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NEW YORK

REPRINT FROM VOLUME IV.

Gynecological Transactions

1880

PROLAPSE OF THE OVARIES.[1]

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New York.

WHILE a large portion of every text-book on the diseases of the female sexual organs is devoted to the discussion of tumors of the ovary and their brilliant operative treatment, the surgically less striking affections of the ovary are greatly neglected, not because they are less common or less annoying than the tumors (although, it is true, less dangerous to life), but because, as I have heard one of our best authorities admit, so little can be done for them. Such are the congestion and inflammation, and the intra-pelvic dislocations of the normal or but slightly enlarged ovaries. I have chosen the latter affection for the subject of my paper, as the displaced organ is very frequently primarily or secondarily enlarged, congested, or inflamed, and the treatment of both conditions can, therefore, be very properly discussed together. That of chronic oöphoritis, indeed, consists mainly in local counter-irritants and — perseverance. I wish to discuss this subject entirely from a practical clinical standpoint, leaving the more intricate histological and pathological questions for further investigations, such as, I believe, have been conducted for some time past by a distinguished Fellow of this Society.

I have been induced to take up this subject chiefly by the great frequency with which I have met with ovarian displacements, often, when least expected, revealing the source of hitherto obscure symptoms; further, by the suffering they give rise to; by the interest excited by them in me and the practitioners who for several years have attended my private courses in gynecology; by the difficulties

[1] Read at Baltimore, September 18, 1879.

experienced in their effectual treatment; and lastly, by the defective discussion of the topic in the majority of the text-books.

Thus, of recent authors, Barnes[1] alone devotes something over two pages to the consideration of "Displacements of the Ovary," while, of the five pages allotted by Beigel[2] to the "Displacements and Prolapsus of the Ovary," less than half a page treats of the intra-pelvic dislocation of the organ, which, the author expressly states, will "rarely call for our attention, unless from some cause fresh irritation or inflammation supervenes, in which case the causative agents will attract our notice far more than the displacement."

Thomas,[3] in a very brief section, says: "The ovaries often fall, when their weight is increased, into the cul-de-sac of Douglas," which is permitted under favoring circumstances by their extreme mobility and the laxity of their supports. Of treatment, not a word. The bulk of the chapter in the treatises of both Beigel and Thomas relates to that comparatively rare affection, the extra-pelvic displacement or hernia of the ovary.

Schroeder[4] devotes one page to "Prolapse of the Ovaries," and says: "An abnormally low position of the ovary is a condition which is very frequently met with, but has received heretofore very little attention."[4] It depends on a relaxed condition of the broad ligament and the enlargement of the ovary. The symptoms are, sudden abdominal pain, often occurring in paroxysms, dyspareunia and dyschezia. "The question of treatment is one of great difficulty, and it is not only in cases where the ovary is bound down by adhesions in Douglas' cul-de-sac that the hope of gradually relaxing the prolapsed condition of the ovary is disappointed."

[1] *Diseases of the Female Sexual Organs*, 1878.

[2] *Krankheiten des weiblichen Geschlechtes*, i., p. 435.

[3] *Diseases of Women*, 1874.

[4] *Diseases of the Female Sexual Organs*, vol. x. Ziemssen's *Cyclopedia*, Amer. ed., 1874.

Olshausen,[1] in his recent excellent work on "Diseases of the Ovary," speaks of the possibility of palpating the normal, not displaced ovaries in many cases per rectum, as first demonstrated by Chéreau[2] and Löwenhardt,[3] and by conjoined manipulation, as first described by Freund,[4] and corroborated by B. S. Schultze,[5] and merely refers incidentally to the retro-displacement of one or both ovaries, which he, in common with other authors, looks upon as the result of the enlargement of the organ, assigning to the displacement itself a secondary and subordinate importance. I have been able to find but one other author, besides Barnes and Schroeder, who thinks that displacement of the ovary should be considered as a separate affection, occurring at times primarily and without preceding inflammation and enlargement, and to be treated accordingly; and that author is Rigby,[6] who as long ago as 1850 approaches my subject when he speaks of dislocation of the ovary occurring in connection with retroversion, and expressing itself by intense neuralgia, violent pain during defecation, on moving the uterus with the finger, or pressing on the prolapsed organ through the rectum. As I have been unable to procure the number of the journal containing Rigby's paper, I am unable to say how far he pursues the subject; my reference is taken from the works of Barnes, Beigel, and Olshausen.

There is one other reference in journal literature to Prolapse of the Ovaries, and that is by Horatio R. Storer and L. F. Warner,[7] but, as will be seen from the quotation, both speak only of cases where the prolapsed ovary is bound

[1] *Die Krankheiten der Ovarien;* Part VI. of Billroth's *Handbuch der Frauenkrankheiten*, Enke, Stuttgart, 1877.

[2] *Mémoire pour servir à l'étude des maladies des ovaires*, Paris, 1844.

