In other cases, instead of decaying, it passes into a substance like adipocere (waxy), and simply makes a tumor, which may remain during the female's life without causing serious trouble. Women have had these extra-uterine tumors so altered, and have afterward borne children in the natural way while they still remained. In the year 1828, a woman was received into the fever hospital, in Cork Street, Dublin, who had a remarkable enlargement of the abdomen. She stated that eight years before she had been in labor two days, but was never delivered. Two years after she conceived again, and went her full time, as she also did on two other subsequent occasions. Finally, an abscess formed near the navel, and from that the original child was expelled, which had been conceived eight years before. It was twenty-two inches long, remarkably well preserved, and had two feet of the umbilical cord attached to it.

A still more remarkable instance was related to the Academy of Medicine, in September, 1833. The body of an old woman of seventy-eight was brought into the Anatomical Theatre, Geneva, in whose pelvis was discovered a tumor, connected with the bladder, uterus and vagina, but not communicating with them. On cutting this open, it was found to contain a fœtus, three months old, crusted over with phosphate of lime. She was the mother of three children, and died of old age. From her history, it was supposed she had carried this fœtus for upward of thirty years.

An instance is even recorded where a woman had two extra-uterine fœtuses at the same time. She conceived, went the full period, had some labor pains, which subsided, and finally relapsed into her usual condition of health, and menstruated regularly; a hard tumor, however, remained on the right side of the umbilicus. Three years afterward she again conceived, and the same thing occurred, labor pains ceasing, and a hard tumor remaining—this time on the right side.

Subsequently, the first tumor became tender, inflamed, and an abscess opened, from which was extruded a quantity of pus and fœtal bones. Two months afterward, the other tumor was opened artificially, and similar remains were expelled. Both openings healed up, and the patient returned to her usual state of health.

In these cases, the fœtus never lives beyond the full period of gestation, nine months, and usually dies before then. When this occurs, the uterus contracts, with labor pains, and the decidua is expelled, with loss of blood, the same as in true labor.

When the conception is in the tube or ovary, it nearly always dies before the full term; the sac then bursts, and the contents escape into the cavity of the abdomen, causing inflammation, hemorrhage, and death.

In a few still rarer cases, the fœtus forms perfectly, and at the full period is extracted alive artificially. In such cases, it has been found as well developed as one from the womb itself. Wherever it may be, a placenta, with cord, usually forms, which attaches itself to some neighboring part, and by which nutrition is effected. The development may occur, however, without this, as some of the cases prove.

In numerous cases, the fœtus has been removed by the surgeon after its death, and often to the saving of the woman's life, although the operation is necessarily a dangerous one. Much, however, depends upon the position of the tumor, and the place where the opening has to be made.

In twelve cases recorded by Ramsbotham, four of the women died from the sac bursting into the abdomen, causing hemorrhage. Three died from ulceration conse-

quent upon nature's effort to expel it. Four recovered, two getting rid of the fœtus by way of the intestines, one by an operation, and one by its forming a permanent tumor. In the remaining one, nature had made no effort at removal in any way.

In one case, a woman of 84 was found with an extra-uterine fœtus, which she had carried forty-eight years. Others at thirty and twenty years have also been seen, and one extreme case of fifty-two years, in which the fœtus weighed eight pounds.

When the conception is in the Fallopian tube, it is seldom carried over two months, and when in the ovary not more than five or six months, but when in the abdomen, it may be carried for an indefinite period, as the above cases prove.

It is remarkable that many of these women, thus carrying children within them for a large portion of their lives, in an unnatural condition, yet enjoyed good health, and even became mothers in the meantime in the natural way.

As to the causes of extra-uterine conception, we are much in the dark. Almost all of the cases have occurred in women who had previously borne children in the natural way, so that it would not seem to result from any defect in formation. Many physiologists ascribe it to fright or shock, either at the time when the egg leaves the ovary, or at the time of impregnation, as before stated.

