

II.—*Contributions to assist the Study of Ovarian Physiology and Pathology.* By CHARLES G. RITCHIE, M.D., Fellow of the Royal Medico-Chirurgical Society, Member of the London Obstetrical Society, &c. London: John Churchill & Sons. 1865. Pp. 208.

“PROPTER solum *uterum* est mulier id quod est,” was the dictum of John Baptist van Helmont more than two hundred years ago. But the uterus has had to resign its place of eminence as the central ruling power in the female economy in favour of the little gland beside it, that is wont to figure still among its mere “appendages;” and in the writings of a man who moves in the foremost rank of living physiologists the sentence stands—“Das Weib ist eben Weib nur durch seine Generationsdrüse.” And he adds (Virchow, “Gesammelte Abhandlungen,” p. 747)—“All the peculiarities of her body and her mind, or of her nutrition and nervous activity; the sweet delicacy and fullness of the limbs associated with the peculiar conformation of her pelvis; the development of the breasts, while the vocal organs remain unchanged; that lovely adorning of the head with hair, that appears on the remaining skin as a soft, scarce noticeable down; and then, again, this depth of feeling, this truthfulness of immediate observation, this gentleness, submissiveness, fidelity; in short, all that we admire and honour in the true woman as womanly, is only a dependency of the ovary.” This little almond-like body has drawn upon itself accordingly the special notice of many of the best observers of our day in Germany, till at last within the past few years it seems to be yielding up the secret of its structure and development to the patient investigations of Billroth, Klebs, Grohe, &c., but, above all, of Pflüger. Nor has it been overlooked in Britain. But, as becomes a people of tendencies more practical, attention has been chiefly given to it here in respect of its pathological relations. For this small organ, when it undergoes its most frequent, and it is an all too frequent, morbid alteration, becomes transformed into a large malignant mass—not specifically malignant as to its anatomical texture, but truly so in regard of its onward irresistible progression to a fatal issue; and modern surgery, after having been long content to alleviate its symptoms and to arrest its march in some few isolated cases, has made one of her most notable advances in the success with which she has learned to carry out the operation for the radical cure of dropsy of the ovary. We had occasion in our last number to notice the first instalment of a work by one of the masters of the art, whose name will ever stand in highest honour in connection with this advance; and as it was on speci-

mens obtained from the fertile operating table of that distinguished surgeon that the author of the volume now before us made his observations, Dr. C. G. Ritchie appropriately inscribes his pages to Thomas Spencer Wells, in "admiration of the untiring zeal with which he has laboured to perfect the only effectual method of treating the graver forms of ovarian disease."

The "Contributions" of Dr. Ritchie, however, have not for their object to mark the improvements in the treatment of diseases of the ovary, but "to assist the study of ovarian physiology and pathology." The work begins with a chapter presenting an "Historical Sketch, from remote times down to 1844," in which "the ancient writers, from Hippocrates down to Vesalius," are dismissed with a short reference of three lines and a half; as, indeed, men deserve to be who paid such scant attention to this seat and source of woman's womanliness. Having got rid of these ancients, our author carries us through the successive stages of the progress that was made towards a proper understanding of the structure and functions of the ovary—stages which he shows us to have been greatly prolonged in consequence of the error into which de Graaf fell of mistaking the ovisacs for ova; for in those times Bartholinus the Younger declares, "Tantum præjudicata opinio potest, ut etiam sine ratione valeat autoritas." Whilst the physiology of the ovary is gradually advancing, the chapter brings us acquainted with the men who first began to comprehend its true pathology; and then again, reverting to its physiology, lands us in the midst of the discussion as to the structure, function, and import of the *corpus luteum*, in the year 1844.

The 'Forties marked the passing years of a decade that saw many a *præjudicata opinio* displaced by candid observation, and many an *autoritas* dethroned by truth and reason; and although with regard to the ovary, the few preceding years had already been signalized by the publication of some of the researches of Coste and Barry, it was only now that the ovarian functions began to be fully understood, and a true theory of menstruation to be framed, from the investigations and deductions of Pouchet, Bischoff, Raciborski, &c. Having brought us down into the middle of this eventful period, Dr. Ritchie retires for a time into the background; not, however, till he has introduced us to his honoured father, who then accompanies us through an interesting series of pages, which extend to more than a half of the entire volume. The contributions of Dr. Ritchie, senior, which his son has done well to rescue from the columns of a weekly journal, and embody in a work which must be consulted by every one who wishes to become acquainted with the present state of our knowledge of the ovary, both in its healthy and its morbid relations—these papers, we say, form the second and third chapters of the work before us.

