ON
A PECULIAR FORM
OF
CONGENITAL TUMOUR
OF
THE NECK.

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A VARIETY of tumours are met with in new-born infants, which are liable to immediate or future increase, having, for the most part, a single cyst, with various contents.

In some of these cysts there are portions of organized material, scalp, or cranial bone, or jaw bone, or nearly an entire fœtus, which can scarcely be supposed to arise from any cause other than an imperfect development and junction of two embryos in utero.

In a second class of congenital encysted tumour are some peculiar secretions,—stearine, or fatty matter, generally mixed with hair, too deeply situated to

arise from the follicles in the skin,—shining particles, called by Chevreuil and Dr. Prout margaritic acid ;—or pulpy matter, like rotten medlar or apple, and other materials, which, although occasionally seen also in after life, are most frequently found about the time of birth.

A third class of cysts are occasionally met with in infants, but not so frequently as at a later period of life ;—serous encysted tumours in any cellular texture ; sebaceous encysted tumours in the cutaneous structure ; or mucous encysted tumours, formed in the same manner as the last, but in the follicles of the mucous texture, or in the excretory ducts of glands.

I have mentioned these different kinds of encysted tumours, which may be met with in infants, in order carefully to exclude them from consideration ; the object of the present paper being, not to speak of any single cyst, but of a peculiar form of congenital tumour, which is composed of many cysts joined together, in which the proportion of organized matter is so considerable, as to give a more solid character to the tumour, and make it deserve the name of cystic tumour, as much as the apparently analogous cases of cystic sarcoma, occasionally found in the breast, testis, or ovary of adults.

I have met with seven such tumours in the necks of young children, where a correct diagnosis is so important ; and as the feeling and appearance of the tumour are somewhat obscure, I am led to hope that the following account may not be useless, and the

two following cases may serve to show the common forms in which the tumour presents itself,—one being of large size, the other small.

A child, about eight months old, was brought to me from Mr. Julius, of Richmond, having a large tumour on the right side of the neck, which was of the size of a small orange at its birth, and had gradually increased since that time. The tumour now reached from the zygoma to the coicoid cartilage, and from the mastoid process to the chin; it projected outwards about three inches, so as to make the side of the face and neck appear nearly twice as large as the opposite side; and it extended also below the jaw, into the mouth, so as to push the tongue considerably to the opposite side and upwards. But although it caused much unsightliness, it appeared to occasion no pain nor inconvenience, and the child was quite healthy.

The skin was unaltered, and unattached to the tumour, and had much fat below it, and the outline of the tumour was smooth and uniform to the eye; on feeling it carefully, however, it was evident that there were several globular irregularities, some of which were of hard consistence, as if solid, and possibly glandular, but four others in the parotid and sub-maxillary glands appeared to contain fluid, which was the more probable, as two other cysts were perceptible below the tongue, transparent, like ranulæ, but containing a dark red fluid.

The cysts were punctured from time to time, as they refilled, and the same plan was pursued with

several other cysts, which came forward as those first observed were obliterated ; each cyst contained from a drachm to half an ounce of liquid, the contents of some being nearly clear water, with very little trace of mucus or albumen, but the secretion of others being of a darker colour, with more coagulable matter, so as to resemble melted currant jelly. Friction was also employed, with hydriodate of potash ointment in the intervals of the punctures.

This treatment was continued for about a year, when the disposition to secrete fluid appeared to be subdued, and the swelling was about a third of its original size, and what remained felt and looked like a loose pendulous bag of fat and skin, with two or three solid lumps, like glands, below. I have lost sight of the child from that time, but on applying recently to Mr. Julius, who continued to see it, he has been kind enough to inform me, that the child has been removed from Richmond for several years, but that when he last saw it, there was no tumour remaining.

The appearance of the tumour in this case was more complicated than in the next which I will mention, which Mr. Palmer attended, at the St. George's and St. James's Dispensary, and which he requested me to look at. The tumour was, in this instance, about the size of an orange, and was soft and elastic, moveable, and nearly pendulous, from its weight, and was situated in the same place as in the last case, in front of the ear, and below the jaw. It gave no

pain nor inconvenience, and had scarcely increased in size since the birth of the child, who was now about a year old. The skin, as in the other case, was unattached, and had much fat below it, and there had been, I believe, some thoughts of removing the disease as a common adipose tumour. There were in it, however, several round bodies, two of which appeared to contain fluid, but the nature of the others was more doubtful. One of these, at the margin of the parotid gland, contained three drachms of clear liquid, but the other being punctured, no fluid escaped through the needle. With the final result of the case, I am not acquainted, as the child was not brought many times to the Dispensary.

The other cases were intermediate, in many respects, between these two ; one of which, it appears from this account, contained altogether about a dozen cysts, large enough to be punctured, while only one or two such were present in the other tumour ; in one, the cysts presented in the mouth, as well as externally, (of which I have seen one other instance,) while in the other, the tumour was solely on the external part of the neck ; one increased steadily, the other scarcely altered from the time of birth ; in one the cysts were easily distinguished, while in the other the projecting bodies felt more solid ; in consequence, as dissection shows, of the cysts being very small and closely set together.