Baudelocque tells us of one case, in which a woman, while with her lover, was frightened by some one trying to enter the room; she had extra-uterine conception. In another case, the woman, under similar circumstances, was alarmed by a stone being thrown through the window, and the same result followed. It is worthy of remark also that more such cases occur in unmarried women than in married ones—possibly from irregular indulgence or fear of its consequences.

Certain experiments have seemed to prove that fright during impregnation may cause extra-uterine conception in animals. It is, however, very rare among them, probably because they are not so subject to emotional terror at such times.

It is my opinion that the condition of both parents at the time of conception, bodily, mental, and moral, is of great consequence to the future child, and that it should be much more considered than it is, along with the condition of the mother during gestation and nursing afterward. It is quite possible that the influences which operate, for good or for evil, upon a child before birth are more powerful than all that can be brought to bear upon it after birth.

FALSE CONCEPTIONS.

A variety of abnormal productions are found in the uterus, called moles and false conceptions, which are different from those not connected with impregnation, such as tumors, polypi, etc. The mole of generation is an abnormal development of the impregnated ovum. It has various forms, but most frequently resembles a mere shapeless mass of flesh, inclosed in an envelope full of fluid. On carefully dissecting this substance, we can usually discover some traces of the fœtal structure; at other times we find nothing but the bag of fluid. Sometimes the production will remain attached to the mother by a kind of cord and placenta, and develop into a shapeless monstrosity; at others it will be entirely disconnected. These growths probably originate from a blighted ovum, which retains sufficient life merely to develop, but not to organize. I have known them to attain a large size, and some females to have many of them in succession. What causes moles we do not know, nor can we always distinguish one from a natural pregnancy. Occasionally they assume the most fantastic shapes, and resemble the most incongruous objects. It is this circumstance, no doubt, which

gave rise to the statements we sometimes hear and read of in old works, of women bringing forth *animals, plants, etc.!* I have seen some moles myself which could be easily mistaken for such things by persons who did not attentively examine them, and whose imaginations were a little lively. A kind of imperfect animalcule, called the *hydatid*, is also found in the uterus. It merely resembles a bag of jelly, and floats in a fluid. Its size varies from that of a pea to a chestnut. Sometimes only one is found, at others a number. When removed from the fluid in which they live, and put in warm water, they will often move, which shows them to be alive. Similar beings are formed in the liver and kidneys. (See article on the tapeworm.)

DEFORMITIES AND MONSTROSITIES.

Monstrosities. These anomalous productions, called also *lusus naturæ*, are of various kinds. They may either have more parts than natural, or less, or unnatural parts. Sometimes there is a confusion of parts only. Thus we sometimes have a fœtus with two heads, or an additional number of hands or feet. And sometimes we have them with only one leg or arm. Then again we see others with supernumerary parts that resemble no member in particular. And at other times we find some of the parts transposed, particularly the viscera. The causes of these accidents are not well understood. An opinion prevails very generally that they are altogether owing to some personal violence, or strong mental emotion experienced by the mother during pregnancy. Thus fright, sudden joy, or the sight of any disagreeable object are thought to be able to produce them. In many cases this opinion is probably correct, so far as the mere fact is concerned, but some very absurd notions are entertained as to the manner in which these causes operate. I shall, therefore, endeavor to give a scientific explanation.

A deficiency of any part, or an imperfect development of it, is evidently caused by something disturbing the vital process, and depriving that particular part of its power of growth, either permanently or for a time; but what those causes are it is impossible to tell. Sometimes the toes, or the fingers, or some of the limbs become imperfect in this way, and sometimes the heart, or some other internal organ, and children have even been born with no heads.

The disturbing cause may either operate from the first, and then there is no trace of the part, or it may operate at a later period, and then the part is merely smaller and more imperfect than the others. Thus sometimes we see one arm or one leg only half as large as its fellow, and sometimes the whole body is dwarfish and the head large. At other times the roof of the mouth is imperfect, or an eye, or the ear, so as to cause congenital deafness and blindness, and sometimes the upper lip is imperfect, causing *hare-lip*.