In the former of these we find the details of observations made on the ovaries of many females in different conditions of age and health, followed by a summary which presents the results of these observations in a series of paragraphs, two or three of which our readers will thank us for reproducing here.

“The ovaries of new-born infants and children are occupied, sometimes numerously, by Graafian vesicles or ovisacs, which are highly vascular as early as the sixth year, and vary in size from the bulk of a coriander-seed to that of a small raisin, in the fourteenth year, at which time, also, they are filled with their usual transparent granular fluid; their contained ova can be detected, and their coats are so elastic that their contents, on their rupture, may be projected to at least twelve inches: the existence of menstruation not being essential, therefore, to these conditions, either as a cause of them or as an effect, and the possibility, even at this age, should rupture of the follicles occur, of their contained ova being conveyed to the uterus along the Fallopian tubes, kept patent by their peculiar secretion, will be admitted.”

“The only circumstances essential to the discharge of ova are the rise of the vesicles which contain them to the surface, and the gradual thinning of the ovarian peritoneum, and of the coats of the ovisacs at their point of union; and although, from the augmented circulation of blood in the uterus at the menstrual period, it is possible that the rupture of vesicles which are thus prepared may happen more frequently at that than at any other time, there is yet no reason to suppose that it does so then exclusively, or that it may not take place during the intervals, menstruation being often present without any such rupture.”

These will suffice to indicate the faithfulness and accuracy with which Dr. Ritchie carried out his observations, and the sagacity with which he interpreted the phenomena presented to him; and they are mere specimens of a collection that forms a valuable storehouse of facts regarding the ovaries, and the varied transformations which the ovisacs undergo. We do not indorse all the statements and deductions of the author; but on the other hand, we find the state of the ovaries of women in different physiological and pathological conditions presented in a relation which we do not remember to have seen elsewhere so distinctly established, as the following quotations will serve to show:—

“In some cases of newly-established menstruation, and also of amenorrhœa of short standing, an aggregate of phenomena was met with similar to that seen in the earlier months of gravidity, consisting of a diminution of the size of the ovarian follicles, the presence of well-developed cephaloid bodies, the remains of linear cicatrices, and a smooth appearance of the ovaries, which were studded, also, with copper-coloured macules, minute vesicles, and porous openings, and found united, in the lately menstruating female, to a vascular, congested, and echymosed state of the internal surface of the uterus; and in such cases, also, it is impossible to distinguish the state from that of those examples of early pregnancy, in which the corpora cephaloidea are of the construction met with in the virgin ovary, except by a reference to the history of the individual, and the size and other conditions of the uterus.”

“The ovarian condition which most resembles what is here stated as occurring during lactation is that met with in amenorrhœa from disease, and as this, whether temporary and occasional, or even protracted, may obtain, contrary to the opinion of some, along with a plump state of both glands, and a profusion of

Graafian vesicles, some of them of good size, and, in recent cases, of considerable density, nothing absolute can be founded on the fact of white bodies being discovered in the ovaries, independently of the other circumstances of the case, beyond a mere probability that it may have been connected with the puerperal condition, a probability which may safely be believed, however, to increase with the number of these bodies, and with the freedom from atrophy of the uterus and its appendages."

"The inherent faculty of the ovaries, owing to which they vary their functional action according to their relative condition, is illustrated by their secretion of structureless cells in childhood, so that these can then be discharged irrespective of the aid of any special orgasm of the parts; and again in pregnancy—by which the occurrence of superfœtation, otherwise a probable event, is rendered rare; and again during lactation—to the avoidance of the early renewal of impregnation; and lastly, in the amenorrhœa of disease and age, when the evolution of the vesicles, not being any longer aided by menstruation, is anew facilitated, as in childhood, pregnancy, and early lactation, by the extreme tenuity of their coats. It is, again, illustrated in the formation of well-organized tenacious vesicles in the child-bearing period of life—so well adapted equally to the specific functions of that period, and also to prevent their wasteful rupture on the frequent occasions of excitement to which adult life is exposed; and receives, again, another proof in the superinduction of the menses at this time, without which the normal rupture of the follicles, for the purposes of reproduction, could not, on account of their increased organization, have been secured. The same accommodating quality of the ovaries is seen in cases where the menses have been suddenly arrested while the ovaries contained a number of the ripe vesicles always associated with that function. Such vesicles, no longer able, from the absence of menstruation, to penetrate the peritoneum, are translated, still covered by the peritoneum, to some part of the adjacent organs, where, separated from their nutrient vessels, they pass into the condition of inorganized bodies. The same principle comes into operation when, from any cause—such as the chronic peritonitis of children, the peritonitis which often follows abortion and pregnancy, and that inflammation of the fimbria and tubes which so frequently takes place in prostitutes, the tubes have become impervious, by the prevention, or speedy arrest, in such circumstances, of menstruation, and the consequent hindrance of the secretion of any other than such fragile, structureless, and small-sized vesicles, as can be easily and safely discharged without the aid of the tubes;—a species of amenorrhœa, therefore, which, should this view of its nature prove correct, ought to be regarded as inevitable, salutary, and not suited for treatment."