I was inclined to think, from the situation which the tumours occupied in the first two cases that fell

under my notice, that the cysts might arise from obstruction of some of the ducts of the parotid and submaxillary glands ; but I have seen a congenital tumour, composed of several cysts of serum, occupying the whole axilla, and projecting in the neck and below the arm, and raising the pectoral muscles in the intermediate space ; and in a case of apparently the same nature, described by Mr. Arnott, in the Medical Gazette of March 16th, 1839, the cystic tumour was equally remote from the salivary glands, being in the posterior part of the neck, behind the sterno mastoid muscle. The following fatal case appears to me to demonstrate the nature of the other cases, especially when considered with Mr. Arnott's, the operation for which I shall presently allude to.

A child, eleven weeks old, was sent to me at St. George's Hospital, by Dr. Willis, with a tumour in the neck : it was emaciated to the last degree, and actually smaller, according to the mother's account, than when it was born ; as, in fact, it had scarcely digested any food from its birth, almost every thing that was swallowed, or attempted to be swallowed, being nearly directly vomited again : it had also scarcely slept since its birth, as, whenever laid down in the horizontal position, it was instantly roused from slumber by impending suffocation ; whatever rest it did obtain was therefore procured while held nearly upright in the arms. Notwithstanding this however, it did not cry or breathe, when awake, as if there was any constant pressure about the glottis,

nor was the tumour in the neck so tense as to account for the symptoms, unless some portion was intricately connected with the larynx and œsophagus, independently of the general tenseness of the whole tumour ; which did not appear very probable, from the facility with which respiration was ordinarily performed. On the right side of the neck was a tumour, the prominent part of which was of the size of a large orange, and which reached from the zygoma nearly to the clavicle, and from the ear to the chin, across the upper part. It was soft and elastic, and the skin was healthy and unattached, and it seemed to be quite free from pain or tenderness.

Below the jaw I could detect three or four small cysts of fluid, and one or two smaller, and apparently solid bodies, like glands ; but the greater part of the tumour in front of the ear did not fluctuate, nor present any irregularity of surface, but was soft and elastic, and compressible, like a subcutaneous nævus, which disease it resembled, also, in becoming more tense and prominent from crying or struggling, and below the mucous membrane of the mouth were several varicose vessels, like those observed sometimes in the neighbourhood of blood-vessel tumours. The child appeared to be too far reduced for any treatment, and died a few days afterwards, suffocated suddenly after having apparently suffered a good deal of pain for a day or two ; and I obtained permission to examine the body, for which purpose Mr. Hewett was kind enough to accompany me.

When the thin skin covering the tumour was turned back, it appeared to be of the size of two oranges, separated by a deep sulcus, which was formed by the tendon of the digastricus muscle, which being much pushed forwards by the tumour, must have had its actions in connection with the larynx and pharynx much interfered with. The disease was now seen to be composed of a great number of small cysts, many hundreds probably, varying in size from a pea to a walnut, closely joined together, and composed of delicate membranes, like very fine peritoneum, but in some parts covered by fibrous structure, giving the cysts the appearance of thin pericardium, and very few of them were so far insulated as to admit of being dissected out without cutting through others. The fluid in most of the cysts was transparent, with scarcely any trace of coagulable matter, but in others the contents were of every shade of red, even as dark as venous blood, but without any coagulum, and evidently only coloured secretion.

The softness and elasticity of the prominent part of the tumour, arose from most of the cysts in that situation being flaccid, and only half filled ; in other parts single cysts were so tense as to be quite unyielding, as if solid, and a feeling of solidity was also given by a few cysts being more closely joined together than those by their side ; and in one or two parts a tense cyst projected into another in a flaccid state, so as also to feel like a solid body ; although the only really solid bodies were two or three small

absorbent glands, mixed with the cysts. The portion of the tumour in front of the ear was covered by a thin layer of condensed parotid gland, another part of which, in a healthy state, lay behind the cysts, through the middle of which ran the portio dura, and external carotid artery. The submaxillary gland was pushed out by other cysts, so as to be loose below the skin, and all the vessels and nerves at the base of the jaw were surrounded by some of the cysts, and curiously twisted in their course.

On dissecting deeper, the cysts were found to extend along the front of the spine, behind the pharynx and œsophagus, some being as high as the basilar process, and some as low as the sixth cervical vertebra; and along the whole length of the neck the cysts surrounded the carotid artery, jugular vein, and nervus vagus, which were even separated from one another by some cysts formed in their sheath. None of these bodies were very closely united to the œsophagus and pharynx, and there seemed to be nothing morbid about the glottis, except a slight thickening of the mucous membrane.

It is evident from this account, that the numerous cysts which compose the tumour are formed in the common cellular tissue; each separate cyst, it is to be presumed, being like the single serous encysted tumour met with in many parts of the body, at every age; why such numbers should be formed at once before birth, does not appear, unless it arise from the peculiarly lax and watery nature of the cellular

membrane in the foetus, especially, perhaps, in the neck, where I believe such a tumour to be more common than elsewhere.