There is no foundation, however, for the notion that these deficiencies are always caused by frights or fancies, or that the mother can produce them by injuring herself in the same part, or by merely placing her hands on it, as many suppose. In many such cases there is no doubt, if the truth could have been known, that the deficiency existed before the fright was experienced; but people are apt to suppose that it must have been caused by the fright, merely because it followed after it.

Sometimes when there are two ova impregnated, instead of both forming perfectly, as in twins, or one being included within the other, as in the case of the boy Bissien, they will become so intermixed as to be grafted, as it were, one upon the other, or grow together. The parts where they touch, then, do not form, and these

only develop certain portions of the different fœtuses connected together. In this way are produced those monstrosities that we see with two heads, two bodies, or many arms, or legs. If there should be more than two ova join together, of course the confusion of parts would be greater, and the monster still more unnatural.

Two perfect twins are also liable to grow together, if they touch, and so become connected in any part. Thus some have been found joined at the back, others at the stomach, and some by the side, like the *Siamese Twins*, between whom there was a ligament.

Most of these monstrosities are probably caused by some disturbing agency at the time of conception, or during pregnancy; but monsters may also result from imperfect eggs, as before explained, and also from imperfect or deformed animalcules.

They may originate with the male, therefore, as well as with the female, and I have known a man who had three deformed children by one wife, and two by another, owing to imperfect animalcules, as I proved by observing them.

It is certain, however, that cases occur sometimes that may well excuse the common belief, especially as people generally are not in the habit of properly connecting cause and effect. Thus a pregnant mother has seen a man who had lost his arm, and her child when born has been similarly deficient. No doubt, however, other pregnant women might have been worse affected by the sight, and yet have had perfect children, and probably she would have had the one-armed child just the same if the man had not been seen by her. It is more likely that her child's arm was not formed at the time of her fright, from some other cause, for if it were, we must suppose that the fright *destroyed it*, and then comes the question how or in what way was it carried off?

In Fleming's *Zoology* a remarkable instance is given of a cat, who was much terrified, while with young, by having her tail severely trodden upon, and who brought forth, at the usual time, five kittens, only one of which was perfect, all the others having *their tails distorted* in a singular manner, and all alike. This, however, was from real bodily injury, affecting the vital power, and not from *imagination*.

It is quite conceivable that the condition of any part of the mother's body, at any particular period of pregnancy, may influence the corresponding part in the new being she carries in her womb, and affect its development. Especially if any violence be done to any part of the mother, so as to arrest its growth, or cause an abnormal condition of it, we should expect that the same part in the child would in some way be similarly affected.

Thus in the case of the kittens, above referred to, the normal condition of the tail, in the mother, was suddenly and violently changed, and apparently the same part in all her kittens suffered a similar change.

In case of a slight injury, or one the effects of which soon pass away, no such result may follow, but if the hurt be severe, and its effects lasting, it may be otherwise.

In all such cases it seems necessary there should be *nervous shock*, as well as bodily hurt, for it is only through nervous agency that we can conceive of the mother affecting the child in her womb,—except through blood poisoning, and that would affect the whole system equally.

Pregnant women are constantly subject to unfavorable influences, which affect their children in many unsuspected ways; and at no period of their lives do they need more watchful care and attention, nor more entire freedom from all injurious conditions. The formation of the child's *head* especially, may be readily affected by the

bodily and mental condition of the mother during pregnancy, and the possible consequences of this may be seen from the following facts:

The British Medical Journal presents, at some length, the results arrived at by Prof. Benedict, in his examination of the brains of criminals—some sixteen in all. Every one of these, on comparison with the healthy brain, proved to be abnormal. Not only, too, has he found that these brains deviate from the normal type, and approach that of lower animals, but he has been able to classify them, and with them the skulls in which they were contained, in three categories. First, absence of symmetry between the two halves of the brain; second, an obliquity of the interior part of the brain or skull—in fact, a continuation upward of what is usually termed a sloping forehead; third, a distinct lessening of the posterior cerebral lobes, so that, as in the lower animals, they are not large enough to hide the cerebellum. In all these peculiarities, the criminal's brain and skull are distinctly of a lower type than those of normal men.

