Pathological observations on the diseases of the placenta / by James Y. Simpson.

PATHOLOGICAL OBSERVATIONS

ON THE

DISEASES OF THE PLACENTA.

PART I. CONGESTION AND INFLAMMATION.

BY JAMES Y. SIMPSON, M. D.

PRESIDENT OF THE ROYAL MEDICAL SOCIETY OF EDINBURGH, &C.

(Read before the Royal Medical Society, November 20, 1835.)

(From the Edinburgh Medical and Surgical Journal, No. 127.)

THE Diseases of the *Placenta* form a subject of inquiry which appears to have hitherto attracted, especially from British pathologists and accoucheurs, a very incompetent share of attention. In the works of various systematic medical and obstetrical authors of the last and of the preceding century, as in those of Bonet, Ruysch, Mauriceau, Morgagni, and Wrisberg, notices of some individual cases and forms of placental disease are occasionally to be met with,—and more lately, several of the morbid affections of this organ have been investigated with greater or less attention, by different continental pathologists,—as by MM. Murat,* Desmoreaux,† Brachet,‡ and Cruveilhier, § in France, and by Professors Stein,‖ D'Outrepont,¶ and Wilde,**

* Dictionnaire des Sciences Medicales, Tome xlii. p. 543. sqq. 1820.
† Dictionnaire de Medecine, Tome xv. p. 379. 1826.
‡ Journal Generale de Medecine, Tome cii. p. 10. sqq. 1828.
§ Anatomie Pathologique, Livrais. i., vi., and xvi. 1829–34.
‖ Gemeinsame Deutsche Zeitschrift für Geburtskunde, Band v. Heft. 2, and Kleinert's Allgemeines Repertorium, v. Jahrgang. 1. Heft. s. 35, 36. 1830.
¶ Gemeins. Deutsche Zeitschrift für Geburt. Bd. v. Heft. 4. and Kleinert's Allgem. Repertor. iv. und v. Jahrg. Suppl. i. Abtheil. s. 77. 1830.
** Medizinsche Zeitung. Jahr. ii. Abtheil. 11. Berlin, 1832.

in Germany. I am not aware, however, that the medical literature of England contains any account of the various morbid states to which the *Placenta* is liable, besides what is to be found in the casual observations and in the details of isolated and incidental cases recorded in the obstetrical writings of Smellie, Denman, Hamilton, Burns, Ramsbotham, Ingleby, Montgomery, Granville, and others.* It is not, therefore, without hesitation, that I venture to lay before the Society, the following general remarks upon some of the principal forms of placental disease, as derived, partly from the data furnished by others, and partly from the observations which I have myself had an opportunity of making upon a few recent, and a very considerable number of preserved specimens of morbid *Placentæ*, contained in the different pathological museums of this country. At the same time, I may, I hope, be allowed to plead in excuse for the many imperfections of the following essay, the comparative novelty of the subject of which it treats, the paucity of materials still existing with regard to it, and the difficulty of collecting these materials from the numerous different sources over which they are scattered.

The Human *Placenta* is an organ which serves as a mere temporary medium of communication between the mother and *fœtus*, and passes through all its different stages of formation, growth, and ultimate expulsion, in the short space of seven or eight months, yet during this comparatively brief existence, it appears to be liable to a considerable number and diversity of morbid conditions, more frequent, I believe, in their occurrence, and more important in their effects, than seems to be generally suspected. Nor are the morbid conditions and lesions of this organ matters of pathological curiosity and interest only; a more accurate knowledge of their various phenomena appears to promise results of no inconsiderable consequence to practical medicine. The peculiarities of the placental economy of the human female, and the nature of the relations which exist between it and the *uterus*, constitute (particularly when these relations happen to be deranged by placental or uterine disease,) one of the great sources of danger and fatality in human parturition. Numerous facts also seem fully to prove, that different morbid actions and lesions of the *placenta* exert a marked and powerful influence upon the health and well-being of the mother during pregnancy,—and, above all, the study of these

* I ought perhaps to state, as exceptions to this general remark, a brief analysis of the symptoms of different diseases of the *placenta* from Professor Wilde's essay, inserted in p. 573 of the 6th volume of Dr Ryan's London Medical and Surgical Journal, as well as a short notice of the subject in Dr Ryan's own lectures on the Physical Education and Diseases of Infants, published in the same Journal, Vol. vi. p. 140–142.

lesions promises to throw an almost entirely new light upon the abnormities of developement, the diseases and death of the *fœtus in utero.* Most, indeed, of the latest inquiries instituted upon these points, appear to me to afford satisfactory evidence, that certain particular varieties of malformation of the *fœtus* are attributable, in some instances at least, to morbid conditions of the *placenta*, or of the membranes covering the internal surface of the *placenta*, as their immediate exciting cause ; * that the not unfrequent occurrence of the death of the *fœtus* in the earlier as well as in the latter stages of pregnancy is almost always the result of a diseased state or states of this organ, and that the act of abortion, occasionally the indirect cause of that death, but much more commonly its indirect effect, is in very many instances capable of being traced to the same source. It does not seem, therefore, irrational to hope, that by a more careful investigation into the nature of the different diseased states to which the *placenta* is liable, and by a more diligent and rigorous observation of the symptoms that precede and accompany these states, and of the causes by which they are produced, we may be gradually led to a greater degree of facility and accuracy in their detection, and to the adoption of better established principles for their prevention and treatment,—and that in this way may be promoted in no inconsiderable degree, those great and ultimate objects of all medical study—the preservation of human life, and the alleviation of human suffering.

The two most frequent and important diseased states to which the *placenta* is liable, *are certainly* sanguineous *Congestion* and *Inflammation*, with their various consequences. The placentary *parenchyma*, and the membranes investing the organ, are liable, as I shall afterwards endeavour to point out, to other morbid states—to hypertrophy and atrophy, to softening and induration, to cartilaginous and calcareous degeneration and the secretion or formation of other morbid products and tissues, to an anormal cystoid or hydatiform structure, and to various forms

* The varieties of malformation to which I here more especially allude consist, as will appear in the sequel, of certain kinds of malformation resulting from a morbid adhesion between the embryo and the membranes covering the internal surface of the *placenta*. It is not improbable, I conceive, that other kinds of malformation may yet be traced to a diseased state of the appendages of the *ovum*, as their first or more immediate exciting cause, but the present state of our knowledge upon this subject is certainly not by any means such as can entitle us to assent to the following comprehensive proposition, deduced by M. Serres as the result of his able investigations into the origin of monstrosities with a reference to the theory of the primitive duality of all the organs of the body, and laid down by him in his late interesting work, "Recherches d'Anatomie Transcendante," &c. "En dernière analyse, la cause la plus generale des irregularités des developpement et de la monstruosité reside en premier lieu dans la dualité primitive des placenta, et en second lieu dans la separation, ou la coalescence de ces deux organes."—P. 178.

of malformation and displacement, but, in a practical point of view, most of these lesions are comparatively less important than congestion and inflammation, and the effects which these diseased conditions produce. It is to congestion and inflammation of the *placenta*, therefore, that I would wish first and principally to direct the attention of the Society.

I.—Congestion of the Placenta.

By the term *Congestion of the Placenta*, I mean to express the existence of a greater than usual quantity of blood in the vessels of that organ, taking place rapidly or more slowly, in some cases rapidly or more slowly terminating in resolution, and in others leading to the infiltration or extravasation of blood in greater or less quantity or quantities, into the substance of the *placenta*, upon its uterine, or fœtal surfaces, or between the membranes of the *ovum*. The excess of blood in the vessels of the *placenta*, constituting congestion of that organ, may, there is every reason to believe, have its seat primitively and separately, either in the placental ramifications of the fœtal umbilical arteries and veins, or perhaps more frequently in the vascular prolongations, which seem to be extended from the uterine vessels of the mother into the substance of this viscus ;* but a

* In this and in other parts of the present essay, the language that I have employed, and some of the pathological explanations that I have offered, will be found to accord with the belief, that the description of the utero-placental vessels and circulation originally given by the Hunters is fundamentally correct, and that not only small tortuous blood-vessels (arterial branches) pass across from the inner surface of the *uterus* into the *placenta*, but that venous branches also, or hollow canals, at least, continuous with the venous sinuses of the *uterus*, run through the deciduous membrane, covering the uterine surface of the *placenta*. From what I have myself observed in recent *placentæ*, and in a personal examination of Dr William Hunter's preparations in the Museum at Glasgow, I am inclined to believe that Dr Lee, and with him M. Velpeau and others, have deceived themselves in considering the placental *decidua* as an imperforated membrane, by not attending sufficiently to the circumstance, that the utero-placental veins pass through the deciduous covering of the *placenta* in a very oblique direction, and that the coats of these venous canals are extremely thin and slender, and composed of a tissue that is endowed with very little elasticity, and resembles in colour and appearance the proper tissue of the *decidua*. Hence it happens, that when we look upon the outer or convex surface of the *placenta* after it has been separated from the *uterus*, the deciduous covering of the organ presents the appearance of a perfectly continuous membrane, having no visible *foramina* or hollow canals in it, owing to the inelastic *parietes* of its venous canals having then completely collapsed together, and to the torn orifices of these canals, being thus concealed by their sides, more or less fully overlapping one another, in consequence of the oblique course of the vessels themselves. These sources of fallacy in ascertaining the proper vascular structure of the placental *decidua* are always rendered greater, if, instead of being kept of its natural convex form externally, the *placenta* be placed by us for examination upon a flat surface, as by this means all the parts on the uterine side of the organ are necessarily more closely pressed together. Drs Sharpey and Allen Thomson, in examining during last summer a gravid *uterus* taken from the body of a woman who had poisoned herself between the fourth and fifth month of pregnancy, were able to trace in the most satisfactory manner both utero-placental arteries and veins passing through the deciduous membrane of the *placenta*. They convinced themselves of the free communication of the venous canals which they found in the

state of congestion in one of these systems of vessels, the foetal or the maternal, scarcely perhaps ever continues, for any considerable period of time, without giving rise to a similar state in the other.

Anatomical characters of Placental Congestion.—The anatomical characters of simple congestion of the *placenta* may, I believe, be sufficiently illustrated by a reference to the engorged and dark-coloured condition, which this organ presents, in cases in which the head of the child has happened to be long and dangerously impacted in the passages of the *pelvis*. The appearances which the *placenta* exhibits on its being expelled after such cases, and more particularly if the impaction has been so great as to prove fatal to the child, are well known to every practical accoucheur. The external surface of the organ is of a more or less deep-violet, and sometimes almost livid colour, its internal structure when torn or divided by the scalpel presents a deep purple hue, its vessels are everywhere loaded and distended with dark-coloured blood, the organ appears enlarged, and its substance feels heavier and more solid than natural.

In cases of abortion occurring as a consequence of physical injuries of the uterine region, or of any of those causes which give rise to it, by producing a strong determination of blood to the vessels of the *uterus*, the same congested and engorged state of the *placenta*, as that to which I have just now alluded, is generally met with, and in these instances also the blood is not unfrequently found effused in more or fewer points, from rupture of the lacerated or distended placental vessels, constituting the *Apoplexy* of the *Placenta* of M. Cruveilhier, who, along with Laennec, Andral, and other Parisian pathologists, has employed, of late years, this term to designate the existence of an effusion of blood into the tissue of the lungs, and other organs of the

---

placental *decidua*, with the proper uterine veins or sinuses, by tracing a continuity of tube between these two sets of vessels, in carefully dissecting the venous canals or cavities of the *decidua*, both from the external or maternal portion of the substance of the *placenta* towards the *uterus*, and from the sinuses of the *uterus* towards the *placenta*, as well as by blowing air through them in these different directions while the preparation was immersed in water. These gentlemen discovered also small tortuous spiral arteries, less in diameter than the utero-placental arteries, but similar in form, passing from the inner surface of the *uterus* into the *decidua vera*, covering those parts of the *uterus* at which the *placenta* was not attached. They further found a net-work of considerable sized veins ramifying through the substance of this uterine *decidua*. The anastomosis of these deciduous venous canals with one another, as well as with the cavities of the veins running on the edge, at least of the placental *decidua*, and with the mouths of small venous orifices opening on the internal surface of the *uterus*, fully appeared on inflating them in different parts of their course. It is to be hoped that the results of this interesting observation, with all its necessary details, will soon be laid before the medical public. In addition I may state, that Mr Owen of London has been lately successful in verifying, by the careful dissection of several gravid *uteri*, the accuracy of the anatomical description of the utero-placental circulation left us by the Hunters.

body, while the word literally and originally signifies one of the more obvious external phenomena or symptoms only, which such an effusion of blood generally produces, when it happens to occur within the *encephalon.**

The blood effused in placentary congestion and hemorrhage occurring during pregnancy may occupy different *anatomical situations.* In numerous instances it is found on the external surface of the *placenta*, or between it and the *uterus*, occasionally in very large quantity; in other instances the extravasated blood is situated towards the foetal surface of the organ, or insinuated between the membranes, or, as very often happens, between the *uterus* and *decidua*; and in others again, it is seen effused into the substance or proper structure of the *placenta*, as remarked by Deneux† and Baudelocque,‡ and, as I have myself had an opportunity of observing, in a considerable number of specimens. In cases in which abortion occurs in the earlier periods of pregnancy, the extravasated blood is frequently found diffused over the whole or nearly the whole surface of the *chorion*, and between it and the *amnion*, in the form either of a continuous layer or layers of *coagulum*, or of more or less isolated nodules; and in two instances I have seen it occupying these situations, at the same time that it was both effused into the cavity of the *amnios* itself, and extravasated in the form of roundish masses among the rudimentary structure of the *placenta.* The immediate anatomical seat of sanguineous effusions situated in the substance of the *placenta* itself is probably in general in cavities formed in a greater or less degree by mechanical rupture of the tissues of the organ, but the occasional similarity of the form of the *coagula*, to the form presented by portions of wax injections thrown into the *placenta* by the utero-placental arteries or veins, would seem to show that in some cases the *coagula* are more or less completely circumscribed within the maternal cells of the *placenta*, supposing the de-

* Professor Thomson, in his lectures, has long been in the habit of employing the old term *ecchymosis* instead of *apoplexy*, to designate all morbid extravasations of blood into the tissues or structure of the internal organs of the body. This use of the term *ecchymosis* in medical pathology seems to be preferable to that of apoplexy, inasmuch as it is consonant both with the original derivation of the word, and with the signification in which it has long been employed by surgical writers. Dr Rush was, I believe, the first who in modern times set the example of applying the term apoplexy in the somewhat perverted signification to which I have above alluded. In his essay on Pulmonary Consumption, after stating different points of resemblance between the effusion of blood in the brain, and the effusion of blood in the lungs, he remarks, "From this great analogy between the remote and proximate causes of the two diseases, I have taken the liberty to call them both by the name of *apoplexy*."—Medical Inquiries and Observations, Vol. ii. p. 53.