[3] *Diagnostisch-praktische Abhandlungen*, Breslau, 1835.

[4] *Die Lage und Entwickelung der Beckenorgane*, etc. Breslau, 1863.

[5] "Ueber Palpation normaler Eierstöcke, etc.," *Jenaische Zeitschrift*, i., 1864; Ibid., v.

[6] *Med. Times.*

[7] *Journal of the Gynæcological Society of Boston*, vol. vi., May, 1872, p. 322 *et seq.*

down by adhesions. Commenting on a case of obstinate reflex insanity reported to the Gynæcological Society of Boston, by Dr. Blake, in which the autopsy revealed chronic endometritis and downward displacement of one ovary, Dr. Storer said that in this case the relation of cause and effect (ovarian disease and insanity) was unquestionable, in which statement he was supported by several other gentlemen who had seen the case. Dr. Storer further said that he "had long been satisfied of the very great importance of the condition now under discussion; especially was this the case, when, as in the specimen exhibited, the displaced ovary was bound down in its false position by adhesions. When he had first called attention to this affection, several years previously, few could believe that apparently so slight a lesion could cause such exquisite suffering and such serious reflex disturbance. It should be recollected, however, that the ovary, already in a condition of hyperesthesia, with inflammation within itself and contiguous to it, and necessarily made worse by congestive enlargement at every menstrual period, was nipped, as it were, by the adhesions between the uterus and sacrum; unable to escape, it was liable to constant exacerbation of the evil from every exciting cause, however trivial, such as pressure from scybalous masses within the rectum, from the uterus when pressed backwards by the distended bladder, and during coitus."

Dr. Warner remarked that when the displaced ovary was healthy such a lesion was of very slight importance; but if the ovary was diseased, the case was very different. The slightest deviation from the natural condition, under the circumstances, was sufficient to cause the most extensive reflex disturbance. He mentioned the case of a patient whose mental condition rendered her a fit subject for a lunatic asylum; she had been under treatment for four years. An examination revealed an unsuspected uterine displacement, endometritis, and especially downward displacement of an ovary which, though but the size of a robin's egg, was exquisitely tender to the touch. The treatment used is not stated, but the patient is reported as having returned to her home very much benefited.

My object in this paper is to show that displacement of the ovary is a very common, and, by itself, highly distressing affection, worthy of a separate place in the text-books, and requiring and capable of efficient treatment independently of the congestion and enlargement of the organ, which may or may not accompany it. Although I had for several years previously made particular note of all the cases where the normal or enlarged ovaries, whether displaced or not, were palpable, and felt particularly interested in the diagnosis and treatment of these cases, I did not think of collecting the material for a paper until this very subject of "Prolapse of the Normal Ovaries" was brought before the New York Obstetrical Society for discussion, by the president, Dr. Skene, at the meeting of November 5, 1878.[1] To the different views expressed on that occasion I shall refer in the course of the present article.

Anatomy. — Before proceeding to the subject-proper of my paper, it may be well to refer briefly to the anatomical relations of the ovary, in order to show how so small and light a body may become so far displaced as to be palpable at the very bottom of Douglas' pouch. My description is taken mainly from Olshausen and Beigel, and from Savage's plates. The ovary, analogous to the testicle, descends into the pelvis during the closing months of fetal life, and, passing forward underneath the parietal peritoneum, projects with its greatest aspect through an opening in the posterior fold of the broad ligament. The anterior surface of the ovary, that still inclosed by the broad ligament, is flat, while the posterior surface is convex, and projects into the peritoneal cavity to the extent of about one centimeter.

I have copied from Beigel the following tables by Farre[2] and Hennig,[3] as I deem them important to a proper understanding of the normal size and distance of the ovaries from the uterus: —

[1] *American Journal of Obstetrics*, April, 1879, p. 342.

[2] Todd's *Cyclopedia of Anatomy and Physiology*, v., 5.

[3] *Der Catarrh der inneren weibl. Geschlechtstheile*, Leipzig, 1870.

FARRE.

	Longitudinal Diam.	Transverse Diam.	Perpendicular Diam.
Greatest	2″	1″ 1‴	6‴
Smallest	1″	6‴	3‴
Average	1″ 4‴	9‴	4½‴

HENNIG.

	Ovary.	Childhood.	Virgins.	Violated.	Married.	Nulliparæ.	Puerperæ.	Widows.	Divorced.	Menopause.	Senile.
		cm.	cm.	cm.	cm.	cm.	cm.	cm.	cm.	cm.	cm.
Length . . .	right	1.3–5.2	3.8	3.4	3.	2.5	4.4	3.6	3.5	3.1	2.9
	left		3.7	3.8	2.8	2.4	5.5	3.2	3.1	2.5	2.7
Thickness . .	right	0.2–0.6	1.	0.9	1.	0.8	0.8	0.8	0.9	0.8	0.8
	left		1.	0.9	0 9	1.1	0.9	0.8	1.	0.8	0.9
Breadth . . .	right	0.2–1.4	1.9	1.8	1.7	1.2	1.3	1.6	1.4	1.5	1.1
	left		1.5	1.7	1.5	1.2	1.4	1.7	1.4	1.4	1.
Distance from Uterus	right	1–4	3.4	4.4	4.7	5.5	8.	3.8	4.	4.	4.
	left	1.2–3.7	3.3	4.5	4.7	5.	7.	4.2	4.2	3.7	4.5

Farre found the greatest weight of five healthy ovaries to be 135 grains; the smallest, 60 grains; the average, therefore, 87 grains; Olshausen states 6 grams.