This last paragraph we quote from the second of the papers of Dr. Ritchie, senior, which constitutes Chapter III. of the work before us, and in which the author's object is, as he informs us, to bring into view

"The precise amount of our knowledge in this department of physiology, and at the same time to state and support his own opinions on the topics which are treated of, in such a way as the structure of his former paper, which was almost wholly a detail of facts, alike prevented and requires. This he would attempt under the following sections:—

- I. Female sexual organs.
- II. Sexual character of the ovaries.
- III. Fallopian tubes.
- IV. Uterine ovum.
- V. Vesicles of the ovary.
- VI. Formative function of the ovary.

- VII. Seat of conception.
- VIII. Evolution of ova.
- IX. Evolution of ova from ovaries in connection with the rut in quadrupeds, and with menstruation in man.
- X. Theory of menstruation.
- XI. Corpora menstrualia vel periodica.
- XII. General conclusions."

Each of these subjects is treated in a most instructive manner, and especially in No. IX. we had marked some passages for citation; but taking leave here of the father, we must turn to hear what the son has to tell us in his two closing chapters.

In Chapter IV. the historical sketch is resumed, and we are presented with a brief outline of the doctrines concerning ovarian growths taught in some of the modern schools. The recent researches into the structure of the ovary, to which we referred in the opening paragraph, have broken in, however, upon the old line of teaching as to its morbid transformations. Hence the need of the abstracts presented us of the essays of Grohe and Pflüger. To the latter observer it strikes us that Dr. Ritchie has scarcely done justice. We have not Pflüger's monograph at command to compare it with the *resumé*; but we feel that Dr. Ritchie speaks very much at random when he tells us that the German professor "leaves us with the impression firmly fixed in our minds that we are still in the dark, and that the more we peer into it, the more impenetrable becomes the darkness." Dr. Ritchie ought to have known that others are being led in the light of Pflüger's discoveries to understand more clearly the homological relations of the ovaries, and their morbid degenerations; and that though the investigations of Pflüger himself were made on the ovaries of kittens, calves, &c., his observations have been shown to hold good also for the human subject (by Spiegelberg in *Virchow's Archives* for August, 1864).* But, passing on to the pathological changes of the ovary, Dr. Ritchie, after referring to Klob's remarks, and giving a short summary of the admirable researches of Dr. Wilson Fox, proceeds to point out the chemical constitution of the contents of the ovarian cysts; and ends the chapter by a discussion as to the nature of dermoid cysts of the ovary, with an interesting description of a case that had come under his own observation.

Finally, Chapter V. presents us with a view of the light in

* We can easily understand how Dr. Ritchie should have given us a choice of three different spellings, in the three different places where he had occasion to introduce the name of the great Dutchman, whose memory we associate with spermatic animalcules. Even a good pen might mis-spell a word like Leeuwenhoek. But why the man, whose name will henceforth be associated with the greatest discoveries of our day in ovarian histology, should throughout this work be miscalled Pflügel, instead of Pflüger, we are utterly at a loss to comprehend.

which modern science is coming to regard the commoner forms of ovarian disease. The work marks a transition period in the study of ovariology; and this chapter proves the author to be well able to aid in its advancement. We will content ourselves, therefore, with simply commending the book very cordially to the attention of our readers, and conclude with one single quotation, which gives a fair idea of the author's style, and embodies the new classification which he proposes to make of tumours of the ovary:—

“The normal function of the ovary is to produce cysts. It is formed, composed, entirely of cysts in different stages of development, and containing within them germs which themselves may be converted into secondary cysts. From the very earliest infancy, while still the foetus is in its mother's womb, these cysts are being formed, becoming perfect and passing away. This series of operations is ever recurring, and ever being modified. The highest stage to which a cyst attains may be a simple globule, or it may be a foetus and a corpus luteum. It may perish unnoticed, or it may powerfully affect the whole system and end in the production of a new animal.