† Journal Generale de Medecine, Tome lxviii. p. 339.

‡ Recueil Periodique de la Soc. de Medecine, Tome iii. p. 23.

scription of these cells as given by the Hunters, Meckel, and Hildenbrand, to be correct. M. Deneux states, that, in the case already referred to, he found the effused blood partly situated in the interstices between the lobules or cotyledons, a circumstance which I have not had occasion to observe in any of the specimens of the disease that I have had an opportunity of examining.

The *particular vessel or set of vessels* which furnish the blood effused in placentary congestion, terminating in sanguineous extravasation, is liable to differ in different cases; but from the difficulty of accurately tracing the source of the hemorrhage in individual cases of the disease, I have little or no precise information to offer upon this point. When the hemorrhage takes place in the earlier weeks of pregnancy between the *chorion* and *decidua*, the blood probably escapes either from the new and tender decidual or umbilical vessels of the rudimentary *placenta*, or from both of these sets of vessels at the same time. When the blood is effused into the substance of the *placenta*, it is generally altogether impossible to trace the vessel or vessels from which it proceeds, and indeed the extravasation seems in many cases to occur at several different points at the same time. In a case detailed by MM. Grisolle and Caseaux, in the Revue Medicale for 1833,* and in which *coagula* of blood half an inch in thickness were situated towards the foetal surface of the *placenta*, some of the secondary divisions of the umbilical vessels would seem to have been ruptured. Occasionally the hemorrhage appears to proceed from a rupture more or less extensive of the vascular parenchymatous substance of the *placenta*. Thus Mr Wildsmith† mentions a case where, on inspecting the body of a woman who died during pregnancy, there was discovered a large *coagulum* at the anterior portion of the *fundus uteri*, weighing eighteen ounces, with a rupture of the *placenta*, two and a half inches in length. The blood in some instances, though originally poured out by vessels traversing the substance of the *placenta*, afterwards bursts through the tissues of that organ, and reaches its decidual or uterine surface, but in very many also of those cases in which the effused fluid occupies this latter situation, it may be traced to a direct rupture of the utero-placental vessels themselves.

The *quantity of blood* effused internally in placentary hemorrhage occurring during pregnancy is generally small, in most cases not exceeding a few drachms; but it is occasionally also, particularly when the blood is extravasated from the utero-pla-

* See also the Dublin Journal of Med. and Chem. Science, Vol. v. p. 154.
† North of England Medical and Surgical Journal, Vol. i. p. 446.

cental vessels between the *placenta* and *uterus* in the latter stages of gestation, so great as to endanger or destroy the life of the mother. In some cases where the hemorrhage has thus proved fatal, the extravasated blood has been found to be wholly collected between the *uterus* and central portion of the *placenta*, and to be completely confined within this circumscribed situation, by the edges of the *placenta* preserving, around the whole circumference of the organ, their natural attachment to the internal uterine surface. Albinus has recorded a fatal hemorrhage of this description in his *Annotationes Academicae;** and Delaforterie† and Saumarez‡ have detailed similar cases. The quantity of blood effused between the *placenta* and *uterus* in the kind of circumscribed cavity above alluded to, is stated in M. Delaforterie's case to have measured three French chopins, and in Mr Saumarez's case it amounted to a pint and a-half. In these, and in similar instances of fatal placental or utero-placental hemorrhage occurring during gestation, death can scarcely be considered as an effect merely of the loss of the absolute quantity of blood effused. The attendant strong feeling of sickness and syncope, the paleness and coldness of the surface of the body, the state of the pulse, &c. would seem rather to indicate that the extravasated blood, by the sudden uterine distension to which it gives rise, or from other causes, produces a fatal depression of the action of the heart, similar to that which results from blows upon the *epigastrium* and severe injuries of the *abdomen*, and which we see supervening more slowly in cases of extensive *peritonitis* running on to a fatal termination.

The size or volume of the individual *coagula* or effusions of blood found in the substance of the *placenta* is liable to great variations. In some instances they are extremely small, not equalling a vetch seed in size; and again I find in my notes two cases mentioned, in one of which a single *coagulum* as large as a walnut is described; and in the other case, another *coagulum* is alluded to as equal in volume to a pigeon's egg. Wrisberg appears to have met with a placental sanguineous *coagulum* of a much larger size than either of these two.§

* Parturienti placenta abscesserat, multo sanguine coagulato interjecto inter eam et uterum. Tota autem marginis circumferentia nihil quicquam abscesserat, eoque ne sanguis profluueret, prohibebatur. Quod quum non intelligeretur, mulierem interemit.—Annotat. Academ. Lib. i. Cap. x. p. 36. This *placenta* with the whole membranes of the ovum is represented in this author's *Uteri Mulieris Gravidae Tabulae*, Tab. vi.

† Journal Generale de Medecine, Tome xxix. p. 384.

‡ New Medical and Physical Journal, Vol. vi. p. 535.

§ In describing the *placenta* of an aborted *ovum*, Wrisberg remarks, "Media ejus pars exhibet magnum ovatae figurae corpus, ultra septem lineas supra reliquam eminens superficiem, coloris fusci nigri, instar coagulati sanguinis, omnem placentae latitudinem, 3½ poll. aequantem occupat, cum tota placentae longitudo 5¾ poll. sit. Maxi-

When in placentary hemorrhage or apoplexy, the blood is extravasated into the substance of the *placenta* itself, it most generally appears, as far as I have myself observed, under the form of roundish *coagula*, often accurately circumscribed; but in other cases, the form and outline of these *coagula* are altogether irregular, and the transition between the sound and diseased portions of *placenta* not very accurately marked. In some instances one or two *coagula* only are observed, or the extravasation is confined to one or two lobes or cotyledons only; but generally a considerable number of *coagula* are seen scattered throughout different parts of the same *placenta*, the sanguineous extravasation having occurred at several points, either simultaneously or successively. In one extreme case of this kind which I have met with, the section of a *placenta* of about the fourth month, presented throughout its whole structure only one agglomerated mass of distinct and separate roundish *coagula*, and the organ was increased so greatly in thickness by these interstitial effusions as to infringe very considerably upon the cavity of the *amnion*.

When hemorrhagic effusions take place towards the fœtal surface of the *placenta*, or in the earlier stages of pregnancy, between the *decidua* and *chorion*, the *coagula* of extravasated blood very frequently protrude these membranes before them, towards the cavity of the *amnion*, and appear in the form of projecting eminences or elevations on the amniotic surface. These eminences vary greatly in number and extent in different cases. In some instances almost every part of the amniotic cavity is crowded with them, in others they are seen only in that part which corresponds to the *placenta*. They vary from the size of a very small pea to that of a hazel-nut, or larger. Occasionally, they form very slight projections only above the general level of the surface of the *amnion*; generally they appear as rounded irregularly hemispherical eminences; and again I have seen them standing out from the walls of the amniotic cavity of an elongated nipple-like shape, and nearly as large as the first joint of the *thumb*. In several cases I have seen the umbilical cord, at its insertion into the *placenta*, at the same time greatly distended with coagulated blood, for a distance of six or eight lines, giving an appearance similar to that represented in two aborted *ova* figured by Albinus* and Sandifort.†

---

ma prominentis hujus corporis latitudo 2 poll. 6 lin. invenitur. In ipso eminentiae centro, funis inseritur umbilicalis, cujus sanguifera vasa in magnos dividuntur ramos, &c."—Descriptio Anatomica Embryonis.—Sandifort's Thesaurus Dissertationum, Tome iii. p. 227.

* Academ. Annotat. Tom. i. Tab. v. Fig. 5.

† Observationes Anatomico-Pathologicae, Lib. iii. Tab. viii. Fig. 4.

The *substance of the placenta* more immediately surrounding recent hemorrhagic extravasations is occasionally darker red than natural, from imbibition or infiltration of the effused blood into the neighbouring portions of tissue, and sometimes the surrounding placentary structure is studded with a number of dark spots or points, probably originating in partial sanguineous extravasations, or in blood stagnated and coagulated in the cavities of some obstructed vessels.

Changes in the Blood effused.—In internal placentary hemorrhage or *ecchymosis*, the blood after its effusion undergoes a variety of changes, interesting in themselves, and important in this respect, that a misconception of their nature has, as it appears to me, led pathologists into error in regard to the nature of some of the lesions occasionally observed in this organ. When the blood is poured out from its containing vessels into the substance or cells of the *placenta*, or between the membranes, it gradually coagulates and assumes a very dark purple, and sometimes (as I have seen it in two preserved specimens*) almost a melanotic black colour. After a time, however, it begins to loose this tint, the colouring matter gradually becomes removed, and the *coagulum* successively assumes a chocolate brown, a reddish or brownish yellow hue, and latterly, if time sufficient is allowed, it presents a pale yellowish white or straw-coloured substance, the fibrinous portion of the *coagulum* being then alone left. When these fibrinous and generally firm and indurated masses are divided, they for the most part exhibit internally a dense-like uniform or homogeneous tissue; but in some cases where the individual mass or *coagulum* has been formed by several successive effusions of blood occurring at the same point, and probably from the same vessel, its section shows a more or less perfect concentric laminated structure. M. Cruveilhier † has represented an *ecchymosed placenta* in which the structure of the *coagulum* appears to be concentrically laminated in this manner, and the more external layers are seen to be losing their colouring matter, while the *nucleus*

* One of these specimens was in the rich and valuable pathological collection of Mr Langstaff of London, the other is contained in the Anatomical Museum of the University of Edinburgh, and is thus described in the printed catalogue (p. 236:) "*Placenta* about the fourth month; fœtal surface studded with numerous irregular dark-coloured tubercles resembling melanotic depositions." The dark appearance of the sanguineous *coagula* in both of these cases is such as might render them at first sight very liable to be confounded with actual melanotic deposits; and in the Edinburgh case this mistake in regard to their true pathological nature might have been the more readily committed, from the small masses of effused blood appearing of a beautiful bluish-black colour, as seen through the membranes covering the fœtal surface of the *placenta*, owing to these membranes, as semitransparent whitish media, reflecting the blue rays of light transmitted through them from the dark surfaces of the coagulated masses of blood lying immediately beneath them.

† Anatomie Pathol. Liv. xvi. Pl. i. fig. 1.

of the effusion is composed of darker and more recently effused blood. I have not had an opportunity of observing these changes in specimens of laminated placental *coagula*, but have had repeated occasion to remark the discoloration of the more common single or homogeneous *coagula* proceeding from their circumference to their centre.

In the blood effused in placentary hemorrhage I have been able to trace a change still more advanced than that of its discoloration and conversion into a yellowish straw-coloured fibrinous mass. In four instances I have seen these fibrinous masses in different parts of the same *placenta*, contracted to a size considerably less than the space which they originally occupied, and consequently appearing, as it were, to be contained in cavities which were only but partially filled by them. This appearance is particularly well seen when the blood has been extravasated towards the fœtal surface of the *placenta*, or behind the *chorion* and *amnion*, and when it has protruded forwards these membranes in the form of the eminences or nipple-like projections, already alluded to. In such cases, after the colouring matter of the effused blood has been removed, and time is given for the fibrinous masses which are left to contract, the folds of the *chorion* and *amnion*, which they had carried before them, being inelastic membranes, remain in the position in which they were placed, and present themselves, when the *ovum* is afterwards examined, in the form of half-empty loose bags or sacks, projecting towards the cavity of the *amnion*. In one of the four *placentæ* in which I have observed this contraction, or diminution at least, of the fibrinous *coagula*, the cavities containing these contracted *coagula* were filled up with a limpid serum, but in the other three instances I do not find in my notes any mention of such an effusion.

In no case have I seen the complete removal of the fibrinous *coagula* from their containing cavities, or any appearance whatever indicative of the organization of these *coagula;* and I have to regret not having directed my attention particularly to the state of the placentary tissue more immediately surrounding the effusions, and observed the changes which take place in it upon the occurrence of these sanguineous extravasations. In some instances, as in those represented by Cruveilhier,* the surrounding placentary structure appears to become atrophied and anaemic, after the effusion has occurred; it seems probable, that, in other cases, this state and other diseased states of the placentary tissue and vessels may precede and indirectly give rise to effusions; but whether a cyst is ever formed around the sanguineous *coagula*, and under what circumstances it is formed, I have no data to deter-

* Anatom. Pathologiq. Livr. xvi. Pl. i. Fig. 1 and 2, and Livr. vi. Pl. vi. Fig. 2.

mine, either from observations which I have myself made, or that I can find in the works of others.

I regret, further, not having in my possession any precise facts to determine the period of time which blood effused into the *placenta*, or between the membranes, requires to undergo the several changes that I have mentioned; but I have seen them all effected in diseased *ova*, which I had every reason to believe were expelled before the fifth and sixth month. The *placenta* that I have formerly alluded to as presenting cavities containing at the same time contracted fibrinous *coagula* and an effusion of serum, was expelled at the eighth month, but was less in breadth, though of much greater thickness, than *placentae* at that period generally are.