The shape of the ovary is that of a compressed ovoid, the posterior free border of which is highly convex, the anterior border flat. Occasionally the organ is more elongated, or nearly spherical. According to Luschka, its average length is 4 cm., breadth 2.2 cm., and thickness 1.3 cm.

The surface of the ovary of a young girl is smooth and soft; the more ova have escaped from their follicles, the more irregular and corrugated does the surface become.

The ovary lies on the posterior surface of its respective broad ligament, which slants downwards and backwards, the outer border of the ovary being slightly farther back than its uterine end, and the convex border pointing backwards. The inner end of the ovary lies within 2–3 cm. of the fundus uteri, which in some cases it is found to touch.

The ovary is sustained in its movable position, 1st, by the posterior layer of the broad ligament through which it has

passed to project into the peritoneal cavity; 2d, by the ovarian ligament, a strong round cord of 2.5 to 3 cm. in length, which attaches the inner edge of the ovary to the uterus directly below and behind the tubal origin; the ovarian ligament consists of smooth muscular fibres and peritoneal envelope; 3d, by the infundibulo-ovarian ligament, a slender band of connective tissue attaching the outer edge of the ovary to the infundibulum tubæ, and preventing the separation of these two organs; this ligament is continued under the name of the infundibulo-pelvic ligament to the posterior part of the iliac fossa, and divides the pelvic peritoneum into two pouches, the shallow utero-vesical or paravesical pouch anteriorly, and the deep Douglas' pouch posteriorly. A very slight support may be afforded by the thickening of the upper border of the broad ligament by the Fallopian tube.

From these relations, it is apparent that the ovary, attached as it is to its adnexa by a slender cord and by movable folds of peritoneum, is movable to a certain extent under normal conditions. Thus it rises and falls with the fundus uteri during pregnancy and after parturition respectively, and slightly changes its position with the normal physiological deviations of the uterus. So also does it accompany the uterus in its increase from tumors, and it may, under certain conditions of traction by adhesions with intestines or violent *vis a tergo*, accompany or follow the usual contents of an inguinal, crural, obturator, or ischiadic hernia. Such extra-pelvic displacements of the ovary are, however, according to Deneux[1] and English,[2] chiefly congenital.

The projection of the ovary posteriorly, the mobility of the broad ligaments and their inclination downwards and backwards, show the tendency of the ovary to glide into Douglas' pouch, — a tendency materially increased by the lengthening of the ovarian ligament in consequence of repeated pregnancies and the dragging of the enlarged ovaries. This explains why, although the ovaries of virgins

[1] *Sur l'hernie de l'ovaire*, Paris, 1813.

[2] *Medizinische Jahrbücher*, 1871.

are larger than those of women in any other condition, except the puerperal state (see Hennig's table), displacements of these organs are rarely met with; while the relaxed ligaments of parous, and, to some extent also, violated but nulliparous, women allow the ovaries to move away from the uterus. Besides, the latter class of cases suffer very much more frequently from downward and retro-displacements of the uterus, conditions very decidedly favoring, as my figures show, prolapse of the ovaries.

The two excellent diagrams by Savage, Figure 1 on Plates II. and XI. respectively, representing transverse sections of the female abdominal cavity, show very plainly the loose attachments of the ovaries on the posterior plane of the broad ligament; and in Plate XI., Figure 1, the facility with which they may prolapse into the gaping Douglas' pouch when the uterus is displaced downward. A cut which I first found in Sinéty's new work on Gynecology,[1] vol. ii., p. 659, but which, I believe, originally appeared in Hodge's Atlas, shows very plainly the depth and relations of the retro-lateral peritoneal pouches into which the ovaries most frequently prolapse.

In women with relaxed, compressible abdominal walls, and a soft, non-rigid vaginal vault, it is frequently possible to palpate the normal, non-prolapsed ovaries, one finger (preferably the left index for the left, the right for the right ovary) pushing up the corresponding vaginal cul-de-sac, and the other hand pressing down the abdominal wall immediately over it. By then rolling the pelvic organs gently over the internal finger with the external hand, the ovary can frequently (and the tube occasionally) be felt, and its size and shape clearly mapped out. It may be compared in feel to a small compressed fig. It is situated about midway between the inner border of the fundus uteri and the ileo-psoas muscle or pelvic margin, and readily slips from between the palpating fingers. If perfectly healthy, moderate palpation gives but slight pain, and that of a dull character.

