ON
CONGENITAL
TUMOURS OF THE PELVIS.

By EDWARD STANLEY, F.R.S.,
SURGEON TO ST. BARTHOLOMEW'S HOSPITAL.

READ JUNE 22ND, 1841.

THERE are various forms of congenital tumour attached to the pelvis, the discrimination of which becomes of much importance with reference to the question of their removal by operation. When it is recollected that in a case of this description, the question for decision may be whether the unnatural growth should be at once taken away, or allowed to remain with the probability of its increase to such a magnitude that the individual, in consequence of the unsightly appendage to his body, would be wholly withdrawn from society, any contributions to the accurate knowledge of this subject will probably be acceptable, and especially as the records in reference to it already made are not so complete as might be desired.

The following case occurred under my observation in the year 1836. I was requested to see a child, four months old, born with a soft pendulous tumour,

about the size of an orange, attached to the lower and back part of its body. In every other respect the child appeared to be perfectly formed and healthy. Mr. Bryan and Mr. Harding were the medical practitioners in attendance, to whom I am indebted for the opportunity of watching the progress of the case. With the growth of the child, the tumour progressively increased, and in proportion to the rest of its body; it continued to thrive well to the age of two years, when it was attacked by measles, with other children of the family, producing much constitutional derangement, under which it gradually sunk. At the time of its death, the following were the dimensions and general characters of the tumour: its circumference measured fourteen inches and a half; a line extending from its base to the most prominent point of its centre measured four inches and a half. The base being very broad, covered the whole of one buttock, and extended across the sacrum to the opposite side of the pelvis. The skin covering the tumour was natural; some large and tortuous veins were seen ramifying in the subjacent cellular tissue. Upon some parts of the tumour there were shallow grooves, which were supposed by many who examined the case to correspond with depressions between folds of intestine within the tumour. The surface of the tumour was generally soft, but in some situations, portions of a firm substance, resembling isolated pieces of cartilage, were recognised in it, and it was remarked that these points of resistance were not always to be felt in

the same situation. Pressure of the tumour did not cause a diminution of its size, so as to justify the belief that any portion of it receded into the body. A finger passed into the rectum discovered a portion of the tumour extending into the cavity of the pelvis by the side of the intestine. When the child cried loudly, the tumour became tense ; this showed its communication with the interior of the body, and it was thought by some to indicate the probability of its communication with the spinal canal, in accordance with the views of Magendie, that there occurs a movement of the contents of the spinal canal in connection with respiration, and dependant on distension of the vessels of the cord and its membranes.

With every prospect of the child continuing to thrive, and with the observation of the progressive increase of the tumour in proportion to the growth of the body, the question of its removal became important, and it was difficult of decision, on account of which the case was seen at different periods by Sir Astley Cooper, Sir Benjamin Brodie, Mr. Thomas Blizard, and many other surgeons. Mr. Blizard was impressed with the idea of the removal of the tumour being practicable and safe, from the recollection of a similar case upon which he had operated with success, the history of which will be presently given. The objection to the operation was not so much from the magnitude of the tumour or from the circumstance of a portion of it extending into the pelvis, but chiefly from an

apprehension that it communicated with the spinal canal, although no circumstances had been observed which indicated such a connection ; there was no defect of motion or sensation in the lower limbs, nor did pressure upon the tumour occasion such consequences as might have been apprehended if it had communicated with the spinal canal.