A number of the cases of *tumours* and circumscribed *indurations* of the placenta, described by Morgagni * in his 48th Letter, of the *scirrhous tubercles* mentioned by Albrecht,† and admitted by MM. Murat‡ and Moreau,§ and of those eminences on the surface of the *amnion* figured by Ruysch,‖ Sandifort,¶ Breschet,** Velpeau,†† and Dr Granville,‡‡ and spoken of by this last author under the name of *tuberculated ova* and *placentæ*, appear to consist in reality of *coagula* of blood, which have undergone more or fewer of the changes that I have attempted to describe. The white masses in the *placenta*, composed of a substance resembling both fat and cartilage, recently mentioned by Professor Stein,§§ not improbably consisted also of the fibrinous matter of effused *coagula* of blood. In the notes which I took of the first specimen of these yellowish fibrinous masses which I had occasion to examine,‖‖ I find that I have described them as internally "not unlike *tuberculous* or dense encephaloid matter;" but since that period I have had ample opportunities of correcting this conjecture, by an examination of above twenty additional specimens of this particular lesion, and I have now not only been able to trace in different *placentae* the gradual transformations already described as occurring in the effused blood, from its appearance as a recent dark-coloured *coagulum*,

---

* De Sedibus et Causis Morb. Ep. 48, Art. 23, 24, &c.
† Acta Nat. Cur., Tom. iv. Obs. 104.
‡ Diction. des Sciences Med. Tome xlii. p. 545.
§ Archiv. General. de Medecine, Tome xxv. p. 124.
‖ Thesaurus Anatomicus Sextus, Tab. ii. fig. 4, and Tab. iii. fig. 7.
¶ Observationes Pathol. Lib. iii. Tab. viii. fig. 4.
** Etudes Anatomiques, &c. d'Oeuf, Pl. iv. fig. 3.
†† Embryologie Humaine, Pl. ii. fig. 8 and 7.
‡‡ On Menstruation and Abortion, Pl. vi. fig. 20.
§§ Kleinert's All. Repertorium, v. Jahr. 1 Heft. S. 35.
‖‖ This specimen was contained, along with a second similar preparation, in the Museum of St Bartholomew's Hospital.

to its condition of a yellowish white fibrinous mass; but I have seen more than one instance in which these two states, with all their intermediate gradations of change and coloration, could be observed in different *coagula* which had been effused at successive periods in the same individual *placenta*.

Sandifort seems to have been aware of the nature of some of the morbid appearances in the *placenta* and *ovum* that I have described, and to have observed some of the principal changes which the extravasated blood undergoes, as appears from the following passage in his Observat. Anat. Path. Lib. iii. Cap. vi. p. 95, "vasa disrupta effunderant, inter chorion et deciduam reflexam, sanguinem, que ibi in grumos collectus erat. Talis effusiosi contigit, ova depurari omnino nequeunt, etiamsi diutissime aqua contineatur, nisi decidua externa et reflexa a chorio penitus tollantur. Contra solvi, tolli, coagulatus ille sanguis valet, qui membranis extrinsecus adhaeret, efficit que, ut *ova, abortu rejecta, referant ferme semper massam cruentam, sic ut quadam veluti carne condentur, atque tunc nitidae puræque membranae omnes apparent.*" Vater, as quoted by A. C. Baudelocque (Traité des Hemorrhagies de l'Uterus, p. 57—58) mentions having seen an *ovum* like the one figured by Ruysch (Tab. iii. fig. 7,) and afterwards a second ovum with the coagula in a different state. "Eandem fere faciem (ut Ruyschii, fig. 3,) habebat ovum aliquando oblatum, sed mulierem morositate iterum ereptum, hac tamen differentiâ, quod eminentiæ interius occurrentes, non durae, sed vesiculæ sanguine grumoso plenæ fuerunt." (Dissert. Inaugural, Mola Prægnans, &c. p. 22.) M. Baudelocque describes an *ovum* which he had himself met with in 1823, having a number of small tumours in its coats, consisting, as his examination of them convinced him, of effusions of blood in different stages of alteration, "dans quelques tumeurs il n'yavait que la fibrine presque décolorée; dans d'autres la consistance du caillot etait moindre et sa couleur plus foncée." It appears to be this same specimen that M. Velpeau has figured, (Embryolog. Pl. ii. fig. 8). He briefly describes (p. 89) the "bousselures" upon it, as made up of "d'anciennes masses fibrineuses degenerées," and mentions having seen in 1833 one other similarly diseased *ovum*. M. Breschet states in reference to the case which he has figured, that he had not been able to determine the nature of the tumours seen projecting on its amniotic surface; "Oeuf humain que nous considerons comme offrant une alteration organique dont nous ne pouvons pas determiner la nature." (Etudes, &c. p. 156.) Dr Granville describes "the tubercles of *placentas*" as "formed by the enlargement of those filiform vessels which exist on the inside of the *chorion*." (On Abortion, p. 21.) I consider it only as an act of justice to myself, and, at the same time, as a strong corroboration of the accuracy

of the pathological views which I have endeavoured to develope in the preceding pages, to state, that I had arrived at these views with regard to the various changes which the blood effused in placental *ecchymosis* undergoes, altogether from the examinations of diseased *ova* which had fallen in my way, and before I was in any degree acquainted with the cases and notices of it that had been previously published by Sandifort, Vater, Baudelocque, and Velpeau, in the different passages that I have just now quoted from their writings.

Having taken up so much of the time of the Society in describing the anatomical characters of placental congestion and hemorrhage, I shall be very brief in my remarks upon its causes and symptoms, referring on these subjects to the different treatises on abortion and uterine hemorrhage, and more particularly to the excellent work of M. Baudelocque upon this latter subject.*

Causes of Placental Congestion.—The occasional, exciting, or determining causes of placental congestion may be considered as existing either on the part of the child or of the mother.

With the causes existing on the part of the child we are as yet but very imperfectly acquainted; but it seems probable that all such morbid states and physical lesions and malformations of the fœtus and umbilical cord as have a tendency, directly or indirectly, to prevent or impede the free return of blood through the umbilical vein, will have the effect of producing more or less marked congestion in the minuter placental ramifications of this vessel, and perhaps may even lead in some cases, particularly if rapidly developed, to extravasations of blood from these ramifications. We now know that the *fœtus in utero* is liable to various febrile, contagious, malarious, and inflammatory affections, —to plague, small-pox, and perhaps measles and *scarlatina*,—to ague, and a number of acute internal inflammations, but whether the presence of these diseases in the fœtal economy is capable of exciting placental congestion or not through the long and tortuous tract of the umbilical arteries, and what morbid effects they may produce upon the placental circulation in general, are points still open for investigation.

As occasional, exciting or determining causes on the part of the mother, of placental congestion and sanguineous effusion into the substance and upon the surfaces of the *placenta* and *ovum*, I may mention physical injuries, such as blows, falls, &c. great muscular exertions,† and bodily fatigue, excess of vene-

* Traité des Hémorrhagies Internes de l'Uterus. Paris, 1831.

† Since writing the above, I find that M. Velpeau, in the last edition of his most elaborate "Traité de l'Art des Accouchements," is inclined to doubt if succussions of the body, blows upon the uterine region, falls, &c. are really capable of producing

ry,* morbid irritations of the *uterus* and neighbouring organs, acute febrile and inflammatory diseases, strong mental emotions, and, in general terms, all those circumstances which have a tendency to produce *plethora*, and increased action of the whole maternal vascular system, and of the uterine system in particular. These various causes may produce placental congestion and hemorrhage in different ways; certain of them, as the physical injuries alluded to, may occasionally lead to this effect, by directly or mechanically rupturing by the concussion which they create, some of the placental and utero-placental vessels and attachments; others of them, and even the very same causes at other times, may act by inducing a morbid determination of blood to the *uterus* and *placenta*, or by exciting such muscular contractions of the *uterus*, as will separate to a greater or less extent the mutual uterine and placental connections.

---

any mechanical detachment of the *placenta* from the surface of the *uterus*. "Quand on se rappelle que l'œuf remplit exactment l'uterus, qu'il est exactment rempli lui-même par l'eau de l'amnios, ou voit bientot que les mouvements imprimés a la femme par des secousses sont presqu' aussi incapables de separer le placenta de la matrice, ou le chorion de l'amnion, qu'ils le seraient d'isoler deux vessies emboitées l'une dans l'autre et dont l'interne serait completement rempli de liquide." Without discussing the point whether the *uterus* is always kept distended or not by its contents, in the manner here mentioned, a circumstance which appears to be extremely doubtful at least, (see Ingleby on Uterine Hemorrhage, p. 132, 133,) and perhaps liable to variations in connection with the relative state of fulness of the uterine vessels, or rather with the relative state of tension of the uterine walls, resulting from the condition of its blood-vessels, and without appealing to the abstract laws of physics in refutation of M. Velpeau's opinion, I would merely adduce for that purpose the morbid phenomena that are every day observed to take place within the *cranium*,—a cavity which we know for a certainty to be placed, after the *fontanelles* are closed, in the same physical relations with its investing membranes, and solid and fluid contents, as M. Velpeau conceives to subsist between the gravid *uterus*, and its contained *ovum*. Concussions and external injuries of the head are well known to produce occasionally a rupture of the blood-vessels running between the *cranium* and *dura mater*, and a greater or less consequent effusion of blood between their detached surfaces, without any depression whatever of the *cranium*. I have known a case of this kind, where a large circular *coagulum*, three inches in breadth, was found effused in this situation, on the body of a man who was discovered in the street during the night, in a state of profound coma. In other cases of traumatic apoplexy, we find blood effused on the cerebral side of the *dura mater*, between it and the arachnoid, or between the arachnoid and *pia mater*, and in other rarer instances, again, it is seen to be extravasated into the ventricles, or into the substance of the brain itself.

* In an interesting memoir on abortion among our domestic animals, inserted by M. Flandrin in Chabert's "Instructions et Observations sur les Maladies des Animaux Domestiques," Vol. vi. p. 107–164, it is stated that pregnant cows, mares, and sheep, miscarry in about twenty-four or thirty-six hours after sexual connection. The same effect is not observed in the sow. Entire flocks of cows are said to have been seen to abort with dead fœtuses after unusually violent thunder-storms, probably, it is conceived, in consequence of the terror that seems to be excited in the minds of these animals by such an occurrence. Occasionally, all the cows of a dairy, or even of a whole district of country, have been observed to miscarry one after another, a circumstance which some authors have endeavoured to explain on the principle of contagion. See Tessier, in "Memoires de la Societe de Medecine" for 1782–83, p. 549. Various curious notices on this interesting point in comparative pathology, are given by Mr Youatt, at p. 528–531 of his volume, on the Breeds, Management, and Diseases of Cattle, in the Library of Useful Knowledge.

With respect to the mode of action of general and local *plethora* and increased vascular action, in producing placental congestion and hemorrhage, I shall only venture to make one remark. If we admit with some authors, that the newly formed vascular canals, which, on the doctrine of the Hunters and others, are believed to pass from the uterine vessels into the *placenta*, are less firm and resistent in their coats or texture than the other blood-vessels in the maternal system, it will follow, that when a greater than usual *plethora* or vascular action happens to occur in the sanguiferous system of the mother, or when, from any causes, the blood is determined in a particular manner to the divisions of the uterine arteries and veins, it will be most apt to become congested in the naturally little, if at all, elastic vascular tubes and canals of the *placenta;* and further, if the momentum of the whole mass of blood in the body of the mother, or of that in the branches of the uterine vessels alone be preternaturally increased, the placental or utero-placental vessels or canals will be the first to yield or rupture under the generally or uniformly increased degree of internal pressure, inasmuch as they are the least capable of affording the requisite resistance to the distending force and equiversant pressure of the contained fluid. All the above effects will be naturally more or less promoted by the existence of any such diseased state or states of the tissue of the *placenta*, or of the placental and utero-placental vessels themselves, as diminish the elasticity and power of cohesion of the component tissues of these vessels, such as their stearoid, cartilaginous, or calcareous degeneration, &c.

Symptoms of Placental Congestion.—The symptoms produced by placental congestion and hemorrhage are, in many instances, obscure and difficultly appreciable, but in other cases, especially in those in which sanguineous extravasation occurs, the preceding and accompanying phenomena are frequently sufficiently characteristic and well-marked.

Simple placentary congestion, whether primitively seated in the fœtal or maternal vessels, seldom, perhaps, if ever exists for any considerable period of time, without more or less speedily superinducing a degree of uterine congestion; and again the state of congestion or determination of blood to the vessels of the *uterus*, when occurring as the primary pathological affection, is probably as generally and directly followed by a similar condition of the placental vascular system or systems. Placentary congestion, therefore, whether proceeding or not to extravasation of blood, usually appears to be either preceded or accompanied by those symptoms, which denote an increased activity in the uterine sanguiferous vessels, as by a feeling of oppression or

weight, and tension or bearing-down in the uterine and pelvic *viscera*. If there exists a general plethoric state of the system, various febrile phenomena may also present themselves. Occasionally, the uneasy feelings in the uterine region proceed to a degree of fixed or intermittent pain, confined to one part of the *uterus* or uterine region only, or diffused generally over it. This pain seems frequently to extend to the loins and thighs, and a similar sensation appears in protracted cases to be sometimes even felt in the *mammae*. At the same time the morning sickness and vomiting, with the other sympathetic affections, which so frequently attend upon the natural developement of the *uterus* during pregnancy, are in most instances manifested in an increased or unusual degree.

When the placental congestion has proceeded to the extravasation of blood, besides the symptoms already mentioned, others of a more unequivocal character generally present themselves. The effused blood may, as we have already seen, be poured out in situations from which it cannot escape externally. Perhaps, however, in the earlier months at least, in the greater number of cases, some portion of the blood is effused into situations such that a small quantity of it does escape *per vaginam*; and this circumstance, when found in connection with other symptoms, particularly with lumbar and uterine pains, and with the knowledge of the previous action of any of the directly exciting causes of placentary congestion or hemorrhage, may be considered as furnishing very unequivocal marks of the existence of these states. If a pregnant woman, for instance, immediately after receiving a fall or blow, or any sudden succussion of the body, such as that occasioned by severe coughing or retching, be seized with sudden distensive uterine pain, and more or less effusion of blood externally, little doubt can, in most cases, be entertained, with regard to the nature of the internal morbid conditions which these symptoms indicate. One of these symptoms only, however, the uterine, or lumbar pain, or the external hemorrhage, may alone be present. The feeling of uterine pain, if occurring alone, can perhaps be but little trusted to as a diagnostic mark in the state of pregnancy, unless when taken into consideration with various collateral circumstances. In placental hemorrhage it is probably produced, as M. Baudelocque has supposed, by the mechanical distension of the *uterus* with the blood effused, and this distension can, it has been alleged, be sometimes (though I should conceive very rarely) actually traced externally in the enlargement of the absolute volume or bulk of the *uterus*. In some instances the pains remit or disappear entirely in the course of a few days or weeks, when the uterine enlargement has again proceeded considerably in its course, and

in many other instances they pass sooner or later into the intermittent and regular pains indicative of uterine contraction. The external hemorrhage, is, in some instances, observed to be in considerable abundance from the beginning; but more frequently it presents itself, in the first instance, as a few drops of blood, or of blood and serum only, afterwards becoming increased or not in quantity. In many cases this hemorrhage is seen to remit and return repeatedly, after the lapse of a few days, or at the distance of several weeks.

