AN ACCOUNT
OF A
DISSECTION OF AN OVARIAN CYST
WHICH CONTAINED BRAIN.

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THE attention of morbid anatomists and pathologists has been directed for many years to the structure of Ovarian Cysts and their contents, and especially to those which apparently contained foetal remains, with a view of determining, if possible, their origin and mode of growth. At present, however, these researches have not been crowned with success, probably from the comparatively limited number of observations that have at present been recorded, the results of which still leave us in much doubt as to their mode of origin. It is from this circumstance that I have ventured to bring this case before the notice of the Society, in order that at some future time it may be of some service in attempting to explain the law which governs the singular development and mode of growth of these tumours, and also from the fact of its being the first time (as far as I have been able to ascertain), that such contents have been noticed, as contained in ovarian cysts.

The patient, who was the subject of this disease, was a female, single, æt. 28, who was admitted into St. George's

Hospital, with typhus fever, under Dr. Bence Jones, on May 14th, and died six days after her admission.

I have thought it perfectly unnecessary to record here the history of the case, as it was totally unconnected with the disease found in the ovary.

I have also been unable to find that she presented during life any symptoms, which led to the suspicion that such disease existed during life.

The post-mortem examination was made twenty-four hours after death.

General Appearances.—The body was well-formed and in good condition. The skin of both legs and arms was covered with numerous small petechial spots; and at the lower part of the abdomen, the skin presented numerous minute vesicles, containing a perfectly clear watery fluid.

Thorax.—There were no pleuritic adhesions. No fluid was found in either pleural cavity. The lungs were very much congested throughout. The heart and valves were healthy. The blood was quite fluid.

Abdomen.—The stomach was healthy. Numerous patches of ecchymosis were found in the mucous membrane of the lower part of the ileum, but no ulceration was observed. In the cæcum, two or three distinct ecchymosed patches were seen in the mucous membrane, and on one of these this membrane was very distinctly ulcerated, in the form of three exceedingly small linear patches. The liver was healthy. The spleen was congested. The kidneys were also congested, but otherwise healthy.

Pelvis.—The vagina was healthy. The uterus was somewhat larger than natural, and its muscular wall thickened. The membrane lining its cavity was covered throughout its entire extent with a highly vascular villous membrane, presenting a great resemblance to the decidua. This membrane lined its entire extent, being limited to the upper part of the neck of the uterus below, and to either uterine extremity of the fallopian tube above. The round ligaments were both healthy. The right fallopian tube was somewhat more dilated than natural, towards its distal extremity, and its

cavity contained a thin bloody fluid, it was pervious throughout. The left fallopian tube was healthy. The right ovary was healthy.

The left ovary could not be seen, its position being occupied by a large cyst, the size of an orange, which was situated at the upper and left side of the pelvic cavity. The upper half of this was transparent, and contained about two ounces of a light straw-coloured fluid. The lining membrane of the interior of the cyst was vascular. Its wall was composed of an external peritoneal layer, an inner smooth skin and shining coat devoid of epithelium, and an intervening fibrous layer capable of separation into several laminæ. On its inner wall were seen several small masses of fat, which were found lying between the lining membrane and the fibrous layer. The cavity of the cyst contained a few short light brown hairs. The lower half of the tumour consisted of a second cyst containing some yellowish white purulent looking fluid, and a considerable amount of granular fatty matter, of the consistence of honey, consisting of fat, with some scaly epithelium, and having intermixed with it numerous fine hairs of a light brownish colour. From some experiments performed by Dr. Noad and myself, it was ascertained that this fatty matter was fluid at less than the natural temperature of the body. Being placed in a freezing mixture, at the temperature of 40° F. it became of the consistence of honey. Upon being heated to 74°, it was of the consistence of gruel, and became perfectly liquid, but was still opaque at 80°. It boiled at 220°.

The hair upon being separated from the fatty matter was found to exist in considerable quantity, part being free and mixed with the fat, part being attached to the wall of the cyst, into which they were inserted by means of distinct bulbs. It was of a light brown colour, the individual hairs varying in length from a quarter of an inch to nineteen inches, and most of them presenting a blunt and also a sharp point. Some of the hair upon being fused with carbonate of soda, and tested with the nitro-prusside of sodium, showed distinct traces of sulphur.

At one part of the bottom of the latter cyst, a portion of the wall presented an appearance similar to the surface of the scalp. This portion was irregular in form, about two inches in length, but its breadth differed at various parts, its opaque appearance was due to a thick layer of scaly epithelium, mixed with fat which covered its surface. On removing this, the surface beneath presented a fine reticulated appearance, and numerous small circular spaces, through which the hairs protruded, the fibrous web composing this layer contained in its meshes numerous sebaceous glands and hair follicles. The hair growing from this portion of integument was of a light brown colour, and about five inches long. Beneath one part of the skin a quantity of fat was deposited in the areolar tissue beneath. A canine tooth projected from the skin fully formed, and the neck of which was surrounded by a thin, loose continuation of the skin; it was implanted in a fragment of bone covered with periosteum, which was reflected into the socket of the tooth. The fragment of bone was placed beneath that portion of the sac which corresponded to the skin; its upper surface, which projected towards the cyst, had a convex outline, was rough, irregular, and presented a distinct socket, in which the tooth above mentioned was implanted. Its lower surface was smooth and concave. Its structure appeared to resemble in every respect that of true bone.

Projecting into the floor of this sac, was observed a third cyst, it was about the size of a walnut, and situated near to the fragment of bone above mentioned; the wall of the cyst was delicate, and its inner surface highly vascular, the vessels were large, forming numerous meshes, which resembled somewhat those of the pia mater. The contents of this cyst consisted of a softish, white substance, the surface of which was perfectly smooth, and presented all the characters of brain. On microscopic examination it was found to consist entirely of the ordinary elements of nervous matter, being composed of a very large number of varicose nerve tubules of varying size, intermixed with the elementary

components of grey matter, viz., nuclei, and nucleated vesicles, containing granules.

Fig. 1.

Varicose nerve tubules, and ganglion globules, composing the mass of brain, found in the ovarian cyst.

On removing the contents of this cyst, a fourth was observed projecting into its floor; this contained a yellowish white opaque gelatinous mass, of the consistence of the white of egg, containing a large number of granular cells, and free granules. At the side of the latter and between it, and the wall of the parent cyst, a fifth cyst was observed, containing a semifluid light coloured mass, which also presented numerous nerve tubules and ganglion globules. The mass contained in this cyst was much less like brain matter than the contents of the cyst previously described, differing from it by being of a more fluid consistence, and by its colour, which was of a dirty greenish yellow tinge. The ordinary elements of brain were also less numerous than in the other cyst.

As far as I have been able to ascertain, nervous matter has never been previously found as forming a part of the contents of these cysts. It is from this circumstance that I have deemed it right to bring this case before the notice of the Society, as it may assist, to a certain extent at some future period, in explaining the law which governs the development of these remarkable tumours.