The left ovary is usually more readily palpable than the

[1] *Manuel pratique de la gynécologie*, par de Sinéty. Paris, 1879.

right, partly because, according to Portal,[1] it is situated somewhat higher, owing to the dextral inclination of the fundus uteri; partly because the rectum, in its (in the female) generally more or less distended condition, prevents the left ovary from sinking into the pelvic brim. Freund[2] found the left ovary to lie more perpendicular to the uterus, and the left border of the latter organ slightly turned towards the anterior abdominal wall.

The normal ovaries are often palpable by combined recto-abdominal examination, but this method usually offers no advantage over the vagino-abdominal plan, except where vaginal exploration is impracticable.

The higher the perineum can be pushed up by the knuckles of the examining hand (the hand used by me being generally the left), the easier will the ovaries be reached. Without bimanual palpation, the normal non-prolapsed ovaries are not ordinarily palpable.

STATISTICS.

Among 1,600 unselected gynecological cases which have come under my care during the last few years, and of which I have accurate notes, there were 145 cases in which one or both ovaries were palpable.

In 68 cases the ovaries retained their normal position; in 77 cases they were prolapsed.

In 53 cases the ovaries were normal in size; in 92 cases one or both were inflamed or enlarged.[3]

Of these 145 cases, 139 were married, and but 6 single; 8 were nulliparæ, and 131 parous women.

In 36 of these 145 cases one or both normal non-displaced ovaries were palpable by bimanual manipulation; 23 times the left, 5 times the right ovary, 8 times both ovaries.

[1] *Anatomie médicale*, tome v.

[2] *Die Lage und Entwickelung der Beckenorgane*, etc. Breslau, 1863.

[3] By "inflamed and enlarged" I mean that the ovaries were distinctly palpable, and their increase of size and their outline clearly traceable. Mere *diffuse* tenderness or resistance in either or both ovarian regions was, of course, much more frequent.

In 32 cases the ovaries were inflamed and enlarged, but not displaced, the decided preponderance being with the left ovary.

In 77 cases either one or both ovaries were dislocated, the right alone 19 times, the left alone 46 times, both together 12 times. In 60 of these 77 cases the prolapsed ovary was enlarged.

In 17 of the 77 cases the prolapsed ovary was normal in size and consistence, the left being displaced 8, the right 3, both ovaries together 6 times.

In 13 cases the prolapsed normal ovary was exceedingly sensitive to the touch. Three of these were young single women, all virgins.

In 8 of the 60 cases of displacement of the enlarged ovaries the displaced organ was immovably adherent.

In all but two cases, the ovaries were prolapsed posteriorly; in two anteriorly, both the left ovary, and both enlarged.

In 44 cases the uterus was also displaced, as follows: retroverted, 22; retroflexed, 11; anteflexed, 5; anteverted, 1; descensus, 5.

In 21 cases laceration of the cervix was present; if unilateral, the ovary on the same side being always the one enlarged and prolapsed. Only in one of these cases was the ovary perfectly normal in size.

As a rule, the enlarged and prolapsed ovaries were hyperesthetic to the touch; in many cases exceedingly so, to the extent of rendering even a very careful vaginal examination highly painful. It may safely be said that in no case was the prolapse devoid of at least some of the symptoms to be specified hereafter.

VARIETIES.

Of dislocations of the ovaries coming within the scope of this paper — the intrapelvic — there are but four varieties. 1. Retro-lateral, into the more shallow portion of Douglas' pouch lying behind the broad ligament, which variety is generally primary and frequently leads to — 2. Retro-ute-

rine, into Douglas' pouch. 3. Ante-uterine, into the vesico-uterine, or paravesical pouch. 4. Into the infundibulum of an inverted uterus.

The cases of prolapse of the ovary into a hernial sac are extrapelvic, and not to be considered here.

My statistics show that the prolapse of the ovaries laterally and backwards constitutes by far the greater majority of all cases of dislocation, for only twice did I touch the ovary anterior to the uterus, as the anatomical relations of the organs would, indeed, lead us to expect.

The left ovary is more frequently found prolapsed than the right (46 out of 77), an observation also made by Barnes,[1] and due probably to the preponderance of congestion and inflammation of the left ovary.[2]

The prolapse (or, better, pro-traction) of the ovaries into the crater of an inverted uterus is mentioned merely for completeness' sake, and has no practical value by itself.

ETIOLOGY.

The various conditions favoring or producing dislocation of the ovary are: —

1. Enlargement of the ovary.
2. Displacement of the uterus.
3. Relaxation of the supports of the uterus and ovaries.
4. Inflammatory adhesions.
5. Sudden jarring or concussion of the whole body.
6. Pressure from above, as by tumors, fecal accumulation, etc.