When placental hemorrhage occurs in the latter months of pregnancy, the internal effusion of blood is sometimes so great, particularly when proceeding from a rupture of the utero-placental vessels, as rapidly to produce all the most alarming symptoms caused by extreme loss of blood, and under such circumstances the case may even proceed to a fatal termination, without, as I have already mentioned, any sanguineous discharge whatever appearing externally. In other cases of placental congestion and hemorrhage occurring in advanced pregnancy, there is an external discharge as well as an internal effusion of blood; although no part of the *placenta* is found on examination to be placed over the *os uteri*,—a case which I have not included, and consequently avoided all allusion to, in the preceding observations.

Effects of Placental Congestion on the Fœtus.—When placentary congestion occurs after the period of quickening, and is very acute in its character, or rapid in its appearance, the motions of the *fœtus* would appear to be occasionally rendered suddenly irregular, and at times almost convulsive. If the congestion is more chronic in its nature, the motions of the *fœtus* occasionally become extremely languid, or not at all appreciable; but under a timely detraction of blood, they may be, as Madame Lachapélle* has remarked, again reproduced after having ceased for several days. How much we may be assisted in the latter months of pregnancy by auscultation, in this and in similar cases, in our detection of the morbid states of the placental and fœtal circulations, it is difficult, if not impossible, at this moment to determine; but more accurate and extensive observations upon this subject may yet lead to some not unimportant results.

The occurrence of sanguineous effusion from the placental, utero-placental, or exposed mouths of the uterine vessels, though often in the latter, and almost always in the early months of utero-gestation, unattended with any great danger to the mother, and very frequently making no impression whatever upon her system, or not even betraying itself by any external discharge, must always be looked upon as a circumstance threatening the most direct and imminent danger to the life of the *fœtus*, for a very small

* Pratique des Accouchments, Tome ii. p. 323.

quantity of blood, whether extravasated in the earlier weeks upon the villous surface of the *chorion*, or at a later period into or around the *placenta*, may be amply sufficient to arrest the processes of fœtal nutrition or respiration to such a degree, as effectually to impede the developement, or destroy the life of the embryo, and in this latter way prove an indirect cause of abortion. For my own part, I feel assured that the preparations of aborted *ova*, contained in the pathological museums of this country, fully bear out, as far as I have myself seen them, the opinion of Professor Duges,* that the most frequent cause of abortion is active placental congestion, a term under which he at the same time includes placental hemorrhage. This remark, I believe, will be found in particular to apply to abortion in the earlier months. In the greater proportion of cases which I have met with of *ova* aborted in consequence of internal placental hemorrhage, I have found the *ovum* itself of the average size of an orange, and the embryo arrested at about the fifth or sixth week of developement, or at that stage at which the extremities of the body first begin to appear in the form of rounded buddings. Expulsive uterine contractions had not, however, supervened in many of these cases for several weeks after the internal sanguineous effusion had actually taken place, and in some of them, the general growth of the membranes and *placenta* appeared to have gone on during that interval, while in one or two cases the embryo itself had also enlarged to nearly the size of the thumb, although the individual developement of its extremities, and perhaps of other organs, had been arrested.

Inflammation of the Placenta.

The next series of Morbid Conditions of the *Placenta* to which I have to direct the attention of the Society, consists of *Inflammation and its various consequences*. It is only within these few years, that the state of inflammation has been distinctly recognized by pathologists, as a morbid action liable to present itself in the *placenta*, and though much of the pathological and nosological history of the disease certainly still remains to be made out, yet I believe a considerable stock of interesting information may even at the present moment be collected in regard to it, by taking a generalized view of the different scattered cases and notices of the affection, which have been published by Brachet in his original memoir on this affection, and by Cruveilhier, D'Outrepont, Dance, Stratford, and other authors.

Placentitis, or Inflammation of the *Placenta*, would appear to be in some cases acute, in others chronic, in its character and progress, most frequently perhaps the latter. It may have its seat

* Diction. de Medecine et Chirurg. Tome viii. p. 309.

either in the proper *parenchyma* of the organ, in the membranes investing its fœtal, or in that investing its uterine surface, or in two or all of these parts at the same time. When seated in the *parenchyma* of the *placenta*, or on its uterine surface, it would seem to be in some cases strictly limited to one lobe or cotyledon of the organ; in other cases it coexists in two or more isolated and even distant lobes; but more frequently it appears to attack simultaneously or successively several adjacent lobes, and in this way it may come to involve a third, the half, or even the whole extent of the *viscus*. In a considerable proportion of instances of *Placentitis*, the inflammatory action seems to be originally propagated from the adjoining substance of the *uterus* to the *placenta*, the first symptoms being those usually considered as characteristic of *Metritis*, but in other instances the inflammation appears to originate in, and to be strictly confined to, the tissue of the *placenta* itself or its membranes, without spreading to the substance of the contiguous portion of *uterus;* and in other cases, again, there is every reason to believe, that, though originating in the *placenta*, the inflammation may spread from it to the *uterus*. The occasional primary origin of inflammation in the substance of the *placenta* itself seems to be fully proved by various considerations,—by its sometimes appearing only in one lobe, or in several circumscribed distant and isolated parts of the *viscus* at the same time,—by its attacking one *placenta*, only in cases of twins or triplets,—and by its being occasionally strictly confined in its seat to the fœtal surface or side of the organ alone.

Anatomical Characters of Placentitis.—The modes in which placentary inflammation terminates, and the morbid lesions and products to which it gives rise, differ greatly in different cases, according to the more or less acute or chronic character of the inflammatory action, the particular seat which it occupies, and other circumstances connected with it. In arranging the observations to be made upon the morbid anatomical characters of the disease, I shall divide it into three stages, the first including the stage of inflammatory congestion, and effusion or secretion of serous fluid; the second that of the effusion or secretion of fibrin or coagulable lymph; and the third that of the secretion or effusion of purulent matter.

First Stage.—In the *first stage* of placental inflammation, or that of *Inflammatory Congestion*, the *placenta* is larger in volume, and darker in colour, than natural, owing to the unusual accumulation or engorgement of blood in its vessels; it feels comparatively denser or more solid to the touch, and as it approaches the second stage, an effusion of serum, or of serum and coagulable

lymph, occurs, and the tissue of the organ becomes more lacerable under the pressure of the finger.

It would be extremely difficult, if not impossible, (if we may judge from the analogy of the lungs and other organs,) to distinguish, by any specific anatomical characters, between the sanguineous engorgement of the *placenta*, which constitutes the first stage of inflammation, and that active non-inflammatory form of placental congestion which I have already endeavoured to describe. Indeed it is highly probable that the non-inflammatory congestion or engorgement occasionally passes into that which is inflammatory, and yet they would appear to be two morbid states intrinsically distinct from one another, and differing widely in the morbid effects and products to which they give rise. The non-inflammatory congestion will perhaps be found almost always generally diffused over the whole *placenta*, while the congestion of inflammation is often confined to a number of particular lobes only; the former leads to an extravasation of blood, and sometimes of serum,—effusions purely the result of mechanical over-distension of the vessels; the latter, again, gives rise to the various morbid products which are observed to result from inflammatory action in other organs of the body, and which are not mechanical extravasations, but vital, though morbid, secretions. In any individual case, however, of the first stage of placental inflammation, and of congestion, it is often difficult, and not unfrequently impossible, to determine its true nature, from the mere anatomical character of sanguineous engorgement of the organ alone, and frequently it is only when we find this state of the placentary mass combined with other more decisive proofs of the action of inflammation,—as with softening of the substance of the organ, with effusion of turbid serum, of coagulable lymph, or of pus, that we can decidedly pronounce upon its actually inflammatory character.

Second Stage.—The *second stage of Placentitis* I have already stated, as characterized by the inflammatory action having proceeded to the effusion or secretion of coagulable lymph. The morbid appearances and effects produced by this second stage of the disease vary greatly, according as the effused coagulable lymph is deposited, 1*st*, in the interstitial or *parenchymatous* substance of the *placenta*, or is effused, 2*d*, upon its uterine, or 3*d*, upon its fœtal surfaces.

1. Few well-marked or accurately detailed cases of *acute* Placental Inflammation, producing an effusion of coagulable lymph into the parenchymatous texture of the organ, have as yet been put upon record. From the morbid appearances, however, observed by Brachet, * D'Outrepont, † and others, in a few cases of

* Loc. cit. Obs. 1. p. 11.

† Gemein. Deutsche Zeitschrift, Band v. Heft. 4 s. 556.

Placentitis, referable to this stage, and from what I have myself observed in a recent specimen of this form of the disease, the following, I believe, may be deduced as its principal characteristic anatomical characters. The affected part of the organ is of a more or less deep red-colour; its texture when cut into, is found solid and dense, and resembling in consistence and appearance a portion of healthy liver, or of pulmonary structure affected with red hepatization. It is inelastic to the touch, but though increased in compactness and solidity, it is still in general so friable, particularly when the inflammation is acute or recent, as to be readily lacerated or ruptured under any considerable pressure. It generally contains more or less of a brownish or reddish turbid liquid, which exudes from its incised surfaces under gentle pressure, or when these surfaces are scraped with the back of the scalpel.

But the form under which we most frequently meet with the deposition of coagulable lymph into the parenchymatous structure of the *placenta*, is that of reddish and grayish yellow *Induration*, the effect, I believe, of *chronic* inflammatory action. This morbid state of the *placenta* has been long known to accoucheurs, and has generally been described by them, along with some other morbid states of the organ, to be afterwards mentioned, under the name of *scirrhus of the placenta*. It evidently, however, has no pathological relations with scirrhus, at least in the sense in which that term is used at the present day, as designating a carcinomatous state or degeneration of an organ. Chronic induration of the *placenta* occurs in cases in which we have no evidence of the presence of the carcinomatous *diathesis*, in the coexistence or subsequent occurrence of scirrhous disease in any of the other organs of the bodies, either of the mother or of the infant,—it has never been remarked in any instance, (so far at least as I am aware,) to ulcerate or fungate, or take on any of the usual malignant action of scirrhous degenerations,—and the anatomical characters which the indurated *placenta* exhibits, differ from those which are usually considered as characteristic of true scirrhus.

On the other hand, that Induration of the *Placenta* is the result of chronic inflammatory action, and the deposition of coagulable lymph, seems proved by the consideration of the nature of the morbific causes by which it is produced, (generally blows, falls, and such external injuries as are calculated to give rise to inflammatory action, received several weeks or even months previously to the expulsion of the indurated organ,)—and by the fact, that it is sometimes possible in different *placentæ*, or even, as I have seen, in different parts of the same *placenta*, to trace the gradations between the increased solidity of *acute hepatiza-*

ion, and that of the most advanced and best marked variety of *chronic induration.*

The anatomical characters of Induration of the *Placenta* appear to vary considerably in different cases, according to the extent of the disease, and the more or less chronic character of the inflammatory action which produces it. In most cases the indurated part is of a reddish or pink-gray hue, but sometimes, probably in its more advanced stages, it presents a citrine yellowish colour. Its section sometimes exhibits a uniform, very compact, and occasionally a somewhat stearoid, lardaceous, or fatty-looking structure; it contains little or no fluid, and in some instances has a dry and desiccated appearance, approaches the density of cartilage, and emits when cut a creaking sound. It very often affects only one lobe, or two or more contiguous, or distant lobes, and in other instances it implicates the whole or nearly the whole of the placentary mass. The portion or portions of *placenta* affected with chronic inflammatory induration, is occasionally found united by adhesive inflammation to the adjoining portion of *uterus*, in whole or in part; but in other instances no such adhesive action has occurred, and indeed the disease may be limited altogether to the fœtal side or surface of the *placenta.*

2. The effusion or secretion, however, of coagulable lymph, as a termination of placentary inflammation, is best known in the effect to which it not unfrequently gives rise, of producing more or less intimate and extensive *Adhesion* between the uterine surface of the *placenta* and the inner corresponding surface of the *uterus*, constituting a morbid state of the after-birth that frequently forms a most formidable and dangerous cause of uterine hemorrhage after the expulsion of the child.

The *extent* of the morbid adhesion of the *placenta* to the *uterus*,—the *seat* of the adherent portion,—and the *strength* or *intimacy* of the adhesion, are found to be liable to great variations in different cases.—In a few rare instances the whole or almost the whole of the organ is found intimately connected with the internal surface of the *uterus*, but far more frequently the adhesion is limited to a single lobe, or to a few adjoining lobes. The adherent lobes are occasionally those *seated* in the centre of the *placenta*, and in other cases those placed at the circumference of the organ only. I may refer to Dr Ramsbotham's* third case, as an instance of the former, and I shall afterwards have particular occasion to notice a remarkable example of the latter observed by Dr Hamilton. †

Occasionally when the *placenta* is only partially adherent to the

* Practical Observations in Midwifery, Part i. p. 99.