Now, that these abnormal conditions may often result from influences acting upon the mother, during pregnancy, is scarcely a matter of doubt, and thus a child may be made a criminal before its birth; or in other words, a moral monstrosity.

REMARKABLE CASE OF A FŒTAL MONSTROSITY.

The case represented in the following cut is one recorded a short time ago in the London *Lancet*. It was the mother's thirteenth pregnancy, and her previous children had been quite perfect. She had received no *fright* of any kind, nor had she been subject to any unusual *longings*.

FIGURE 110.—*Singular Monstrosity.*

A. The heart.—B. The liver.—C. The stomach.—D. The spleen.—E. small intestines.—F. The large intestines.—G. H. The kidneys.—I. The ureter. The feet and legs are conjoined, only the toes being separate.

It will be observed that the upper part of the body and the head are quite perfect, but that from below the chest and the middle of the back, all is imperfect, displaced, and deformed.

About a month previous to her confinement, she had a slight flooding, which, however, increased, and every day more and more blood was lost, up to the time of delivery. This, however, could not have caused the monstrosity entirely, because it is evident the deformity must have existed before the eighth month, and was doubtless the result of some abnormal direction of the nerves and blood-vessels. The deficient nutrition of the parts, however, owing to the loss of blood by the flooding, may have made the case much worse.

In all cases of *deficiency* of any part, there is always an absence of the nerves and blood-vessels of that part, and in all cases of wrong position or deformity the blood-vessels and nerves are wrongly directed, or turned from their usual course. In the same way, if we tie a ligament round the bark of a tree, so as to compress the sap-vessels, the tree will bulge out at that part, or be *deformed*, and if we cut through the sap-vessels entirely, the parts above will die, or be *deficient*.

MONSTROSITY.—DEFICIENCY OF PARTS.

Of all the irregularities of montrosity, instances in which there exist a deficiency of parts are most commonly met with ; and this deficiency may exist in many organs. Among those that can be brought under the examination of the eye, the mouth and lips are perhaps most frequently the seat of this abnormal development. Sometimes there is a simple fissure in the upper lip, forming the single hare-lip ; at other times there is a double fissure, and a want of a greater or less portion of the palate ; sometimes, again, the palate is faulty, while the lips are perfect. Not unfrequently, also, there is some imperfection in the genitals. The interior part of the bladder and the parietes of the abdomen, just above the pubes, have been found wanting ; so also has a portion of the muscles and integuments round the navel. In the former case, the mucous lining of the bladder is continuous at its circumference with the skin, and forms a soft, red, sensitive protuberance in the pubic region ; the ossa pubes do not meet, and the recti muscles are separated to some extent. Such an extensive malformation could not exist without disturbing the arrangement of the genital organs. In the latter, the intestines in the neighborhood of the umbilicus appear to have no covering but the peritoneum, and the chorion and amnion continued from the placenta. Often a large portion of the bowels is received into the cord itself; and cases are on record in which the whole contents, both of the abdomen and chest, were without any covering or skin. The septum between the ventricles of the heart, and occasionally the diaphragm, have been deficient or imperfect. Sometimes one or both arms, at others, the legs, are scarcely formed at all ; and when this is the case, Nature seems to make up for the deficiency by granting an extra growth to other parts ; thus, in a fœtus preserved in the London Hospital Museum, the head and trunk are nearly twice the natural size, while the arms and legs are not more than three inches long. A want of the spinous processes of three or four contiguous vertebræ, is not a very uncommon species of monstrosity. This constitutes *spina bifida*. There is usually a soft fluctuating tumor in the situation of the malformed bones, caused by water contained within the sheath of the spinal marrow. A midwife, under my superintendence, delivered a woman, a few years since, of twins, each laboring under spina bifida situated low in the lumbar vertebræ.