Permission having been obtained to examine the body of the child, a cast of the tumour was in the first place taken. Then, upon examining its interior, this was found to consist of an assemblage of different tissues. One portion of it was solid throughout, and closely resembling in its characters the ordinary fibrous tumour of the uterus. Another and larger portion consisted of two cysts, one enclosing the other ; the sides of these cysts were membranous, and their texture dense and fibrous, each cyst containing a transparent yellow fluid. A narrow and solid portion of the tumour was found to extend through the inferior aperture of the pelvis upwards within its cavity, nearly to the top of the sacrum, chiefly occupying the right side of the pelvis, and in consequence compressing the bladder and rectum, not, however, apparently to the extent of materially interfering with their functions. There was no attachment of the tumour to the sacrum, otherwise than by loose cellular tissue. The sacral canal was completely closed, and accordingly had no communication with the tumour. The information derived from the examination of the extent and connections of the tumour appeared

to confirm the opinion that its removal might have been safely undertaken in an early stage, when, from the smaller extent of the tumour, it might have been practicable to draw downwards the portion of it from within the pelvis, as it had no other connections with the surrounding organs than by loose cellular tissue.*

The following is the history of the case upon which a successful operation was performed by Mr. Blizard, as it was drawn out by himself:—

“ A female child, about two years of age, was brought to me by its mother, with a tumour attached broadly to the sacrum, and thence extending nearly to its feet. A careful examination, both externally and internally, by introducing the finger into the rectum, led to the conclusion, that the tumour had no communication with the internal cavities or spinal canal, and that its removal might be safely accomplished. Attention was paid in the division and separation of the skin, to leave what would be sufficient to cover the wound, and admit of union by a simple line. In the course of the removal of the integuments from the tumour, there presented what appeared to be a portion of intestine of a dark colour, owing to its contents, which, when afterwards examined, had the closest resemblance to meconium. This occurrence caused for an instant much anxiety, but the careful examina-

* The preparation is contained in the Museum of St. Bartholomew's. For the representation of it see Plate V.

tion with a finger in the rectum afforded the conviction that the tumour had no communication with the abdominal or pelvic cavity, and accordingly the operation was proceeded with and finished. The divided parts were accurately brought together, and united by the first intention. In a fortnight the child had quite recovered from the operation, and was now able to walk, which it had not before done, in consequence of the weight and position of the tumour. Many years afterwards I had the opportunity of ascertaining from the mother that her daughter grew up a fine girl, living to the age of thirteen, when she died of consumption."

Healthy skin covers the tumour; its form is oblong, its length is seven inches; its circumference at its broadest part eleven inches; its lower end is rounded, and the skin is here divided by fissures into separate portions, which were supposed to be the rudiments of fingers or toes. Within the upper part of the tumour, immediately beneath the skin, and so near its attachment to the body of the child as to be included in the incision for its removal, was the portion of intestine of which mention has been made in the foregoing history; its length is three inches and a half, its external characters are those of a portion of large intestine with an appendix vermiformis continued from it, perfectly formed, and in size corresponding with the large intestine and appendix of a foetus at its full period. The inner surface of the intestine presents folds arranged regularly and in a longitudinal direc-

tion. At one extremity the intestine is closed, and by its rounded form resembles the cæcum, and it is from this part that the narrower process resembling an appendix vermiformis is continued. At its opposite extremity, it is to be presumed that the intestine was also closed before the incision was made into it in the removal of the tumour. On its outer surface the intestine had a close cellular connection with a surrounding solid substance, of which the rest of the tumour consists. This substance is divided into separate portions, circumscribed and of a globular form, one the size of an orange, and others of smaller dimensions, and consisting throughout of a dense fibrous texture. In the cellular tissue uniting these fibrous tumours, was found a portion of bone, about the size of an adult os lacrymale, but presenting no resemblance of form to any bone in the skeleton.*

In the eighth volume of the work intituled *Medical Facts and Observations*, a case of congenital tumour of the pelvis, analogous to the foregoing, is recorded by Mr. W. Simmons, Surgeon to the Manchester Infirmary. The child lived to the age of two years, when the surface of the tumour became ulcerated, and discharged an ichorous fluid, attended with irritation, which was fatal. In the examination of the tumour, its principal attachment was found to be by a ligamentous substance extending to the os coccygis of the child. The tu-

* The tumour is deposited in the Museum of the Royal College of Surgeons. The examination of it was made by Mr. Clift, whose drawings of it were exhibited to the Society.

mour consisted of a mass of fat, containing in its centre a closed intestine, more than a foot in length, and filled by a fluid resembling meconium. There were also found dispersed through the tumour, several processes of bone, some resembling tibiæ, others the bones of the hand and foot, and there were some unlike any part of a perfect skeleton.