† Practical Observations on various Subjects relating to Midwifery, 1836. Part i. p. 266.

internal surface of the *uterus*, the unadherent portion is brought away after the expulsion of the child, by traction at the cord, or by the introduction of the hand, while that which is morbidly adherent is still left more or less firmly attached to the internal surface of the *uterus*. Dr Ramsbotham * has described a series of instances of this kind, under the title of *disruption* of the *placenta*; and Mr Ingleby, † in his able work on Uterine Hemorrhage, has referred to several fatal cases and *post mortem* inspections in which a similar accident had occurred. In one of these *post mortem* inspections, where the woman had died the eleventh day after delivery, a number of pieces of *placenta* were found still firmly adherent to the *fundus uteri*. In a second case, where death had occurred twenty or twenty-one days after delivery, many small masses of *placenta* in a black and offensive state were seen studding the internal surface of the *fundus* and part of the body of the *uterus*; these masses did not separate by maceration. In a third case, a portion of *placenta*, about the size of a small egg, was attached very firmly to the *fundus* of the *uterus*, and could not be separated either by the finger or by maceration. The patient had died of irritative fever on the thirteenth day after delivery. In a fourth case, where the patient sunk on the eleventh day after delivery, Mr Ingleby found a layer of *placenta*, covered with a thin purulent-looking fluid, nearly circular, and three inches in diameter, very fibrous and rather white in appearance, adhering somewhat tenaciously to the *fundus*. In a fifth case, he found, five weeks after delivery, a portion of *placenta* about the size of a walnut, attached to the *fundus* of the *uterus*. The retained portion of *placenta* had apparently acquired or retained a degree of organization; it was of a somewhat florid colour, the lining membrane of the *uterus* covered the greater portion of the mass, though not its centre, which was ragged, and vessels could be traced opening upon it.

Dr Biancini ‡ in a lecture on the connection between the blood of the mother and *fœtus*, published at Pisa in 1833, mentions a case similar to the above. A woman who had suffered greatly during parturition died eight days after delivery. The attempts made to bring away the *placenta* had occasioned a profuse and alarming hemorrhage. After death an injection of glue and vermilion thrown into the uterine vessels filled all the uterine arteries, and penetrated into the vessels of a considerable portion of *placenta*, which was still adherent.

The *intimacy or strength* of the morbid adhesions between the

* Practical Observations, p. 164. seqq.
† On Uterine Hemorrhage, p. 205, seqq.
‡ Sul Commercio Sanguigno tra la Madre et il Feto. 4to Esperimento.

placenta and *uterus* is liable to vary greatly according to the degree of acuteness of the inflammatory action which has originally produced the effusion of coagulable lymph, and the length of time it has been deposited. When the coagulable lymph, on which the adhesion depends, is soft and recent, and the effect of acute inflammation, the degree of adhesion between the *uterus* and *placenta* is scarcely greater than natural. If, however, the inflammation be more chronic, and the deposition of coagulable lymph has become organized, the *placenta* is with greater or less difficulty separated from the *uterus*, by the uterine contractions, or by the hand of the accoucheur. In some instances the organic union between them is so firm, and the corresponding surfaces of the *uterus* and *placenta* are so intimately blended together, that the uterine contractions are altogether inadequate to break up the morbid organic connections existing between them; and occasionally it has been found impossible to disunite them completely from one another by any manual efforts during life, or even by dissection after death.

The *thickness* of the layer of coagulable lymph uniting the *placenta* to the *uterus*, in cases of morbid adhesion between their contiguous surfaces, is sometimes very considerable. Wrisberg* mentions a case of very strong, and apparently universal adhesion of the *placenta*, in which he found the uterine surface of the organ covered with a membranous substance, two lines and a-half thick in the intervals between the lobes, and from a line and a-half to two lines in thickness, where it covered the surface of the cotyledons. In this and similar cases, is the coagulable lymph effused, at first, into the substance of the placental decidua, causing its morbid thickening; or is it principally thrown out upon the uterine or upon the fœtal side of that membrane, and are the cavities of the decidual utero-placental vessels liable to become obstructed with it? Is the inflammatory effusion of lymph producing the morbid adhesion of the *placenta* to the *uterus* furnished by the decidual or decidual and proper placental vessels, or is it chiefly thrown out by the vessels of the adjoining portion of the internal surface of the *uterus*, or are not all of these vessels generally the seat of inflammation, and the sources of the effusion at the same time, owing to the inflammatory action, when it originates in any of them, in most instances speedily spreading by contiguity of texture from the one to the other? Occasionally the coagulable lymph effused between the *placenta* and *uterus* is changed not only into a filamentous or cellular morbid structure, but, as happens also in the false membrane of chronic pleuritis, it sometimes assumes a tendinous or cartilaginous appearance. Thus Wrisberg states, that, in the

* Commentat. Medic. Obstetric. &c. Argumenti, p. 45.

case above referred to, the thick membrane covering the *placenta* was whitish, compact, and very dense, and of a cellular or rather tendinous structure, (albicante, compactâ et durissima, cellulosa quasi tendinea.) This membrane, forming the bond of union between the adherent *placenta* and *uterus*, may also, as we shall afterwards find, be the seat of calcareous deposits, &c.

Cases such as I have alluded to above, in which the morbid union between the *placenta* and *uterus* is so intimate as not to permit of the two organs being readily separated by the hand, or by the scalpel even upon the dead body, are certainly of rare occurrence. Saltzmann * however, Plater, † and Morgagni, ‡ may, from among others, be cited, as having recorded striking examples of it. In Saltzmann's case the woman had died immediately after delivery, and on opening the body, he found "secundinam undiquaque ipsi utero tam firmiter adhaerentem ut vix et nonnisi labore separari potest." Plater describes the *placenta* as so adherent to the *uterus* on the dead body of a woman who had sunk under similar circumstances, "ut aegre manibus avelleretur, et tracta lacerarentur." The case recorded by Morgagni is one of still greater interest. The subject of it, a woman who had during the course of pregnancy been lifting very heavy weights, suffered a premature labour at the seventh or eighth month, and died, with the *placenta* almost wholly retained, on the eleventh day after delivery. On the *post mortem* inspection of the body part of the *placenta* was found detached, and hanging down through the *os uteri*, but another portion of it was still so strongly adherent to the *uterus*, that it scarcely could be separated from it even with the aid of the scalpel, (utero dicte adeo affigebatur, ut vix posset, cultri etiam ope, separari.) The adherent portion of the *placenta* was indurated, and the corresponding surface of the *uterus* inflamed.

Of late years several cases have been published in Germany by Professor Naegele § of Heidelberg, and by Drs Salomon ‖ and Burger, ¶ in England by Dr Rigby, ** in France by M. Gabillot, †† and in America by Mr Porcher, ‡‡ in which adherent and retained *placentæ* have been supposed to be either totally absorbed from the *uterus*, or to have become organically and permanently incorporated with its substance. Madame Boi-

---

* Observat. p. 43. Bonetus' Sepulcretum Anatomicum, Tom iii. p. 121.
† Observat. Lib. i. p. 231. Bonet. Sepul. loc. cit. p. 121.
‡ De Sedibus et Causis Morbor. Epist. xlviii. Art. 28.
§ Froriep's Notizen. Bibliotheque Medicale (1829) Tome i. p. 366.
‖ Kleinert's Allgemein. Report. vi. Jahrgang. 2. Heft. s. 72.
¶ Rust's Magazin für Gesam. Heilkunde, Bd. xxxv. s. 156.
** London Medical Gazette, Vol. xiv. p. 333.
†† La Clinique. 29th August 1829.
‡‡ American Journal of the Medical Sciences, No. xx. p. 391.

vin,* has endeavoured to explain away the cases given by Drs Naegele and Salomon, by supposing, that in those instances where the *placentæ* had been conceived to be retained, they had actually passed off, but escaped observation, from their consisting of a merely membranous structure, or being otherwise malformed. Granting that this explanation may bear upon some of the cases that have been published, it certainly, I think, cannot be made to apply to others; and without at all questioning the good faith or powers of observation of those who have given the cases hitherto recorded, the question may at present be permitted to remain *sub judice*, until more decided evidence is brought forward either in its favour or against it, and in particular until an opportunity occurs in which an *uterus* can be examined in which this supposed process of placental absorption is actually going on, an important link in the chain of evidence, but one that, as far as I know, is still wanting.

Various pathologists seem inclined to reject at once the idea of the absorption of the *placenta*, upon the assumed ground, that it is altogether impossible that the uterine absorbent vessels could ever remove so large and solid a mass as that of which the human *placenta* is composed. If the facts, however, upon which such an objection could be alone legitimately founded are more carefully examined, they will, I fear, be found to weigh, so far as they have been hitherto observed, as much, at least, in favour of the question at issue as against it. Dr Salomon has adduced various instances from Bartholin (*De Insolitis Partûs Humani Viis*, page 37;) Carus (Zur Lehre von Schwangerschaft und Geburt-Erste. Abtheil. 1822, s. 2, 50;) and Huzard (Memoires de l'Institut. National des Sciences et Arts, Tome ii. Scien. Mathem. et Physiq.) of what appear to be accurately observed cases of the removal from the *uterus* of the cow of the soft parts of the fœtal calf, nothing having been found in the uterine cavity after death except a mass of fœtal bones. This occurrence seems to take place after the full term of pregnancy has been completed, and when the *uterus* has been unable to rid itself of its contents, in consequence of some obstacle in the *pelvis*, or otherwise, to the passage of the calf. Cases of this kind are, I believe, not extremely rare. I have myself had two instances reported to me, by persons upon whose powers of observation I can implicitly rely, of the *uteri* of cows containing a mass of fœtal bones. Mr King has recorded a similar case in the "Veterinarian" for January 1834. Jaeger (Meckel's Archives für Anat. und Physiologie, Bd. xi. s. 91,) mentions having discovered a *fœtus* reduced to a skeleton alone, in the *uterus* of a deer. In extra-uterine pregnancy in the human subject,

* Observations et Reflexions sur les Cas d'Absorption du Placenta, Paris, 1829.

the *fœtus* has been occasionally discharged by the intestinal canal through the abdominal *parietes*, or through the cavity of the urinary bladder or *vagina*, in the form of loose bones. In these cases are the soft parts of the body of the *fœtus* and its *placenta* always, by a suppurative or other morbid action, decomposed and diffused through the fluid contents of the extra-uterine cyst, and afterwards discharged externally, previously to or along with the fœtal bones? In the case of the cow, does a similar process of decomposition and discharge of the soft parts take place while the bones are retained *in utero*?—or are the soft parts and appendages of the *fœtus* ever removed in either of these two sets of cases from the cavities containing them by a process of absorption? I am not aware of any facts observed with a requisite degree of accuracy from which to deduce any decided answer to these questions, but they appear to me to be subjects that deserve to be minutely and carefully attended to in the observation of future similar cases; and if, in any sufficient number of instances, it can be proved that the *uterus* of the cow is actually capable of removing, by an act of absorption, the soft parts and appendages of a contained *fœtus*, as is supposed by Salomon, and admitted also, I believe, by Carus and Huzard,—or if by a similar process the *placenta* and soft parts of a human *fœtus* can be removed from an extra-uterine cyst, it would certainly seem unreasonable to reject altogether the idea of the absorption of a morbidly adherent human *placenta*, upon the sole ground that an absorbent action, of the degree or extent required for that purpose, could not possibly go on at the internal uterine surface. When an extra-uterine *fœtus* becomes encrusted with calcareous matter, and is retained for a long period in the body of the mother, its *placenta* appears to be sometimes either removed or changed in such a manner that it cannot be recognized. In the case, for example, recorded by Dr Cheston (Medico-Chirurgical Transactions, Vol. v.) and where the *fœtus* was supposed to occupy the cavity of the *uterus* itself, it is stated (p. 231,) that no remains of the membranes, *placenta*, or navel-string could be discovered, except the insertion of the last into the body of the child.

3. The fœtal as well as the uterine surface of the *placenta*, or at least the membranes covering the fœtal surface of the organ, are also liable to be the seat of the inflammatory secretion of coagulable lymph, or, in other words, of adhesive inflammation. M. Cruveilhier has mentioned a case in his Anatomie Pathologique, Livr. xvi. where the placental surface of the chorion was penetrated with false membrane, the cellular tissue between the chorion and amnion likewise infiltrated, and the *placenta* itself enlarged and *œdematous*, or containing a considerable effusion

of serum. Mr Stratford of Boston has also detailed the particulars of an interesting case of absorption at the third month of utero-gestation, where the *placenta* was large, soft, and spongy, and covered with *flocculi* of coagulable lymph, particularly on its fœtal surface. The membranes of the *ovum* appeared to be thicker and more opaque than natural, and yellow *flocculi* of coagulable lymph were floating in the *liquor amnii*.

I have seen more than one instance in which the amnios covering the *placenta*, and other parts of the surface of the membranes, were partially coated by an effusion of coagulable lymph, and M. Mercier, * in his papers on dropsy of the amnios, has alluded to the same morbid appearance. I shall presently have occasion to allude, when speaking of the effects of *Placentitis* upon the *fœtus*, to a series of interesting cases, in which the internal surface of the *placenta* has been found intimately attached by adhesive inflammation to the head and *abdomen* of the child, and has seemed in consequence to act as a cause of some varieties of malformation.

Third Stage.—The third stage of *Placentitis* (according to the division previouly proposed) consists in the effusion or secretion of purulent matter. The purulent matter secreted in placentary inflammation has now been found occupying several different situations, and deposited under different forms. In one case mentioned by M. Brachet † he found two circumscribed abscesses, each as large as a pigeon's egg, situated beneath the fœtal surface of the *placenta ;* these deposits were circumscribed in their locality, although no distinct cysts isolated them from the surrounding placentary tissue. In another *placenta*, M. Brachet ‡ found an abscess occupying three-fourths of the extent of the organ, protruding towards its fœtal surface, and containing as much as a wine-glassful of purulent matter mixed with blood; and in a third case § he observed a number of little abscesses, varying from the size of a small pea to that of a nut, scattered throughout the substance of the *placenta*, and surrounded by hepatized structure. Cruveilhier ‖ seems to have met in several instances with concrete purulent matter, infiltrated through the tissue of the *placenta*, accompanied by an effusion of coagulable lymph between the portions of chorion and amnion, investing the fœtal surface of the organ, and surrounding its circumferance. In these cases the texture of the *placenta* was denser than usual, much less vas-

* Journal Generale de Med. xlv. p. 256, &c.
† Loc. cit. Obs. v. p. 22.
‡ Ibidem, p. 23.
§ Loc. cit. Obs. vi. p. 25.
‖ Anat. Pathol. Liv. i. and Revue Medicale, 1830, Tome ii. p. 410.

cular, of a somewhat lardaceous appearance, and as it were toughened and indurated.