The number of cysts existing in the tumour, and the different degrees of consistence of the whole or of separate parts in different cases, arising, as the dissection demonstrates, from the size and state of tension, and relative position of individual cysts, make the diagnosis of the tumour somewhat obscure. When numerous, and full of liquid, and small in size, they feel like enlarged glands, or other solid globular bodies ; when numerous and only half filled, they become soft and compressible ; but in both these cases the existence of fluid is difficult to be detected, in comparison with those cases in which only a few larger cysts exist.

The resemblance to fatty tumours is considerable, and the deception is assisted by the quantity of fat generally situated beneath the skin, and filling up the inequalities of the surface of the tumour. They are also much like a subcutaneous nævus, which is so often developed in the same situation, when the cysts are half-filled ; in the fatal case I have related, the softness and compressibility of part of the tumour, its increase from exertion, and the varicose vessels within the cheek and mouth, made me think it probable that some part of the tumour was composed of blood-vessels, though the nature of the remainder was clearly perceptible. In each case that I have seen, however, the existence of globular bodies in some of which fluid was perceptible, distinguished

the tumour from every other kind likely to be formed in infancy.

In the treatment of these complicated cystic tumours, the mobility and apparent insulation of portions of the tumour, whether the projecting part be taken for a single cyst or for solid matter, leads to the idea of an easy dissection of the tumour from its connexions; while the real nature of the disease shows how totally impracticable an operation of this kind would be found, in many cases, from the inaccessible situation and intricate connexion of the deeper parts, with important blood-vessels and nerves passing in every direction between the cysts.

In the case of Mr. Arnott's to which I have alluded, the tumour was situated in a somewhat less important situation behind the sterno-mastoid muscle. A single cyst was opened first, when the infant was a month old, and repeated once more, and when five months old, this was laid open, in order to remove what appeared to be a solid body, but which was found to be composed of a multitude of small cysts, as in the cases previously narrated. The tumour was followed under the sterno-mastoid muscle and carotid artery, and behind the pharynx, and its total excision being found impossible, a ligature was tied round the deeper part. The child ultimately did well, but the ligature was not entirely thrown off for three months, during which time repeated attacks of erysipelas occurred.

The history of this case is not, therefore, an en-

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couragement for the performance of excision, in the more important parts about the angle of the jaw ; at the same time, the occurrence of a fatal case would justify severe measures, if others fail, and shows the necessity for early attention to the tumour.

With regard to other treatment, I have only presented one completely successful case to the Society ; but the progress made in the rest by similar means, when I lost sight of the children, leads me to believe that they also would have been cured. This treatment was on the same principles that are often successful in the analogous serous encysted tumours, composed of one cyst instead of many ; and also in the tumours formed by obstruction of the ducts of glands, as in the *mammæ* or salivary glands, or in the mucous follicles, as in the vagina or mouth.

1. The cysts may be emptied, from time to time, by a grooved needle, so that there is no scar whatever ; or by a lancet, when they are situated in the mouth ; the punctures heal directly, and the emptying the larger cysts appears to assist the action of other remedies upon the cysts themselves.

2. Pressure may be employed, especially after the evacuation of the fluid, in some situations, as in front of the ear, although, of course, this means is generally inapplicable, on account of its obvious interference with respiration, mastication, and deglutition.

3. Stimulant applications may be constantly employed, of such a strength as to excite moderate inflammation, but stopping short of suppuration, in order

to avoid deformity ; for which reason, also, I directed their intermission for a short time after the punctures. The cysts do not appear, however, much disposed to inflammation, beyond the degree necessary for their obliteration and absorption, after the fluid has been got rid of. The applications I have made use of have been the ointment of hydriodate of potassa, rubbed on by the hand ; a solution of a drachm of iodine and two scruples of hydriodate of potassa in an ounce of water, painted over the tumour by means of a camel's hair brush ; a lotion, of half an ounce of Goulard with two ounces of spirit, and six of camphor mixture, applied by means of folded linen ; or one composed of from one to two drachms of muriate of ammonia, mixed with two ounces of vinegar and spirits of wine, with eight or ten of water. I presume, however, that anything else would answer the same purpose, which did not excoriate or blister the skin, or excite suppuration in the cysts ; and judging from the few cases I have seen, their effect would appear to extend to some depth below the skin, and to act on both the cysts and their fluid contents.

If a cure is effected by such means, before having recourse to the severer methods of laying open the cysts, or attempting their removal, it must obviously be tedious, as some cysts fill again more than once, and others come forward ; hence, chiefly, the reason why several cases were only half cured, when I saw them last, the patience of the children's friends becoming exhausted before the cases could positively

be said to have been cured. The note I have quoted from Mr. Julius shows, however, that one large and extensive and deeply situated tumour, containing numerous cysts, could be completely got rid of by such means, and each of the others was very materially lessened, and would probably, I think, have been also cured by perseverance, if, indeed, the discontinuance of attendance did not arise from the absorption of the tumour going on, beyond what I myself saw.