Professor Clarke of Cambridge has furnished me the following particulars of a case of congenital tumour of the pelvis, of which he made the examination. "About five years ago the subject of the tumour, a girl aged ten months, was brought to Addenbrooke's Hospital, in the hope that it might be removed. She had good health, was well nourished, and possessed the free use of her legs. After a short residence in the hospital, during which nothing was done, a small ulcerated portion of the surface of the swelling gave way whilst the nurse was dressing the child. A vast quantity of water escaped, and death suddenly ensued. The case was believed by most who saw it to be spina bifida. The tumour occupied the sacral and the two glutæal regions, descending as a large spherical mass as low as half way down the thighs. The fluid which escaped from it was limpid and colourless; it was not tested. I had some doubts of this being a case of ordinary spina bifida, from the large size of the base of the tumour. This was not constricted as though it communicated with the spinal canal by a moderate opening. The sac which contained the fluid was formed of skin, subcutaneous tissue, the glutæi

maximi distended so as to form a thin muscular expansion, and an albuminous membrane innermost. This latter membrane was continued into the cavity of the pelvis, through the great sacro-ischiatic foramina, and there it appeared to be reflected over a tumour as large as a swan's egg, situated, as it seemed, upon the anterior surface of the sacrum, but which really communicated by its root, with the cavity of the spinal canal. Beyond this, the opportunity was not afforded of continuing the examination."

The size, form, and situation of the tumour are shown in the annexed engraving.

There is a specimen of congenital tumour of the pelvis in the Museum of St. Bartholomew's, which differs in its characters from those already described; it was obtained, and the examination of it made by Mr. Wormald. The child was born at the full period, alive, with a tumour as large as two closed hands, attached to the lower and posterior part of its body. In the progress of the child through the inferior aperture of the pelvis, the tumour burst, and discharged a large quantity of sanguineous fluid. Directly the child was born, it cried loudly, and moved its limbs freely, but its cries and its movements became gradually feeble, its skin at the same time becoming pale, from which it was conjectured to be dying from internal hæmorrhage; it lived but two hours. The tumour was found to consist of one large cyst, with smaller cysts attached to its internal surface. Within the large cyst there was found some coagulated blood; the smaller cysts contained a serous fluid. The sides of the large cyst are composed of a thin smooth membrane, covered by healthy skin, and firmly attached above to the bones constituting the boundaries of the inferior aperture of the pelvis. The coccyx and lower end of the sacrum project into the cyst, and there is a portion of the same cyst continued upwards within the pelvis between the anterior surface of the sacrum and the rectum. The anterior sacral holes communicate with this portion of the cyst, and some filaments of the sacral nerves are continued from these holes to the inside of the cyst, where they are distributed. Through

the sacral holes, the cyst communicates with the cellular tissue on the outside of the theca vertebralis, between this and the surrounding bony walls of the spinal canal, but it has no communication with the interior of the theca ; this is completely closed.

It appears unnecessary to furnish additional cases and references, as the foregoing series is sufficient for the object of illustrating the principal circumstances in the history of these congenital tumours of the pelvis. The varieties in their nature permit them to be arranged in four classes.

First. The cases wherein the tumour is composed wholly of morbid structures, which, although formed during foetal life, have no peculiar character, the solid tissues mostly resembling the ordinary fibrous tumours of the uterus, and the membranous cysts being analogous in their nature and contents to the corresponding anormal structures formed at other periods of life.