1. *Enlargement of the ovary.* — The ovary may become enlarged from various causes: normal, periodical, menstrual congestion; passive or inflammatory hyperemia; acute or (much more frequently)[3] chronic interstitial inflammation; puerperal subinvolution; beginning cystic, fibrous, or cancerous degeneration; early ovarian pregnancy.

[1] *Loc. cit.*, p. 266.

[2] See discussion by Peaslee, Jacobi, and others. *Trans. N. Y. Obst. Soc.*, May 7, 1876; *Am. Jour. Obst.*, vol. ix., p. 650.

[3] Skene, *American Journal of Obstetrics*, April, 1879, pp. 343, 344.

The anatomical relations of the ovary, as above described, clearly show that an ovary enlarged by any of these causes naturally tends to drop backwards into the retro-lateral peritoneal pouch, and, as the organ enlarges, it glides to the deepest portion of the pouch, Douglas' fossa. The left ovary is aided in this median movement by the rectum, which occupies the left sacro-ischiatic excavation.

The conditions producing congestion and chronic inflammation and enlargement of the ovary are, briefly, all sources of recurrent irritation of the sexual organs (menstruation, particularly when the amount of discharge is disproportionate to the violence of the molimina; excessive or imperfect sexual intercourse; exposure to cold at the menstrual period; all forces obstructing the return of venous blood from, or producing active congestion of, the pelvic organs; chronic inflammation of the uterus and its mucous membrane; laceration and eversion of the cervix uteri).[1]

It is still an open question as to whether the enlargement of the ovary is usually primary or secondary, that is, the cause or the result of the displacement. I decidedly favor the former view for the majority of cases; but, as my statistics show, have frequently found the normal, non-enlarged, and movable ovaries prolapsed into Douglas' pouch, occasionally, without accompanying retro-displacement or descent of the uterus. And I can readily understand that an ovary displaced 2″ or more (according to the relaxation of its attachments and the depth of Douglas' pouch), and exposed to daily mechanical irritation between uterus and rectum during defecation, and frequent violence during coition, must sooner or later become congested, and, finally,

[1] Henry F. Walker, *American Journal of Obstetrics*, April, 1879, p. 324. Dr. Walker is credited with the statement that "when an ovary of the *normal* size is found prolapsed it is almost always an accompaniment of a special lesion, namely, fissure of the cervix." I agree with him that the fissure of the cervix has a causal connection with prolapse of the ovary, but think that the fissure first produces chronic congestion of the ovary, and not until then does the displacement ordinarily occur. At least, I have always found the prolapsed ovaries enlarged in such cases.

take on a condition of chronic hyperemia and hyperplasia, which is remediable (if at all) only by the reposition and support of the organ. Thus, I believe that in the majority of cases the enlargement is primary, but I am equally convinced that in many cases the hyperemia and hyperesthesia are due to the prolapse.

A very interesting observation was made by B. S. Schultze,[1] who saw an inflamed ovary prolapse, and, after six weeks, when the inflammation had subsided, return to its place. A similar experience is related by M. D. Mann,[2] who met with a case in which periodical congestion of the ovaries occurred about five days after menstruation, prolapsus supervened, and with the disappearance of the congestion the ovaries returned to their normal position.

As regards the subinvolution of the ovaries after parturition, Hennig's table shows that these organs at that time are much larger than at any other period, and I therefore do not doubt the correctness of Dr. Skene's[3] opinion that this is a prominent cause of prolapse.

It should be distinctly understood that by "enlargement" of the ovary I mean nothing akin to a tumor, but merely an increase of size of the organ to perhaps twice its normal bulk (a robin's or even pigeon's egg), such as might be expected as the result of hyperemia and hyperplasia. Such an enlargement rarely exceeds the size mentioned, and instead of continuing to grow, as tumors usually do, a hyperplastic ovary either remains stationary, or, after the menopause, contracts and shrinks.

2. *Displacement of the uterus.* — When the uterus is retroverted, or retroflexed, the ovaries necessarily accompany the fundus in its backward deviation, unless the broad ligaments still possess sufficient tension to keep them in position. If the ovaries are not enlarged, they may not prolapse ; but if they are enlarged, one may expect, in every aggravated case of retroversion, to find one or both ovaries retro-prolapsed at some period or other of the case. In several instances I have found the ovaries prolapsed at one

[1] *Loc. cit.* [2] *Am. Jour. Obst.*, xii., p. 345, 1879. [3] *Loc. cit.*

examination, and replaced at the next, as the result either of antiphlogistic treatment, or some favorable posture of the patient. The deeper Douglas' pouch naturally is, or has been, made by the pressure of the retro-displaced fundus, the deeper will the ovaries be situated.

In descensus or prolapsus uteri the ovaries descend with the uterus and vaginal vault, and are then more easily palpable per rectum, since, if the examining finger enters the vagina, it naturally pushes up the vaginal roof, and with it the prolapsed ovaries. Only when the cystocele predominates, and the partially prolapsed uterus is retroverted, may the ovaries occasionally be felt per vaginam at the still retained posterior vaginal roof.