The deposition of purulent matter on the uterine surface of the *placenta* is mentioned by the late M. Dance * in an interesting case of fatal vomiting and inanition during the early months of pregnancy. Between the *placenta* and *uterus* there was a layer of concrete *pus* which could be lifted up by the back of the scalpel, in the form of yellowish *flocculi*, and whitish-pseudo-membranous concretions existed between the *membrana decidua* and the internal surface of the *uterus*. M. Breschet† in his essay on the human *ovum*, states that he had met with two analogous cases of purulent and pseudo-membranous effusions between the *placenta* and *uterus*, and over the surface of the *membrana decidua*, the substance of this membrane being at the same time thickened and infiltrated with purulent matter. In a memoir on diseases of the *uterus*, inserted by M. Dance in the Archives Generales for October 1829,‡ he has described a case of abortion preceded by febrile and inflammatory symptoms, and where there was a layer of soft coagulable lymph and purulent matter deposited, not, as in the preceding instances, on the uterine, but on the fœtal surface of the *placenta*, between its *chorion* and *amnion*; the placental portion of the *chorion* was at the same time opaque and greatly thickened.

Before concluding the description of the anatomical characters and effects of placentitis, it is almost unnecessary for me to remark, that in the same *placenta* two or all the different stages of inflammation are very often found coexisting together in different cotyledons and surfaces of the organ, or even in the same cotyledon and surface; and that every shade and transition may be occasionally observed in an inflamed portion of the *viscus*, from congestion to the effusion of coagulable lymph and of purulent matter, either in an acute or chronic form. In proof of this remark, I may merely refer to the instances of the disease that I have last quoted, and to 1st, 5th, and 6th cases of it reported in M. Brachet's Memoir.

In most of the cases of placentary inflammation hitherto published, the disease has only been recognized at the time of delivery, and neither the causes which gave rise to it, nor the symptoms which it had produced, have in general been accurately traced. Very limited data, therefore, it must be allowed, exist with regard to these parts of the history of *Placentitis*. These data, however, so far as they go, are not without interest or prac-

* Repertoire Generale d'Anatomie, Tome iii. p. 71.
† Etudes Anatomiques, &c. Sur l'Oeuf, dans l'Espece Humaine, p. 123–4.
‡ Archives General. de Medecine, Tome xxi. p. 222.

tical importance; and in order, if not to arrive at, at least to approximate to, as accurate a degree of information as they are calculated to afford, I have selected twenty of the recorded cases of the disease, from among others given in the writings of Ramsbotham, Brachet, Dance, Stratford, and D'Outrepont, for the purpose of comparing and analyzing their phenomena with particular reference to the points I have mentioned. In making the selection of these twenty examples of *Placentitis*, I have acted solely on the principle of uniformly rejecting all those cases of the disease to which no kind of commemorative history was attached, and which, consequently, could be of no use for the purpose at present in view, while I have as uniformly retained all those other instances of the affection that had any commemorative history connected with them; and I only regret that, in a considerable number of these cases, this history is so imperfectly given as to furnish little or almost no precise information. *

Causes of Placentitis.—With respect, however, to the *exciting causes* of placentary inflammation, I may, in the *first* place, mention that M. Brachet enumerates as such, blows upon the belly, falls, violent succussions, sudden and great movements, frights, emotions, all kinds of lively and profound sensations, and diseases of the mother, particularly *metritis* and other inflammatory complaints. In turning to the individual cases given by M. Brachet, I find that in two instances (cases 10, 16,) the disease seems to have come on, while the mother was suffering under great mental anxiety;—in a third case the only assignable exciting cause was a severe fright which the

---

* The following note contains a list of these twenty cases. In order to facilitate the references that are made in the text to the cases individually, I shall affix a particular numeral to each, and at the same time state, for the sake of the greater precision, the kind of inflammatory lesion which the *placenta* exhibited.

Ramsbotham, Practical Observations, Part 1. Case 1, (p. 94); 2, (p. 106); 3, (p. 108); 4, (p. 109); 5, (p, 122); 6, (p. 125); 7, (p. 129): 8, (p. 131); 9, (p. 179). All instances of adherent *placentæ*; in case 2 the membranes were likewise singularly adherent.

Brachet, Journal Gener. de Medecine, Tome cii. Case 10 (p. 13), extensive chronic inflammatory induration; 11, (p. 15), the half of the *placenta* in a state of acute and inflammatory congestion; 12, (p. 20), chronic inflammation; 13, (p. 22), two abscesses on the fœtal side of the *placenta*; 14, (p. 23), a very large abscess on the fœtal side of the organ, with surrounding hepatization; 15, (p. 25), effusion of coagulable lymph and pus at many points throughout the placental *parenchyma*; 16, (p. 33), uterine surface of the *placenta* adherent.

Dance, Repertoire Generale d'Anatomie, &c. Tome iii. Case 17, (p. 71), an effusion of coagulable lymph and purulent matter between the *uterus* and *placenta* and over the external surface of the *decidua vera*. Archives Generales de Medecine, Tome xxi. case 18, (p. 222), an effusion of pus and coagulable lymph between the placental *chorion* and *amnion*.

Stratford, London Medical and Surgical Journal (1829) Vol. ii. Case 19 (p. 89) inflammation of *placenta* and membranes of the *ovum*, with effusion of coagulable lymph.

D'Outerpont, Gemein. Deutsche Zeitsch. fur Geburt. Bd. v. Hft. 4. Case 20, (p. 556), acute inflammatory hepatization.

mother had experienced ten days previously to the abortion at the fourth month of pregnancy, of a *fœtus*, the *placenta* of which was in the first stage of inflammation; and in a fourth instance, the mind of the patient had been kept harassed during the whole period of pregnancy with domestic quarrels. In two other of M. Brachet's cases (12, 13,) as well as in two cases of adherent *placentæ*, mentioned by Dr Ramsbotham, (1, 8,) the inflammatory action was apparently produced by falls. In one of Dr Ramsbotham's cases, (7,) the affection was attributed to carrying a heavy basket against the side during pregnancy, and in the instance of acute *Placentitis*, given by D'Outrepont,* (20) too tight lacing, with a view to conceal pregnancy, appears to have acted as the exciting cause. In two of Dr Ramsbotham's cases of adherent *placenta*, (2, 5,) the inflammatory action productive of the adhesion seems to have been excited by blows upon the *abdomen*. In one of these cases, (5,) where the blow was received upon the fore part of the *abdomen*, the *placenta* is afterwards mentioned in the history of the delivery as firmly united to the fore part or corresponding portion of the interior surface of the *uterus*. I refer to this case the more, that Saxtorph and Wenzel† state that the *placenta* when attached to the anterior wall of the *uterus* is frequently morbidly adherent—a circumstance that D'Outrepont‡ says is consonant with his own experience, and one, I conceive, for which we may perhaps account by supposing, that the organ, when occupying this situation, will be more exposed to the physical injuries already alluded to as capable of giving rise to *placentitis*, either directly or indirectly, by exciting, in the first instance, inflammatory action in the contiguous or corresponding portion of the uterine *parietes*. Of the remaining eight cases of *placentitis* upon the list, no allusion is made to any exciting cause of the disease in the history of five of the cases, (3, 4, 6, 17, 18,) and in the remaining three instances (9, 14, 19,) it appears that no exciting cause could be traced, although inquiry was made after it.

Among the predisposing, if not among the exciting causes of placentary inflammation may, I believe, be justly enumerated the existence of the same state of disease in a previous pregnancy. It is well known that morbid adherence of the *placenta* to the *uterus* is occasionally met with in several successive pregnancies in the same woman. Dr Hamilton states in his "Practical Observations,"§ that he has known several mothers of large

---

* Gesammelt. Schrift. ii. s. 359.

† Gemein. Deutsche. Zeit. für Geburt. Bd. v. Hf. 4. p. 556.

‡ Kleinert's Allgemein. Repert. loc. cit. s. 82.

§ Practical Observations on various subjects relating to Midwifery, p. 286–7.

families, who had, in the course of their child-bearing life, incurred three or four or even five times, great danger from this circumstance. Mauriceau mentions two cases, in one * of which abortion had occurred either four or five times, and in the other † five times in succession, between the sixth and seventh months of pregnancy, and without any evident exciting cause. The infants appeared to have died some days before their expulsion, and the *placentæ* of all of them are stated to have been scirrhous, or affected with chronic inflammatory induration, generally throughout almost their whole extent. In one of M. Brachet's patients, (case 14,) abscesses were found in the *placenta* of two consecutive pregnancies, and this case is the more remarkable, that the placentary inflammation in the *first* instance was evidently the consequence of a fall, while, as I have stated above, no exciting cause for the disease could be traced to account for the disease in the subsequent pregnancy. In connection with these facts, I may here, at the same time, mention that other forms of placental disease besides inflammation show the same tendency to recurrence in different pregnancies in the same individual. The tendency to the repetition of abortion in women who have once suffered from it, is a fact which the practical accoucheur has constantly occasion to observe, and numerous striking examples of the great frequency of its repetition in the same woman have been put upon record.‡ In many of these cases of recurrent abortion, the affection appears to be connected either with placentary congestion or inflammation. Dr Gooch,§ in the second volume of his "Chirurgical Works," has recorded an instance where the *placenta* was found ossified to a greater or less extent in the same patient three several times; and Bonus‖ observed a case of a similar triple recurrence of the hydatiginous condition of the *placenta* or *chorion*.

It would be interesting, and in some respects practically important, to ascertain the duration of the different stages of *placentitis*, or, in other words, the variety of morbid lesion which the organ might be most apt to present to us, according to the distance of time that may, in any given case, have elapsed, between the application of the exciting cause of the disease, and the ultimate expulsion of the organ from the *uterus*. But the twenty cases which I have above noted afford very little satis-

---

* Observations sur la Grossesse et l'Accouchement. Obs. 283, p. 235.

† Ibid. Obs. 141, p. 198.

‡ In Plouquet's Literatura Medica, Tom. i. p. 8, a number of references may be found to the works of authors that have mentioned examples of the frequent recurrence of abortion.

§ Cases and Practical Remarks in Surgery, Vol. ii. p. 250.

‖ Mad. Boivin, Sur la Mole Vesiculaire, p. 24.

factory information relative to this point. I find that in nine only out of the twenty cases are any data mentioned, by which the time between the application of the probable exciting cause of the *placentitis* and the time of delivery can be ascertained with sufficient accuracy. In one of these cases (11,) where the disease appeared to be of ten days' duration, the half of the *placenta* was affected with the first stage of inflammation; in a second (19,) in which the symptoms had lasted for 13 days, there was an effusion of coagulable lymph and purulent matter between the placental chorion and decidua; in a third case (6,) of three weeks' duration, there were adhesions between the *uterus* and *placenta* that were capable of being easily separated; in a fourth case (5,) the adhesions between the *uterus* and *placenta* were rather strong, although the disease was only apparently of a month's duration; in a fifth case (13,) in which two abscesses were found in the *placenta*, the first symptoms of the disease had occurred after a fall about seven weeks previously; in two other cases (1, 16,) there were chronic adhesions with the uterine surface, and in one of these cases (16,) the adhesions are described as very strong, the affection having lasted for several months; and in the two remaining instances (10, 12,) where chronic induration of the *placenta* was found, the *Placentitis* seems to have continued in one case (10,) for four and a-half months, and in the other (12,) for two months.

Symptoms of Placentitis. — The *symptoms* accompanying *Placentitis* must necessarily be considerably varied, by its more or less acute or chronic character, by the extent and seat of the inflammatory action, and particularly by its happening to be complicated or not with inflammation of the contiguous portion of the parietes of the *uterus*. When we consider the frequent chronic nature of placentary inflammation, its apparent occasional confinement strictly to the substance of the *placenta*, and the fact that though nerves have been alleged to have been found in the umbilical cord and *placenta* itself, none have hitherto been distinctly shown to pass between it and the *uterus*, or, in other words, between the *placenta* and the mother, we may be disposed rather to wonder at *Placentitis* giving rise so generally to symptoms more or less marked in the maternal system, than that the disease should sometimes be latent in its character.

The symptom which seems most constantly to accompany placentary inflammation is *pain* or pains fixed to the uterine or lumbar regions, or to some part of these regions, and differing in different cases in intensity, character, and duration.

Pain in the uterine and lumbar regions has been observed in almost all those cases of *Placentitis*, the history of which has

been traced with any degree of care. But this symptom, it must be confessed, may present itself also during pregnancy, as an effect of other pathological states of the *uterus* or its contents, besides placental inflammation; and, again, it appears to have been wanting in some instances in which this disease actually existed. When the full histories, however, of individual cases of *Placentitis* shall come to be more patiently and accurately investigated, such exceptional cases will probably diminish greatly in number. In the meantime I may only observe, that in estimating the value of this symptom as a pathognomonic mark of placentary inflammation, we must not reject it as an uncertain one, (as many British accoucheurs seem inclined to do,) from the fact of its occasionally occurring, in a well-marked degree, during a greater or less part of utero-gestation, in cases in which the *placenta* is ascertained at the time of delivery not to be morbidly adherent; for we must recollect that this adhesion of the *placenta* to the *uterus* is only *one* of the various morbid effects or lesions to which *Placentitis* gives rise; and in many such cases as those to which I allude, if the *placenta* itself be carefully examined after its expulsion, one or more of these lesions will generally be detected in its substance, or in its membranes.

When after the action of any of the exciting causes of *Placentitis*, which I have previously enumerated, a local lumbar or uterine pain supervenes, we may, as M. Brachet has stated, in general presume with considerable confidence upon the presence of placentary inflammation: and here, it appears to me, we should in some cases be able to make an useful practical application of uterine auscultation in the diagnosis of this disease; for if we find the seat of pain to correspond with the seat of the placental soufflet, the certainty of the connection of that pain with placental inflammation will necessarily be greatly increased. I make this remark on the supposition that Monod, Kennedy, and Paul Dubois are correct in referring the sound in question solely, or in its greatest degree of intensity at least, to the seat of the attachment of the *placenta* to the *uterus*, if not to the utero-placental vessels themselves.