“Between these two extremes there are innumerable stages, innumerable halting-places at which the cyst development may stand still, or may deviate from the physiological course and become altered by such external agencies as pressure and inflammation. Authors have attempted to explain the formation of ovarian cysts as a complicated process the nature of which is unknown. Similar explanations have been given of these cysts which occur in the kidney and in other organs. The whole course of pathology, however, is now tending to a more simple explanation. It has been shown that renal cysts are for the most part nothing but sacculated ducts, that the so-called hydatid mole is merely atresia of the villosities of the chorion, that the proliferous cysts of the mamma are examples of adenoma. The same thing holds good in the ovaries. Adventitious structures are few and far between. There are no adventitious structures peculiar to the ovary. Tubercle or cancer may be developed, hydatids may be found; but these are of comparatively rare occurrence. The great mass of ovarian disease is due to slight errors of nutrition. More serum is poured into a vesicle than is normal. The secretion is retained instead of being got rid of, or is poured into a cavity which was not intended to receive it. Cells go on multiplying *ad infinitum*, and thus produce hyperplastic growths. Changes which normally occur in the contents of vesicles after they have been discharged, take place within the vesicles themselves, either in a perfectly regular series, or slightly modified by their novel situation. Such are the different ways in which ovarian cysts are produced.

“Perhaps one of the simplest classifications of ovarian cysts, according to their mode of formation, may be obtained by making use of Virchow's distinctive terms ‘Hypertrophy’ and ‘Hyperplasia.’ It is by no means a perfect classification, but it seems to me to be simpler than any other.

“All those forms of ovarian disease which could not be got under either of the first two heads I have classed as ‘Neoplasms,’ or new formations; although, with the exception of hydatids, it is doubtful how far any of them deserve that name.

Proposed Classification of Ovarian Tumours based on the mode of their origin.

I.—Hypertrophy of the ovary.

(1.) Partial (simple cysts, multiple cysts).

(2.) General (hypertrophy of primary follicles, as well as of Graafian follicles).

II.—Hyperplasia of the ovary.

- (1.) Fibrous hyperplasia (fibrous degeneration of Kiwisch).
- (2.) Follicular hyperplasia.
- (3.) General hyperplasia.

III.—Neoplasms.

- (1.) Belonging to the ovum.
- (2.) Dendritic.
- (3.) Tubercular.
- (4.) Cancerous.
- (5.) Hydatiginous."

III.—RECENT WORKS ON MIDWIFERY.

1. *Parturition and its Difficulties. With Clinical Illustrations of 13,783 Deliveries.* By JOHN HALL DAVIS, M.D., &c. Second edition. London: Hardwicke. 1865. Pp. 354.
2. *On Combined External and Internal Version.* By J. BRAXTON HICKS, M.D., F.R.S., &c. London: Longman, Green, Longman, Roberts, & Green. 1864. Pp. 72.
3. *A Handbook of Obstetric Operations.* By W. S. PLAYFAIR, M.D., &c. London: Henshaw. 1865. Pp. 232.

THE subject of practical midwifery has, during the last few years, attracted a more than usual share of the attention of those who venture on the responsibilities of professional authorship. The reason of this is manifest. For thirty-five years little advance had been made, in England at least, in the study of midwifery as a science. New writers simply adopted all the assumed facts and theories of the day, differing only in minor or trivial points. Those, again, whose names are best known and most deservedly appreciated, have contented themselves with blandly editing new editions of their published works, and indorsing their early views with the stamp of subsequent experience. But, we may ask, how many of these have taken the trouble patiently to investigate the correctness of those observations on which the science rests? It is surely a fact of no trivial import, and one which loudly demands the attention of our obstetrical celebrities, that where this method of investigation *ab initio* has been adopted, the conclusion has uniformly been, that the facts on which many of our standard theories are based are false, and require further and careful examination. The works of Hodge, Swayne, West, Matthews Duncan, and others, prove the truth of this assertion. In each we find original views, and these differing widely; but can we wonder that in regard to a subject so difficult there should be such diversity of opinion? Take, for example, the doctrines of Naegele on the mechanism of