The peculiar position of the ovary on the inclined posterior plane of the broad ligament, and the shallowness of the vesico-uterine pouch, explain why it rarely prolapses anteriorly with ante-displacements of the uterus.

3. *Relaxation of the supports of the uterus and ovaries.* — This condition occurs chiefly in women who have borne many children, in whom involution of the uterine supports, and the uterus and ovaries themselves, has been less and less perfect after every successive labor, and in whom the broad ligaments and vaginal roof have become so relaxed as to allow the uterus and appendages to sag towards the floor of the pelvis. A similar condition may arise in women whose elasticity of fibre has become exhausted by hemorrhage, passive pelvic congestion, constipation, and leucorrhea.

4. *Inflammatory adhesions* are very commonly met with in ovarian displacement, and may be either the cause of the displacement (the peritonitic adhesions drawing down and displacing the organ), or its result (the enlarged and dislocated organ exciting local perioöphoritis, and more or less firm adhesions). The symptoms in such cases are generally aggravated, and the treatment very unsatisfactory.

5. *Sudden jarring or concussion of the whole body.* — Whether a normal, not enlarged ovary can be prolapsed by a fall or leap of the patient, such as not uncommonly pro-

duces retroversion or retroflexion of the uterus, I cannot say from experience, never having met with such a case; still, I think it possible. That an enlarged ovary, however, can be retro-displaced by such an accident I can positively assert, for a case of the kind recently came under my observation.

6. *Pressure from above, as by tumors, fecal accumulations, etc.* — A heavy intra-abdominal mass, such as the enlarged liver, spleen, kidney, or fecal accumulation in the cecum or sigmoid flexure, may, by pressing down the uterus and the whole inclined plane of the broad ligament also, approximate the ovaries, normal or enlarged, to the floor of the pelvic peritoneum. During the past winter I met with a case of a large, irregular, solid tumor in the left iliac fossa of a young girl, which had been pronounced ovarian. Its peculiar shape and its history led me to incline in favor of sarcoma of the kidney, and to exclude ovarian disease, which diagnosis was confirmed by a vaginal examination, which revealed the left normal ovary (the girl was a virgin) prolapsed by the tumor, and therefore easily touched by the examining finger without pressure from above.

SYMPTOMS.

The symptoms of prolapsus of the ovary are local and general, and differ in degree with the condition of the organ, whether it is normal, or acutely or chronically enlarged and inflamed.

The symptoms produced by prolapse of one or both normal ovaries (if, indeed, any appreciable inconvenience be experienced) will be: a dragging sensation in each groin and down the thighs, some bearing down and weight in the pelvis, sacralgia, pain in either hip, slight radiating neuralgic pains in the groins and thighs; a numb, sickening pain during coition and difficult defecation, owing, of course, to direct pressure on the ovary. This pain is, however, by no means as acute and intense as that produced by strong pressure on the normal testicle. The general symptoms are an excess of irritability, of "nervousness," similar to that usually occurring during the menstrual period.

It must be admitted, however, that cases are not infrequently met with in which the prolapsed ovary excites no local symptoms whatever, except that of pain during coition. Only a few days since a lady came to me for treatment of sterility. I found her right ovary prolapsed and enlarged, although she complained of no local discomfort, except a "weak back." On touching the ovary she exclaimed, "That is where I always feel pain;" and on being closely questioned When? she confessed that she only felt the pain in the right side during coition, which act was painless only when performed on the left side.

The displacement of a congested and enlarged ovary excites symptoms of vastly greater intensity than those just related. The patient complains of pain disproportionate to that usually met with in ordinary displacement or engorgement of the uterus; there is a burning, throbbing, heavy sensation in the pelvis and sacrum; a feeling of obstruction, alternating with tenesmus in the rectum; frequent darting, shooting pains in one or both groins, generally the left, and through the pelvis and down the thighs; nausea and irritable stomach; dyspareunia and dyschezia (painful coition and defecation), generally in a high degree. The more acutely congested and the larger the ovary is, the longer it has been prolapsed, the more it is pressed between a retrodisplaced uterus and a loaded rectum, the more perioöphoritis has been excited, the more pronounced will be the discomfort and pain produced. It need scarcely be said that the approach of the menstrual congestion intensely aggravates all the symptoms mentioned, which may also be exacerbated at irregular intervals during the intermenstrual period. The prolapse of an *acutely* inflamed ovary would add to the above symptoms the element of febrile excitement.

Usually, every movement of the cervix uteri by the exploring finger causes great pain through traction or pressure on the ovary, which itself is generally exceedingly tender to the touch. A vaginal examination ordinarily produces an exacerbation of pain for one or more days. In several instances, I have been told by the patients that their dis-

comfort was always increased on sitting down. This is unusual, as most women complain of their inability to walk or stand for any length of time. I attributed this circumstance to the crowding down of the abdominal organs into the pelvis, and the compression of the enlarged ovary in the sitting posture between the viscera and uterus and the floor of the pelvis.