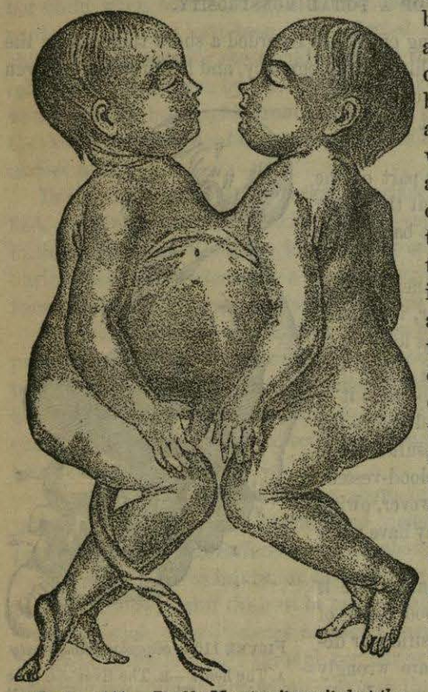

FIGURE 111.—*Double Monstrosity united at the Sternum.*

But the most interesting and singular variety of deficient organization is the *acephalous* monster (that is, literally, brainless). In this there is a total want of the bones at the sides and upper part of the cranium, as well as of the brain and the membranes ordinarily covering it. The base of the skull is ill shaped, and covered by a membrane continuous with the integuments. There is no forehead, but the skull runs backward from the superciliary ridge. Sometimes, under the membrane at the base of the skull, there is a quantity of soft pulpy matter; but more frequently the spinal marrow commences, as it were, abruptly. The preparations of the acephaloid fœtus (which have been multiplied *ad infinitum*, and specimens of which may be found in every museum), prove that the case is by no means very rare ; and they show also that the brain is not essential to our being while in utero ; for many of these children have arrived at the full intra-uterine size—nay, some are actually larger than an ordinary fœtus ; as if nature had intended to compensate for the loss of the brain by allowing an exuberant growth to the body. In these instances the nerves are well formed, and even those of the senses which ordinarily terminate in the cerebral mass itself, such as the optic, are not wanting. Acephaloid children have been known to live some hours, and even days. I myself saw one alive thirty-six hours after its birth, which cried (though feebly), sucked, and seemed to perform all the animal functions much more perfectly than could have been supposed. The spinal marrow has been found wanting in some cases, when the brain was deficient. There is a woman now living in Double X Place, Globe Road, Mile End, who has had six children, and each alternate one has been acephalous, the others healthy, and born living. It has been observed by her attendant, that with each of the monstrous fœtuses there has been an excessive quantity of liquor amnii, not so, however, with the others. Many explanations have been offered to account for the origin of the *acephaloid* fœtus. Professor Rudolphi, of Berlin, indeed has proved, by a collection of specimens, that it originates in *hydrocephalus ;* and the last fact that I have mentioned would seem to bear out this view of the question ; for I have myself frequently observed that when the fœtus is dropsical, there is an excessive quantity of liquor amnii. My