In endeavouring to ascertain the exact seat of the local pain in any given case, more caution is required than seems to be generally believed. On this subject I cannot, I believe, do better than copy the just remarks and judicious injunctions given by Dr Ramsbotham.* "We frequently meet," he observes, "with great vagueness in the description of pain, and particularly in the description of the situation of that pain, and, if anything like precision be desirable, the patient should be re-

* Practical Observations, p. 77.

quested to lay her hand on the part. A woman will tell you she has got a pain at her heart, and if you apply this test of the situation of the pain, she probably applies the hand to the epigastric region, or to any part but that over the heart. If she complain of a pain in the side, she probably applies the hand to the side of the belly; but even this test will not be sufficient to enable a professional man to discriminate between a pain in the *parietes* of the belly, and one situated in the *uterus* or in the parts underneath. If he wish to arrive at any degree of accuracy in this respect he must examine the part with his own hand. The apparent indelicacy of this act must give way to the patient's welfare."

On consulting the histories of the twenty cases of *placentitis* that I have previously enumerated, I find that pain in the region of the *uterus* or loins was complained of in seventeen; in one of the remaining three cases (14) the sensation amounted only to a feeling of dragging (*tiraillments*) in the lumbar region; in another (4) the patient is merely described as having been out of health for two months previously to delivery; and in the third (18) it is distinctly mentioned that no local uterine pain was ever complained of. Of the seventeen cases in which uterine or lumbar pain was present, in two (5, 7,) the particular seat of the pain is not specified; in two (11 and 13,) it is described as existing both in the *uterus* and loins; in five, (10, 12, 15, 16, and 17,) it seems to have been felt only or principally in the lumbar region, and in the last (17) of these five cases it extended down from this region along the thighs. In another case (19) the pain in the loins was accompanied by a strong bearing-down sensation in the uterine reigion; and in seven cases, (1, 2, 3, 6, 8, 9, and 10,) it appears to have been entirely confined to some part of the uterine tumour. Out of these seven cases in which the pain was seated in some part of the *uterus* alone, in three (8, 9, 20,) it is mentioned as having been seated towards one side of that organ; in one (1,) as felt between the *umbilicus* and *pubis;* and in three (2, 3, 6,) it was felt in the region of the *umbilicus* or the fore-part of the uterine tumour.

The character of the pain is described in three cases, (6, 9, 20,) as constant; in one (1) as almost constant; in another (7) as at first remittent, and afterwards constant; and in six as remittent, (1, 5, 10, 12, 13, 15.) Of the six cases in which it was remittent, in one (13) it was increased by leaving the horizontal posture; in two, (1, 5,) it was increased during the night, and in one of these two, (1,) the part which was the seat of the pain, (viz. the lower and anterior part of the uterine tumour,) was tender to the touch, but the pain itself was not rendered greater

by motion. In one (3) of the instances in which the pain was confined to the fore part of the *uterus*, the patient appears to have found relief in lying upon her belly and face in bed. In most of the above cases the particular nature of the pain is not mentioned, but in others it is variously described, as dull, heavy, burning, obscure, &c.

In the greater number of the cases, the pain supervened within a few hours, or at most within two or three days after the application of one or other of the exciting causes already mentioned, and generally continued more or less from that period to the end of utero-gestation. In one case (10) the pain was relieved, and in two others, (12, 16,) removed by the detraction of blood.

In one of the cases (18) recorded by M. Dance, already particularly alluded to as not accompanied by uterine pain, there was most obstinate vomiting for three months, defying all remedies, and at last producing death, apparently by inanition, between the third and fourth month of pregnancy; and in the two instances previously referred to as met with by M. Breschet,* in which anatomical pathological appearances were found similar to those in this case of M. Dance's, a similar state also of frequent, obstinate, and very violent vomiting accompanied the disease. In M. Dance's case, though the uterine surface of the *placenta* was extensively inflamed, yet the *fœtus* did not appear to have suffered, and it seems probable, therefore, that the placentary inflammation only supervened towards the last days of life, at the same time, perhaps, that the slight attendant febrile symptoms first appeared. In two of the acute cases of *Placentitis*, (17, 19,) mentioned by Stratford and Dance, shivering with febrile symptoms supervened in the course of the disease; and in one of the instances, (12,) given by Brachet, febrile symptoms came on along with lumbar pains on the night after the patient was exposed to the injury, which apparently acted as the exciting cause of the placentary inflammation.

In several instances of suppurative inflammation of the *placenta* alluded to by Cruveilhier, he appears to have observed as a very uniform symptom, a kind of continued hectic febrile movement, with an exacerbation in the evening, preceded or not by shivering. Dr Burns † describes a species of fever which he has observed to affect women about the middle period of pregnancy, and that appears to be not unlike in its principal characters to the disease described by M. Cruveilhier: he states, that this affection makes its attacks suddenly like a regular paroxysm of ague; that it soon puts on rather an appearance of

* Etudes &c. de l'Oeuf, p. 124.

† Principles of Midwifery, (1832,) p. 224.

hectic; and on the whole, he conceives, it bears a great analogy to the infantile remittent fever. This disease, Dr Burns adds, is very obstinate, and often ends in abortion. Has not the *placenta* in such cases been the seat of inflammatory action?

Professor Wilde * mentions also slight fever and great heat, as common symptoms of placental inflammation, and when this inflammation happens to terminate in suppuration, he describes a dragging sensation and shiverings as supervening, with dull heavy pains in the *uterus* and thighs, that are more especially felt on standing or walking. The same author states, that in Placentitis the urine is sometimes passed in drops, and with a sharp pain, and that when the disease runs on to induration or hepatization, the dull local uterine pains are occasionally accompanied by a white, irritating, and abundant discharge from the *vagina*. In Mr Stratford's case (16) a discharge of blood from the *vagina* appears for a short time to have preceded the expulsion of the diseased *ovum*; and Mauriceau † mentions in the details of one of his cases of recurrent abortion from indurated *placenta*, which I have formerly alluded to, that a small quantity of blood was usually voided *per vaginam*, for ten or fifteen days previously to the labour-pains coming on. In M. Dance's first case (17) the aortic pulsations were unusually strong, a symptom that may perhaps be pointed out as affording, in most instances in which it occurs, an indication of increased or inflammatory action in the extremities of the vessels more immediately arising from that artery.

In considering the different symptoms of Placentitis that I have had occasion to mention in the preceding pages, it is difficult, and, indeed, in the present state of our knowledge, altogether impossible, to estimate justly what degree and variety of these symptoms ought to be attributed to the placentary inflammation itself, and how much the character and combinations of them are liable to be varied by that inflammation of the adjoining internal surface and *parietes* of the *uterus*, by which the Placentitis is often accompanied and complicated. In order to arrive at anything approaching to accurate information upon this point, a much greater number of carefully observed facts than at present exist on the records of medicine, will be required. But I may here observe, that, out of the twenty cases of inflammation of the *placenta* previously enumerated, in two of the instances, (13, 19,) in which the disease appears to have been principally confined to the fœtal surface of that organ, the characteristic pains were well-marked, and even severe, while in

* Ryan's Medical and Surgical Journal, Vol. vi. p. 573.

† Observations sur la Grossesse, Ob. 283. p. 233.

the only case (18) in which this local pain was entirely absent, the inflammatory action was seated on the uterine surface of the *placenta* and membranes, and the tissue of the *uterus* itself was, on *post mortem* inspection, found to be softened. The local pain, also, seems almost always to cease after the process of labour and the expulsion of the diseased *placenta*. In one case, (16,) however, the region of the *pubis* continued tender for some time after delivery.

Morbid Adherence between the *placenta* and *uterus*, the result of adhesive inflammation between their contiguous surfaces, besides being accompanied by more or fewer of the above-mentioned symptoms during pregnancy, is almost uniformly marked, at the time of delivery, by a more or less profuse and sudden flow or gush of blood attending upon each recurrence of uterine pain or contraction after the birth of the child, and even sometimes also during the act of its expulsion. The exceptions to this general rule, more especially to the occurrence of hemorrhage with each after-pain, as long as the *placenta* is allowed to remain adherent, are very rare. In instances, however, such as those met with by Wrisberg,* Desmoreaux,† and Ramsbotham,‡ of apparently universal adhesion of the *placenta*, no hemorrhage can be expected, and Dr Hamilton § has recorded an example of another form of morbid adhesion, where no hemorrhage took place after delivery to indicate the diseased state of the after-birth; in this instance the central portion of the *placenta* was healthy, but around its whole border or circumference the organ for the breadth of an inch was morbidly and firmly adherent to the *uterus*.

Danger of Placentitis to the Mother.—The morbid inflammatory adhesion of the *placenta* to the *uterus*, just now alluded to, is not unfrequently attended with great danger to the mother at the time of delivery, or subsequently to that event, from the extreme hemorrhage to which it sometimes gives rise, from its leading, under unskilful management, to inversion of the *uterus*, or afterwards from its retention producing, as it so frequently does, a very fatal form of irritative fever. As illustrative of the frequency, and, at the same time, of the danger liable to result to the mother from this consequence of placentary inflammation, I may remark, that, from the annual reports of the Royal Maternity Charity of London, in the years 1828–29–30 and 31, published by Dr Francis Ramsbotham, in the 3d, 5th, 7th, and

* Comment. Med. Physiol. Anat. et Obstetr. Argum. Tom. i. p. 44.
† Dictionnaire de Medecine, Tome vi. p. 420.
‡ Practical Observations, p. 82.
§ Practical Observations. Part i. 286.

9th volumes of the Medical Gazette, it appears that during th e above period, 8967 women were delivered in the district of the Charity which is under Dr Ramsbotham's more immediate care. Out of these 8967 cases, there were 67, or nearly one in every 134, in which the *placenta* required the introduction of the hand for it is removal, either on account of its being morbidly adherent to the *uterus*, or from its being retained by the atony or irregular contractions of this organ ; * 45 out of the 8967 women delivered, or nearly one out of every 199 died, and 13 out of these 45 deaths, or about one-third and a-half of the whole, were directly attributable to the effects resulting from morbid adhesion of the *placenta* ;—in other words, one woman out of every 689 that were delivered perished in consequence of this single consequence or termination of placentary inflammation.

But besides the fatality occasioned by this single termination of placental inflammation subsequently to the expulsion of the child, inflammation of this organ sometimes proves a source of danger to the mother during the progress of pregnancy, by producing in her a state of general bad health, or by giving rise to abortion or premature labour.

Thus out of the twenty cases of placental inflammation, to which I have so frequently adverted, abortion occurred in one (17) at the third month, in a second (18) between the third and fourth, in a third (19) at the fourth, in two (11, 18,) at the sixth, and premature delivery in one (20) at the eighth, and in another (13) at the eight and a half month of utero-gestation. In several of the remaining cases, the time of utero-gestation at which labour came on is not mentioned, but in most of them the placental inflammation was of a subacute or chronic character, and the patient seems generally to have gone on to the full period of pregnancy, and even it is stated in two cases (10, 14,) some days beyond that period. From the former cases, however, and from all that I have observed, I am convinced that placentary inflammation will be found to be a much more frequent cause of abortion and of ill health to the mother during pregnancy, than seems at present to be at all suspected. It is known

* It does not appear from Dr Ramsbotham's tables in how many out of these 67 cases the *placenta* was actually retained by morbid adhesions with the *uterus*, and in what proportion other causes acted in producing that result. I have not been able to find any sufficiently extensive series of obstetrical observations, by which to judge of the usual average number of cases in which the *placenta* becomes morbidly adherent to the *uterus*, but I am inclined to think that the ratio given in Dr Ramsbotham's tables is considerably higher than usual, owing probably to the patients applying to the Dispensary belonging to a rank of life in which they are exposed to many of the exciting causes of placentary inflammation. Adhesion of the *placenta* to the *uterus* being only *one* of the effects of *placentitis*, and commonly of *placentitis* in a chronic form, it would be impossible to judge from the frequency of utero-placental adhesion alone of the frequency of placentary inflammation in general.

as a general observation among obstetrical practitioners that, in cases of abortion, the *placenta* is not unfrequently retained in the *uterus* for days or even for weeks after the *fœtus* is expelled. Does this retention depend in some of these instances upon inflammation having taken place in the *placenta*, or in the contiguous surface of the *uterus*, and produced a morbid degree of adhesion between these two organs?

Effects of Placentitis on the Fœtus.—Placentary inflammation occasionally proves fatal to the *fœtus in utero*. Professor Wilde, in his brief enumeration of the symptoms of this disease, mentions as one, that the motions of the child gradually become weaker, and at last cease altogether, a circumstance observed in two of M. Brachet's cases (10, 14,) and in those previously quoted from Mauriceau. (Obs. 241 and 283.) Out of the eight cases of placental inflammation given by M. Brachet, in one (16) the state of the infant is not adverted to; in three the children were dead born, viz. in the two cases (10, 14,) to which I have just alluded; and in a third instance of twins * one child was dead and beginning to putrify, and the whole substance of the *placenta* corresponding to it was in the second stage of inflammation. The second child and *placenta* were healthy. Of the other four cases of *Placentitis* mentioned by Brachet, in one (11) the child was lively but died thirty hours after birth, and in all the other three, (12, 13, 15,) the infants were feeble and excessively pale, wan, and lean; one of them died in a few days after birth; the other two survived.

The *placenta* being apparently directly subservient both to the respiration and nutrition of the foetus, performing for it at once the functions of the lungs and of the stomach, or perhaps more properly of the mouth, during the greater part of its intrauterine life, it is not wonderful that chronic inflammatory disease of this organ, by more or less completely arresting or impeding the performance of these functions, should sometimes destroy the life of the child, and in other instances produce in it that state of *phthisical marasmus*, (if we may so term it,) which the three infants, mentioned by M. Brachet, exhibited. That the state of these infants was really dependent, not upon any pathological condition in their own economy, but only upon the morbid condition of the *placenta*, and the mal-performance of its functions, was proved, on the one hand, by no anormal or morbid lesion being discovered upon a careful *post mortem* inspection in two of the fatal cases, and, on the other hand, by two of those infants that were born alive rapidly gaining plumpness and

* Journal General. cii. p. 11, 12.

strength, when transferred to the care of a good nurse. The above were instances in which the inflammation of the *placenta* had been chronic, and the disorganization it produced consequently slow in its progress, and more or less of the organ had been left in a state fit to perform its functions. Where the inflammatory action is more acute in its nature, or more general in its extent, the foetus may be killed by it more rapidly, and before its state of nourishment is affected. This appears to have happened in M. Brachet's fifth case (13,) where at the $8\frac{1}{2}$ month of utero-gestation, the child was born dead and putrid, but of large size and sufficient weight. Three-fourths of the *placenta*, as I have already stated, were occupied by a large abscess, which the history of the case shows to have been of comparatively recent formation.