Secondly. The cases wherein the tumour is composed of morbid structures in conjunction with isolated portions of perfectly-formed animal organs, having no other relation to the living being with which they are connected, than as they are dependent upon it for the means of nutrition and growth. These cases must be considered to belong to the class of parasitic monsters, constituting intra-foetation, the inclusion of one foetus within another, and, in accordance with the present theories on this subject, supposed to result from the cohesion or intus-susception of germs, when more than one ovulum is contained

in the same vesicle, under which circumstances there will arise either the union of two perfect foetuses, as in the instance of the Siamese twins, or the growth of one foetus to its perfect form, with but the portion of another foetus attached to it, as in the remarkable case recorded by Velpeau, where a tumour which was removed from the scrotum of an adult was found to consist of several bones, with other distinct parts of a foetus.*

Thirdly. The cases wherein the tumour, being of the nature of spina bifida, consists of a membranous cyst, communicating with the interior of the theca vertebralis.

Fourthly. The cases wherein the tumour is composed either wholly, or in part, of membranous cysts, communicating with the spinal canal, but exteriorly to the theca; thus in one of the cases related, a probe passed from the cyst, of which the tumour in part consisted, through one of the anterior sacral holes into the cellular tissue between the theca of the cord and the bony walls of the canal.

It will be observed, that in all the cases noticed in this paper, the congenital tumour projected from the posterior and inferior part of the pelvis; its situation, consequently, was such as to allow of removal by operation but from the apprehension that there might be some deeper portion of it extending to the interior of the pelvis, and more especially from the apprehension that the tumour might be of the nature of spina bifida, and accordingly that its interior would be found to be continuous with the membranes of the spinal cord.

* Gazette Medicale, February 1840.

We learn from the foregoing histories that the general character of these congenital tumours, whatever may be their nature, is to increase progressively, and in proportion to the rest of the body ; hence arises the important question of their removal : and it must be added, that this question will in general be extremely difficult of decision, for the reason that no outward mark or symptom can be referred to as distinguishing the tumour composed wholly of morbid products, and having no other connection with the body of the child than by cellular tissue, from the tumour which, by the continuity of its interior with the membranes of the spinal cord, is of the nature of spina bifida ; yet the operation of removal, in one case accomplished with a fair prospect of success, would, in the other, be certainly fatal. And, accordingly, it has happened in one of these cases, that an operation commenced with the expectation of a successful result, has been stopped in its progress by the discovery of a pedicle extending from the tumour to the interior of the spinal canal. Mobility of the congenital tumour does but indicate the probability of its having no connection with the vertebral canal, as the means of this connection may be a narrow pedicle, permitting free movement of the tumour upon the walls of the pelvis. Also to the existence of a narrow pedicle and a small opening of communication with the vertebral canal, we may refer for explanation of the frequently observed fact of pressure of the tumour causing no portion of its contents to recede into the

canal, and thus occasioning symptoms of compression of the spinal cord or brain. Any derangement of the nervous functions in the lower limbs would of course be evidence of the probability of the connection of the tumour with the spinal cord; but it must be recollected that the instances are not infrequent of spina bifida co-existing with a perfect integrity of function in the spinal cord and its nerves.

A circumstance of physiological interest will be noticed in two of the foregoing cases, namely, the existence of a fluid in the isolated portion of intestine within the parasitic monster, which in colour and other obvious characters closely resembled meconium, although there existed no liver or other distinct hepatic apparatus which could have furnished the colouring matter of this fluid, and there was certainly no communication between this portion of intestine and the intestinal canal of the child to which the parasitic monster was attached. An analogous fact occurred to my observation, many years ago, in the examination of an acephalous lamb, in which, with perfectly-formed stomach, intestines, spleen and kidneys, the liver was wholly wanting, and yet within the intestines, especially the large, there was found a considerable quantity of a dark yellow and thick fluid, not to be distinguished by its appearance from meconium. When diluted, the colour of this fluid was exactly that of healthy bile, but it was not bitter to the taste, and in this respect it differed from the perfect meconium of the human foetus, which imparts to the tip of the tongue the peculiar bitter flavour of bile.

Engraving from Nature by J. Schaeffer.