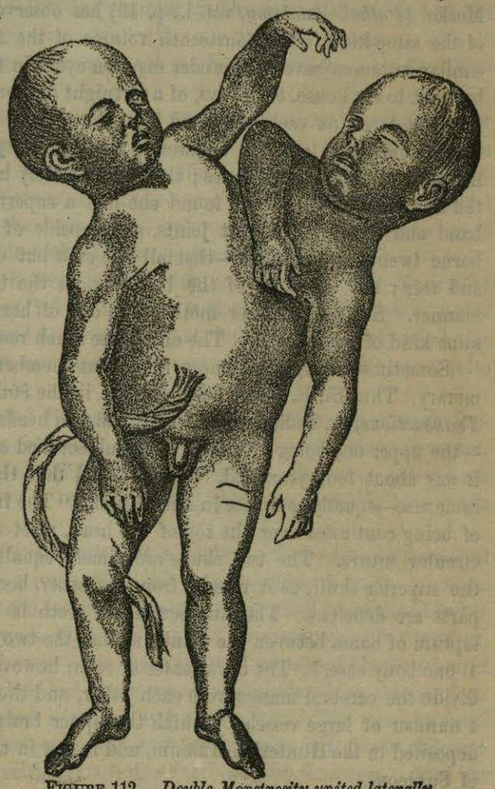

FIGURE 112.—*Double Monstrosity united laterally.*

friend, Dr. Mackenzie, of Glasgow, writes to me, "When visiting the Anatomical Museum at Berlin, in 1817, Professor Rudolphi pointed out to my attention a series of preparations explanatory of the formation of acephali. Embryonic hydrocephalus is the cause. He showed me an embryon, on the upper part of whose head was a vesicle ready to burst—a second, in whom the envelopes of the brain had burst, the pieces floating round the basis of the skull—and a third, in whom these floating remnants were partly gone, thus verging on the common acephalus, as we find it when born after nine months intra-uterine life."

REDUNDANCY OF PARTS.

Organs are not unfrequently redundant: thus occasionally there are supernumerary thumbs, fingers or toes; such an irregularity being sometimes confined to one limb, sometimes affecting all. It is evidently both erroneous and unjust to call a child a monster, merely because it possesses a toe or a finger more than the natural number; for the very word conveys a horrible, or at least an unpleasant, impression. It is worth remark, that this deviation from natural formation sometimes runs in families. Meckel (*Pathol. Anatomy*, vol. i., p. 19) has observed this; there is a curious case of the same kind in the fourteenth volume of the *Medical Gazette*, p. 65; and two similar instances have come under my own eye. In the year 1831, two children were brought to my house, twin boys, of a fortnight old, one of them with a supernumerary finger and toe on each hand and foot, the other with only one extra finger on the right hand; the toes had apparently well-formed joints, by which they were connected to the metatarsal bones; the fingers merely hung by a pellicle of skin. I saw the mother afterwards, and found she had a supernumerary finger and toe on each hand and foot, with perfect joints, and capable of motion. She told me she had borne twenty-one children—that all the girls but one were born with extra fingers and toes; but only one of the boys, besides the twins, was affected in the same manner. She also said her mother and one of her sisters were the subjects of the same kind of irregularity. The other case much resembled this.

Sometimes a larger and more important member than a finger or toe is supernumerary. Thus Sir E. Home has described, in the 80th volume of *The Philosophical Transactions*, an Indian child which had two heads, united together at their crowns—the upper one being inverted. The subject died of the bite of a rattle-snake, when it was about four years old. It was found that the two skulls were nearly of the same size—equally complete in ossification. "The frontal and parietal bones, instead of being continued over the top of the head, meet each other, and are united by a circular suture. The two skulls are almost equally perfected at their union; but the superior skull, as it recedes from the other, becomes imperfect, and many of its parts are deficient. The number of the teeth is the same in both. There is no septum of bones between the crania, so that the two brains must have been contained in one bony case." The dura mater of each, however, was continued across, so as to divide the cerebral masses from each other, and their membranes were perforated by a number of large vessels by which the upper brain was nourished. The skull was deposited in the Hunterian Museum, and is now in the possession of the Royal College of Surgeons.

In the lower animals, monstrosities occur much more frequently than in man; and the domesticated are more obnoxious to these irregularities than those in the wild state. Monstrous pigs, sheep, puppies, kittens, ducks, and chickens, are to be seen in every collection of specimens devoted to the elucidation of the subject of reproduction.

Two children have been joined together by the back, the sides, and by the sternum and abdomen. Figures 96 and 97, the originals of which are in the London Hospital Museum, show the possibility of such a confusion. Nor are such specimens by any means singular; but many similar are preserved. Instances, indeed, are not wanting of individuals variously connected by nature, surviving their birth, and even living to maturity.

The Siamese twins were connected only by a band about four inches long and eleven in circumference, situated at the lower part of the sternum, involving the ensiform cartilages, and possessing at its lower face an umbilicus. The length of the band allowed them to turn a little sideways towards each other. Their nervous systems seemed to act more in unison than in the case of some others; for they both slept at the same time, and one could not be awakened without rousing the other; their pulses were not always alike. Hunger affected both simultaneously; they both preferred the same kind of food, and were both satisfied with nearly the same quantity, and at the same time. But the vascular systems were distinct, or had but slight communication; for asparagus eaten by the one did not impregnate with its peculiar odor the urine of the other; and not the least pulsation could be distinguished in the band.