There is one other series of effects produced by placentary inflammation, or at least, by inflammation of the membranes covering the external surface of the placenta upon the fœtus, which I regret that the already too extended limits of this essay will allow me merely to allude to,—I mean the morbid connection of the internal surface of this organ, by adhesive inflammation with some part of the body of the *fœtus*, and the production, in consequence of that connection, of different forms of malformation by displacement and arrestment of developement, in more or fewer of the fœtal viscera and members.

Paul Portal, in his work on the Practice of Midwifery,* has given the first, and among the older authors, the only distinct instance which I have been able to find of this variety of monstrosity ;† but since the beginning of the present century, eight cases at least have been published by different authors, of malformed fœtuses born with the fœtal surface of the *placenta* more or less intimately connected by morbid adhesions with their head

---

* La Pratique des Accouchemens, p. 192–199, 1685. Two figures of the child and *placenta* are given.

† Dr Thomson has pointed out to me an instance of monstrosity figured in the Ephemer. Nat. Curios. for 1673, p. 166, by Lachmund, as in all probability an example of the morbid attachment of the *placenta* to the head of the child, but the description given of the case is very indistinct. In the works of the older writers on monstrosities, as in those of Lycosthenes, Licetus, Aldrovandi, &c. I have not found any instance of malformation, in which it is distinctly stated that the *placenta* was connected by morbid adhesions to the *fœtus* in the manner mentioned in the text, but it is probable that some of the instances of torn membranes, occasionally described by these authors as attached to the heads of malformed infants, and fancifully supposed by them to resemble the ears of the lower animals, &c., were the remains of ruptured placentary adhesions. An instance of monstrosity quoted from Fincelius by the younger Schenkius, (see his *Monstrorum Historia Memorabilis*, 1609, p. 8–9,) was perhaps an example of the attachment of the *placenta* to the head of the *fœtus*. "Habuit ille in vertice *massam carnis*, *imaginem præbens testudinis rufæ* ; in cervice caudam carnosam habuit instar muris, sed abescentem, qualis erat cutis sine pilis, capite erat Thersitico, oculis extantibus."

and face. The first of these cases was published by Dr Poole* of London, the second Mr Cam† of Bath, the third by Necati,‡ a fourth, first recorded by Duchateau,§ and afterwards minutely and ably described by Geoffroy St Hilaire,‖ a fifth by Breschet,¶ three by Charles Rudolphi,** and the last and eighth by Lauray.†† Besides these nine published cases, I may mention, that I have myself had an opportunity of examining three additional specimens of this curious species of monstrosity, one in the Museum of Guy's Hospital, a second in that of the London University, and a third in the anatomical collection belonging to the London College of Physicians.

Within these few years several other cases have been put upon record of malformed *fœtuses* born with the *placenta* adhering either directly or by means of a connecting membrane to the *parietes* of the unclosed abdomen of the *fœtus*, or to its extroverted abdominal *viscera*. Dr Poole,‡‡ in the short paper already referred to, mentions having seem a case of this kind; Mr Hill §§ has recorded what appears to be a second similar instance; in 1817, a third was shown to the Society of Medicine by Chaussier;‖‖ and three additional cases have been more lately described by Dr Knox, ¶¶ Professor Henot,*** and Dr Montgomery. ††† Of this variety of malformation and morbid placental adhesion, I have seen five instances,—two of them in the London University Museum, one in the Museum of Dr Blundell, another in that of Mr Langstaff, and the fifth in the collection of M. Dupont at Paris.

I am not aware of any cases of attachment of the fœtal membranes to the head among monstrosities in the lower animals, but Professor Gurlt of Berlin ‡‡‡ has described several cases in which these membranes were attached to the *abdomen* of different animals, and he has delineated three instances of it in his plates, in the calf, lamb, and kid; Tab. vi. 2 and 3. and Tab. vii. 1. In all these cases the spines and bodies of the animals were much

---

* London Medical and Physical Journal, Vol. iii. p. 397 and 497. 1800.
† Ibid, Vol. vii. p. 385. 1802.
‡ Specim. Anat. Pathol. de Labii Leporini Congeniti natura et origine. Amsterdam. (1822.)
§ Journal Complementaire des Sc. Medicales. Tome viii. p. 377–8. 1820.
‖ Anatomie Philosophique, Tome ii. Monstruositiès, p. 151–221. 1822.
¶ Repertoire d'Anatomie, &c. Tome ii. p. 288. 1826.
** Monstrorum Trium cum Secundinis Coalitorum. Berlin, 1829.
†† Bibliotheque Medicale, (1829) Tome ii. p. 288.
‡‡ Lond. Med. and Phy. Journ. Vol. iii. 399.
§§ Ibid, Vol. xxiv. p. 61, (1810).
‖‖ Bulletins de la Faculté, &c. Tome v. p. 310. 1817.
¶¶ Edinburgh Journal of Medical Science, Vol. i. p. 343. 1826.
*** Archives Generales de Medecine, Tome xxii. p. 313. 1830.
††† Dublin Medical Transactions, New. Series Vol. i, p. 375. 1833.
‡‡‡ Lehrbuch der Pathologischen Anatomie der Haus-Säugethiere, Bd. ii. s. 99-143.

contorted, as is generally the case also with this kind of malformation in the human subject. In four out of the five instances which I have seen in the human *fœtus*, the trunk was more or less completely doubled backwards or laterally upon itself, and in three of the cases, one of the sides of the body was less perfectly developed than the other.*

If this were a fit opportunity, it would be easy, I conceive, to point out some very striking points of analogy in external figure and internal anatomical structure between the different individuals belonging to these two classes of malformations, and I am further persuaded that, by a study of these analogies, many of the cases of monstrosity, particularly of strongly marked malformations of the head and face, of defective conjunctions in the median line of the body, and of extroversions of the encephalic, thoracic, and abdominal viscera, that are to be found upon the records of medicine, might be shown to be equally referable, in the first instance, to the existence of morbid adhesions of the *embryo* to the *placenta* or membranes of the *ovum*, as their more immediate determining cause, although such adhesions were not observed at the time of birth, from the connecting and often tender bands or membranes of which they generally consist, having been in some instances ruptured in the act of parturition, and in others destroyed during the course of intra-uterine life, the solutions of continuity which they had left upon the body of the *fœtus* having become before birth more or less completely cicatrized and obliterated.

Treatment of Placental Congestion and Inflammation.

I shall not lengthen out the present part of my paper, by obtruding upon the Society any very detailed remarks upon the prevention and treatment of placentary congestion and inflammation; for on these subjects I have indeed little novel to offer, and few or no modes of practice to inculcate beyond those that are

* I had some time ago presented to me a delineation and short description of an anencephalous human *fœtus*, to which both of these last remarks strongly apply. I regret that the imperfect history which I have received of this case, does not enable me to state positively if the sides of the large opening in the anterior part of the body, through which almost all the abdominal and thoracic viscera protrude, stretched onwards in a membranous form to the *placenta* or not; but this interesting monstrosity resembles so exactly some of the other instances that I have seen in which this membranous placentary connection existed, that I have little doubt that such was the nature also of the present case. The trunk of this *fœtus* is doubled back to such a degree that the *occiput* nearly touches the lower part of the dorsal spine, to which it is connected by a short web of integument. The spinal column, at the same time that it is thus made to project forwards is curved also towards the left side so as nearly to form a semicircle. The ribs on this side are merely rudimentary, consisting only of a few cartilaginous stumps. The ribs, again, on the right side are long, and form a broad flat thoracic surface. This *fœtus* was the product of a premature labour, as the monstrosities of this class have almost always been.

generally acted upon in the daily attempts that are made, to alleviate and remove the several individual symptoms and combinations of symptoms occurring in the state of pregnancy, that I have had occasion to particularize in the course of the preceding observations. The more accurate pathological investigation of the nature of any disease has very seldom led in a direct manner to the developement of any new methods of practice in its treatment, and hence, amid the many and strange revolutions to which medical theory has been subjected, it is singular in the retrospect to remark, how comparatively stationary a number of the leading principles of medical treatment in different affections have at all times remained. But though general and anatomical pathology has not, in the great advances which it has now made, more especially in modern times, led, with some very few exceptions, to the suggestion of any actually new remedial measures, yet, assisted by clinical observation, it has confessedly, imperfect as it still is, proved already of incalculable advantage to practical medicine, in having enabled us to generalize more accurately than before our knowledge and practical application of the ample store of therapeutic agents that we already possess, by, in the *first* place, affording us data to generalize upon the identity of morbid actions and morbid effects in different organs of the body; it has enabled us in many of the complicated diseased conditions of the human economy to detect the true causal relations in which various forms of morbid states and symptoms, coexisting in different and distant parts of this economy, stand to one another,—to distinguish affections that are primary from those that are merely their secondary and sympathetic effects,—to fix upon the individual organ that forms the primitive seat of diseased action, and which, consequently, ought to constitute the main point and object against which all our remedial measures should be, directly or indirectly, aimed; and, besides, modern pathology, in a few remarkable instances, has afforded us important clues, that have served as guides by which we have traced back confirmed morbid states and lesions from their more advanced and more incurable stages to their earliest commencements, and further, it has, in some of these instances, shewn us that the morbid actions of which they consist at these, their first periods of developement, are such as can often be detected by a cautious and careful use of the improved means of diagnosis which it has placed in our power, and at the same time be made the subject of a rational and successful medical treatment.

General blood-letting, repeated or not, according to circumstances, along with more or fewer other antiphlogistic measures, has been long successfully employed by medical men, to subdue the various symptoms direct and sympathetic, local and constitutional, that I have endeavoured in the preceding pages to trace to conges-

tion and inflammation of the *placenta* as their immediate or proximate cause; and the inquiry into which I have entered is, I trust, calculated to show in a clear light, the value and rational character of this practice, upon the general principle of applying to the diseases of this organ the same remedial measures that have been found, by observation and experience, to be best fitted for combating congestive and inflammatory morbid actions in other parts of the body. Upon this general ground also it would seem not unreasonable to anticipate, that, in the preventive treatment of some of the more common forms of abortion, and of the other local effects and symptoms of placental congestion and inflammation, as well as in the treatment of those various but more remotely situated sympathetic and constitutional affections to which these two morbid states of the *placenta*, but particularly its state of inflammation, so frequently appears to give rise,—an active employment of leeching or other local depletory and sedative measures may be attended with highly beneficial results; and be advantageously followed up, if the nature of the case or the obstinacy of the symptoms require it, by blisters and counter-irritation in the neighbourhood of the region of the *uterus*, as has indeed been already recommended to us by some American practitioners, in the management of cases of threatened abortion.* The kind of inquiry into which I have been led may also, I hope, prove ultimately useful, in showing that a large part of the great sacrifice of human life that is constantly occurring from the death of the *fœtus*, and from the act of abortion to which that death gives rise, primarily depends upon morbid actions originating and seated in the *placenta*, and that in many instances these actions are in themselves of such a pathological nature as are generally considered to be amenable to medical treatment. And further, if the view which I have taken of the pathological nature of the adherent *placenta* be correct, namely, that it is the result of a state of inflammatory action in that organ, generally of a chronic character, or, as I ought, perhaps, more properly to say, of a state of adhesive inflammation in the contiguous surfaces of the *placenta* and of the *uterus*, it seems reasonable to expect that we may, by watching more diligently for the first symptoms and advances of this inflammation, be then able to arrest, by the employment of such measures as those above referred to, the morbid action in its earlier stages, and thus avert, or at least diminish, what, as I have already endeavoured to show, ultimately proves one of the principal sources of danger and fatality to the parturient female, and constitutes altogether a case, than which (as Dr Ramsbotham has justly remarked) "there is scarcely one in the whole circle of practical midwifery more

* See Jackson, American Journal of the Med. Sciences, No. iv. p. 299; and Cenas, in Ib. No. x. p. 547.

pregnant with immediate and impending mischief."* The above remarks on the early detection and on the early and active treatment of placental inflammation are only, if possible, more strongly applicable to the management of the cases referred to at a previous part of the paper, in which placental inflammation shows a tendency to recur in different pregnancies in the same woman. But, indeed, under all circumstances, and in all instances, in employing in the treatment of placentary inflammation and congestion, more or fewer of the various general therapeutic means above alluded to, and such other remedial measures, medicinal, dietetic, and regiminal, as the peculiarities of individual cases are, in the practice of our profession, constantly found to require, we ought ever to be guided and stimulated by the consideration, that on the activity and success of our exertions are dependent not only the present well-being and future safety of the mother, but the health also, and, it may be, the life of her infant *in utero*.

* Out of the nine cases of adherent *placenta* extracted in a preceding page from Dr Ramsbotham's work, in two (2, 4) the mothers died, one (2) in eight hours, and the other (4) in three hours after the birth of the child. A third patient (1) out of the nine, died nine days after delivery, but apparently not at all in consequence of the previous adhesion of the *placenta*, or its effects. If we keep this last case entirely out of the calculation, it appears that, out of twenty-three cases in all of adherent *placenta*, described by this author (Pract. Observ. p. 98–141), in nine of the instances the women died, seven of them from hemorrhage, and exhaustion, at intervals varying from one hour and a-half to eight hours after delivery; one from inversion of the *uterus*, apparently the course of two or three hours; and the remaining ninth patient survived till the fifth day, when she sunk under symptoms of reaction and fever.

(To be continued.)

EDINBURGH:
PRINTED BY JOHN STARK,
OLD ASSEMBLY CLOSE