dublin Cow-pock Institution," we are informed, 1st, That Dr. Sayers of Limerick had under his care a case of true small-pox in the same person a second time, and who between the attacks had passed through chicken-pox; 2d, That Dr. Ferris of Portarlinton had, in the course of nine years, seen two cases of natural small-pox succeed to the inoculated small-pox. He saw the marks of inoculation on both the patients. 3d, That Mr. Simpson of Roscommon had seen formerly, and not unfrequently, small-pox occur after variolous inoculation; and, 4th, That the Rev. Dr. Walsh of Glasnevin knew that a woman who had had the small-pox, and had been very frightfully marked by them, took the disease again, which proved fatal.

BERARD and DE LAVIT (*Essai sur les Anomalies de la Variole et de la Varicelle*) after quoting many instances and authorities which have already been taken notice of, add, that Dr. Laudun saw, in 1812, a young girl suffer an attack of small-pox, after having passed through them the preceding year; that Mr. Christien mentions two cases of the recurrence of small-pox; that Mr. Lamure saw the same person suffer small-pox twice in the course of one year; the first time she was dangerously ill, and the last time she died; that Dr. Farjon had a patient labouring under small-pox, whose body was marked by a former attack of the same complaint, and that Dr. Golfin attended a person affected with genuine distinct small-pox, about three years after he had had the same disease in a regular manner, which had left marks. The proofs, these authors continue, which we have given, and which we could multiply a great deal more, proves that the same person may suffer more than once from small-pox.

Mr. JOHNSTON of Dunbar, in a letter to Dr. Thomson, dated February 1819, has given an account of his own case. In 1805, when dissecting an Asiatic who had died of confluent small-pox, he punctured his finger; in consequence of which

he had fever, followed by a variolous eruption. He had passed through small-pox many years before.

In the Report of the National Vaccine Establishment for 1819, it is stated, that "while there are still persons who can be found to question the efficacy of the vaccine, it is proper to remark, that, in the course of the year, *fifteen* cases have been reported to the Board, of small-pox attacking the same individual twice, two of which proved fatal."

Dr. BARNES, in his Observations on Fever and Vaccination, extracted from the Reports of the Carlisle Dispensary for 1817-18, relates a case of secondary occurring after variolous inoculation, performed more than twenty years before, and leaving two large distinct scars on the left arm. The pustules were numerous and confluent; there was considerable swelling and tumefaction of the face, and great salivation.

Mr. DUNNING, (Edinburgh Medical and Surgical Journal, vol. xv.) in a postscript to a paper on vaccination, informs us, that two instances of second attacks of small-pox had lately occurred in the neighbourhood of Plymouth. The first was the case of a young surgeon: the disease was so severe that the loss of his sight was very seriously apprehended for many days. The second was that of a young gentleman, who had the disease with some severity, after having passed through inoculation for the small-pox.

Mr. FOSBROOKE (London Medical Repository, vol. xi.) brings forward the testimony of several authors who had seen the disease for a second time; such of them as have not already been noticed I shall give in his words. Dr. Coxe, of Philadelphia, relates three cases without unusual symptoms, and then says that he himself had known one of secondary distinct, and another of secondary confluent. Dr. Jenner, continues Mr. Fosbrooke, informed me that when he was at Gloucester assizes three years ago, Mr. Justice Holroyd asked him to observe how universally his countenance was indented. People have been absurd enough to say small-pox cannot be taken twice. I had the disease when a little boy, with others. I got it a second time, when twelve years old, and this was the consequence. The Marquis of Hertford told

Mr. F. that his father was inoculated by Sir Cæsar Hawkins, and from the eminence of Sir Cæsar, when a boy he went with him on a tour to France. At Paris he took the small-pox and died. Mr. Bromfield, a celebrated surgeon in London, inoculated Miss Pappendeck, the Duke of Clarence, and Prince Ernest. Miss Pappendeck afterwards had secondary small-pox, and was pitted. A Mrs. G. a solicitor's wife at Cheltenham, had small-pox five times. Mr. Chamberlayne, Clerkenwell, has had small-pox twice. Colonel Brysac twice severely. Two persons in Mr. St. Angerstein's family. The poet Campbell, gave Dr. Jenner two cases in one family. The grandfather of Mr. J. Nichols, the publisher, is another case.

Mr. FOSTER, (Report of Parliament on the Contagious Nature of the Plague, 1819.) when asked by the Committee whether he had heard or seen instances of the small-pox affecting persons more than once? answered, that he was personally acquainted with a man who had it three times. When asked whether he had heard frequent instances of a man having it twice? said that he had heard very frequent instances of it, but very few well authenticated. When asked whether he knew *any* instances of it well authenticated? answered, that he knew two or three besides the one alluded to.

The foregoing are most of the cases of secondary small-pox I have been able to find recorded in the works which I have had an opportunity of consulting. I am aware that the collection must still be very imperfect; but such as it is, I shall be happy if it can be of any use to you in the investigation in which you are at present engaged.

I remain,

My dear Sir,

With much respect and regard,

Your obliged and obedient Servant,

ANDREW SMITH, M.D.

Queensberry House, Sept. 1819.