The Siamese twins are now dead, after having lived thus conjoined for many years. They married two sisters, and both had families. One died first, and the other did not long survive his separation from him. It was found, on the post-mortem examination, that the liver of one, and some of the larger vessels, extended along the band of union into the body of the other, so that they could not have been separated with safety, as Sir Astley Cooper suspected.

While this book is going to press there is now exhibiting in New York City "The Benoit Twins," two sisters, joined together something like the two in figure 112. The two bodies, heads, and arms are distinct, but they have only two lower limbs between them. They are now some five years old, in good health, and quite lively.

In such a case each head seems the seat of a separate intelligence, though probably there is a sympathetic connection between them. One may sleep, however, while the other is awake, or feel hunger or thirst when the other does not. Each seems to influence one of the lower limbs only, and there are probably some parts equally under the control of the two.

Instances also are recorded of the union of a perfect with a partially developed body, of which A-Ke, a Chinee, sixteen years old, may be adduced as an example. He had the loins, nates, upper and lower extremities, of a small parasitical brother escaping from the abdomen between the umbilicus and the sternum. This prodigy, I believe, was shown in England some years ago, and small models of his person must be familiar to every one who has had the curiosity to inquire into this subject. Another case very similar to the last is related by Ambrose Paré. The man exhibited himself in Paris in 1530, was forty years old, and had growing out of his abdomen a small body, perfect in all its parts, but wanting the head and shoulders. Paré has given a drawing of this, as well as many other monstrous productions, and Palfyn gives the history of a man having a small body attached in the same way; but in

this instance, also, there were arms external, and the head only was wanting. Winslow relates that he saw a girl of twelve years old, well-formed, and of the common size, with the abdomen and lower extremities of another body hanging from the left side of the epigastric region; and in the 79th volume of *The Philosophical Transactions* there is an account of a well-made Gentoo boy, who had the pelvis and lower limbs of a little brother suspended from the pubes.

Rueffe, Paré and Palfyn all speak of a man, alive in 1519, from whose abdomen a small though well-formed head appeared to grow; and Winslow saw, in 1698, an Italian, who had another head much less than his own, connected to the chest below the cartilage of the third rib. The man felt any impression on this *extra* head.

Again, an imperfect body has been found entirely enclosed within another. In the *Gentleman's Magazine* for December, 1748, mention is made of a child born with a large bag extending from the perineum to the toes, which in a few days burst, and a mass of florid flesh protruded, in which were distinctly perceptible a hand and foot, with perfect fingers and toes; but no organs could be traced, nor any rudiments of either sex. Richerand mentions the case of a lad who died at thirteen years old, and who, from his earliest infancy, had a tumor on the left side of the lower part of the abdomen, which was very painful. He was seized with fever and increase of pain in the prominent part, and voided by stool purulent and fetid matter, and a ball of hair, after which he soon sank. The tumor was found to consist of a cyst, having a recent communication with the transverse colon, and containing the rudiments of a fœtus. There was discovered a brain, spinal marrow, very large nerves, muscles, and the skeleton of the head, vetebral column, pelvis, and imperfect limbs, with a short umbilical cord attached to the mesocolon. No organs of digestion or respiration, urinary or generative, could be found. The case was drawn up at length by M. Dupuytren, and drawings were made by MM. Cuvier and Jadelot, and a detailed account was published in the *Bulletin de l'Ecole de Medicine, Gazette de Sante*, 1804, and some other works of the period. A somewhat similar case was published by Mr. George Young, in the first volume of *The Medico-Chirurgical Transactions;* it was of a child whom he saw frequently during life, in consequence of a tumor in the abdomen, which gradually increased till his death; he survived nine months. A cyst was found occupying a large portion of the abdomen, which contained four pints, fourteen ounces of greenish-looking fluid, and an imperfectly-formed fœtus adhering to it by a conical process arising from the umbilicus. The surface was covered with that sebaceous matter so usually found on the skin of infants at birth; and the skin itself was rosy, and of a healthy look. The extremities were distinct, but short and thick; the fingers and toes were furnished with nails; there was a well-formed penis and a cleft scrotum. There was no brain, nor spinal marrow, nor diaphragm; neither heart, nor liver, nor urinary organs, nor any internal organs of generation. Scarcely any muscular fabric was discovered in the whole mass. The alimentary canal was the most perfectly formed of the internal organs; a part of the intestines, indeed, was in all respects naturally constructed. Mr. Highmore, a surgeon of Sherbourne, in Dorsetshire, opened the body of a boy named Thomas Lane, between fifteen and sixteen years old, in June, 1814, in which he found the rudiments of a human fœtus. The two last-mentioned specimens are preserved in the Museum of the Royal College of Surgeons.