As constitutional symptoms may be mentioned: a feeling of lassitude, of distaste for mental and physical exertion; an excitable, irritable disposition, alternating with melancholy and hallucinations, various hysterical and nervous symptoms, occasionally hemichorea, and neuralgic pains in the leg of the affected side. In one case under my care, pressure on the ovary during exploration, or by means of tampons, always produced immediate faintness and nausea, and, if continued, vomiting. Occasionally, the constitutional symptoms occur without any local sign whatever; and only a chance exploration per vaginam, previous knowledge of the case, or the desire of the patient, leads to the detection of the real nature of the trouble.

The cases reported by Drs. Blake and Warner, and referred to in the early part of this paper, show the reflex influence of a prolapsed, inflamed, and adherent ovary on the mental condition. In that of Blake (discussed by Storer), the patient had for several years gone the round of numerous hospitals here and abroad with a phantom tumor, which disappeared under an anesthetic; but no correct diagnosis of the cause of her hallucinations had been made, until Dr. Storer saw her; and, unfortunately, no treatment was, or perhaps could have been, effectual.

A case of temporary mental disturbance from this cause came to my notice last spring, and, as it illustrates a point in the etiology as well, I will relate it.

A very intelligent lady, who had been under my care for several years for membranous dysmenorrhea, laceration of the cervix uteri, and retroversion, and who had been cured of her dysmenorrhea by local applications, of her laceration by an operation, and of her displacement by means of a pessary

came to me one day last spring, after an absence of several months (during which she had been in excellent health), with the following history: Feeling perfectly well, and finding some discomfort in her marital relations from the broad bulb retroversion pessary which I had introduced, she removed it, and continued quite well until recently. During the past two weeks, however, she had experienced very peculiar nervous and cerebral sensations, similar to those felt by her when she was suffering from membranous dysmenorrhea, such as pain in the vertex and occiput, irritability, general malaise, distaste for her household duties, low spirits, etc. Although feeling perfectly well locally, she had finally yielded to the solicitations of her husband to come to the city and consult me, feeling (as she said) that something must be wrong with her sexual organs. I could not see in her symptoms any such indication, and was more inclined to think of malaria, a disease not unknown in the portion of New Jersey where she lived. However, to make sure, I acceded to her wish that I should examine her. On passing my finger to the posterior cul-de-sac, my first impression was that the old retroversion had returned, but as a retroflexion, for, immediately behind the uterus, and apparently connected with it, I found a smooth body similar to the fundus. This was quite tender, more so than the retroflexed fundus uteri ordinarily is; besides, a peculiar, velvety feel of the body made me suspect that it might be, not the body of the uterus, but an enlarged ovary. The sensitiveness of the patient prevented my assuring myself of this fact by bimanual palpation; I therefore introduced the sound, and found it to pass straight upward, leaving the posterior body unchanged. Only when the uterus was anteverted did this body slightly leave the floor of the pelvis. There could now be no doubt that it was the ovary, enlarged to the size of a hen's egg, and I expressed my surprise to my patient at this new phenomenon, which I knew had not existed when I last saw her, or, indeed, at any time since she had been under my care (she had formerly had some chronic ovaritis, but it had latterly given her no trouble). The lady then told me that she had

purposely omitted an important fact in the history of her case, wishing first to hear my opinion. Just before the symptoms began for which she now consulted me, a few days before her expected menstruation, she went out driving, and, while alighting from the buggy, her dress caught in the upper step, and she was violently thrown to the ground, falling on her hip and side, and was stunned for some time. As she struck the ground she felt a jar in the pelvis, which, however, soon wore off, and she appeared to be none the worse for the fall. From that day, however, began the peculiar feelings above described. Menstruation came on a few days later, and was unusually scanty. The inference was clear: the fall displaced the left ovary, already enlarged by previous chronic inflammation and the approaching menstruation, and the displacement of the organ produced the peculiar reflex symptoms — oöphoroneuroses — referred to. The reposition of the ovary in the knee-breast position, its support first by cotton tampons, and, as its sensitiveness decreased, by the old and long-tried bulb-pessary, rapidly, and, thus far, permanently, restored the patient's health.

There can be no self-deception in this case. The lady was too intelligent to mistake her symptoms; she had never suffered from prolapse of the ovary before, and the chain of cause and effect, and the result of the treatment, — all were too plain to permit a doubt of the nature of the case.

I have within two weeks been consulted by a young lady of seventeen years for epileptiform attacks, occurring at irregular intervals, in whom the only abnormal condition discoverable was a prolapse of the somewhat enlarged and but moderately tender right ovary, which lesion I candidly believe to be, at least in part, the starting point of her neurosis.