In *L'Historie de l' Académie Royal des Sciences*, vol. ii., p. 298, 1733, there is an account given by M. D. Sainte Donat, a surgeon at Sisterton, of a fœtus found in

the scrotum of a man. And Velpeau presented to the Paris Academy, in 1840, a preparation of the rudiments of a fœtus—the whole mass being as large as a doubled fist—which he had removed from its connection with the right testicle of a man, æt. 27, named Gallochat. The tumor had existed from his birth.

Parts misshapen, though properly situated, are by no means uncommon; sometimes this unnatural formation is the result of defective, sometimes of redundant organization; thus the different features of the face may be malformed; the scrotum is sometimes cleft; the urethra and rectum imperforate. Club feet are usually classed among this variety of monstrosity; but it appears to me that they often owe their origin to accidental causes rather than natural formation. The distortion may not unfrequently arise from the limb being cramped in utero, owing, perhaps, to the awkward position in which the child lies, or to there being but a small quantity of the liquor amnii.

Misplacement of perfectly-formed parts is the least common of all kinds of monsters. I do not know that, even among all the extravagant stories in the older works, there is any account of a well-formed arm rising from the pelvis, or a leg from the shoulder; and we should certainly not give credence to it, were we to meet with such a tale. But the viscera have occasionally been found transposed, both in the chest and abdomen; and such a case may be considered a monstrosity of this description. When the viscera of the chest are transposed, those of the abdomen are almost always in the same condition; but there are some exceptions to this general observation. I do not know any instance on record, however, of the abdominal viscera being transposed, where the chest did not also participate in the malformation. In the 18th volume of *The Medical Gazette* p. 393, for June 11th, 1836, there is a paper by Dr. Watson, in which he enumerates thirty-three cases of this irregularity; nineteen of the subjects were males, six were females, and in eight the sex is not mentioned. In four the anomalous formation was detected during the lifetime of the individual. A fœtus with the heart on the right side, and other viscera transposed, is preserved in the London Hospital Museum; the subject was in other respects misformed. And in the same volume of *The Medical Gazette* just cited, p. 600, a case is given by Mr. Cooper, of Brentford, of a female infant, in which the viscera of the chest were transposed; but those of the abdomen were in their natural situation; so that these cases are not so singular as some have imagined.

It may be thought a needless waste of time to enter so much at large upon subjects from which no practical good appears likely to result; but its interest has seduced me into these details. Besides, by studying nature in her imperfections and irregularities, we are more likely to arrive at some knowledge of her laws, than if we regard her only in her healthy condition. By learning what parts she can dispense with, we ascertain those organs essential to existence, and by tracing the deviations from her common course, we may perhaps be hereafter led to a more correct acquaintance with her mode of operation.

ORIGIN OF MONSTROSITIES.

It is not my intention to endeavor to account for the origin of monstrous formations in general; but I may cursorily state, with regard to deficient and redundant monsters, that some suppose the germ, before impregnation, is improperly formed; others, that it is an undue admixture of prolific particles at the moment of fecundation; others, that monstrosity has taken place after conception, owing to some