DIAGNOSIS.

In spite of the decided and positive character of the rational signs mentioned under symptoms, it will readily be seen that the majority of them are met with in almost

every aggravated form of uterine disorder, and that none of them are distinctive of ovarian disease, with perhaps the exception of the darting, throbbing pains in the groins, which in fact merely indicate ovarian congestion or inflammation, but not prolapse. The diagnosis is, however, easily made by a vaginal examination. The finger passing to either side of or behind the cervix feels at once (if it be a normal ovary) a small, flattened, movable, slightly tender body at the side of and slightly behind the uterus; by rolling it against the sacrum, under the index finger, its dimensions, shape, and surface may usually be accurately determined, especially if it be prevented from slipping away by counter-pressure on the abdomen with the other hand. Occasionally its attachments (tube and ovarian ligament) may be detected. Dr. Skene[1] suggests catching the ovary between two fingers and the sacrum in order to map it out clearly, instead of by bimanual examination, which will be effectual only with relaxed abdominal walls. I have always succeeded perfectly with one finger and external compression, provided the ovary was really prolapsed, when in extreme cases it may be as low in the pelvis as the level of the external os, to which point, we know, Douglas' pouch frequently descends. I have rarely found it necessary to do more than point out the existence and whereabouts of the prolapsed organ to enable my students to detect it. The only objection to Dr. Skene's plan is, however, the introduction of a second finger.

If the ovary is enlarged, its detection is still easier. The finger strikes against an oval, smooth, velvety body, varying in size from a pigeon's to a hen's egg, now generally behind the uterus (in consequence of its size and the median slope of Douglas' pouch), pressure on which gives the most intense pain, and immediately excites the remark by the patient, "That is the spot" where all her trouble comes from. Every movement of the uterus by the finger produces traction on the enlarged ovary and causes severe pain. I have known patients almost to faint, and many to complain of nausea,

[1] *Loc. cit.*

when the inflamed ovary was compressed or moved by the finger. In some cases a rigid perineum renders the mapping out of the supposed prolapsed ovary difficult, and I have then found the examination in the side position (left side with right index, for right ovary; right side with left index for left ovary; the surgeon standing rather behind and to the side of the patient) to furnish a more extensive exploration of the lateral and posterior regions of the pelvis. This is useful in doubtful cases, where the ovary is considerably enlarged, quite firm, and attached to the cul-de-sac or the posterior surface of the uterus by adhesions, and thus simulates a subperitoneal uterine fibroid, or a retroflected fundus uteri. In the former case, the diagnosis may often be attended with great difficulty, and possible only by recto-abdominal exploration, or after watching the retro-uterine body during menstruation; in the latter case, the introduction of the sound into the uterus (as practiced in the case reported above, and recommended by Barnes,) at once decides the point; as indeed must bimanual palpation if the fundus can be grasped in front of the tumor.

I have met with one case in which a tumor of the size of a pigeon's egg to the left and in front of the uterus was clearly palpable between both hands, and puzzled me for some time as to its nature. It was evidently attached to the left uterine horn by a slender band, and might therefore be a fibroid of the pediculated variety. Close observation at several periods, a peculiar smooth feel of its surface, its tenderness, and finally its marked increase in size at the menstrual period, decided me in favor of the left ovary. An examination with the finger in the bladder would have settled the diagnosis most effectually. Enlarged ovaries, when adherent, are generally more tender than when movable, owing to the perioöphoritis which has attached them. This is especially the case when the inflammation has been recent. When not adherent, it is easy to displace and replace even enlarged ovaries by digital manipulation and proper posture of the patient.

If both ovaries are prolapsed at the same time, one, gen-

erally the left, will usually be found somewhat lower than the other; the same is the case if one is larger. If both are of equal size they will generally occupy the same relative positions when prolapsed as when normally suspended, but will be somewhat nearer to the uterine border. The examination of the patient in the erect posture will sometimes render the prolapsed ovary more accessible to the finger, which may also be said of the exploration per rectum; if the perineal tissues are lax the finger may even be passed above the ovaries.

It may be well to mention, for the benefit of the beginner, that occasionally scybala in the rectum may very closely resemble the prolapsed ovaries in shape, size, and consistence. The expert will, of course, at once recognize the nature of these small, round, movable tumors which he feels behind the cervix by their great mobility, their very low situation in relation to the vagina, their indentability (like putty), and by there being usually more than two.

In several instances, I have found the presence of the ovary obscured by coils of small intestine in Douglas' pouch. It need scarcely be added that the more the uterus is retro-displaced, the easier, ordinarily, are the prolapsed ovaries palpable. Still, in one case of extreme anteversion, both normal ovaries were prolapsed deep into Douglas' pouch. In this case, however, there existed a general want of tonicity from tuberculous cachexia.

SIGNIFICANCE.

It may be advanced that all the pathological importance of prolapse of the ovaries lies in their diseased condition, their enlargement; that the displacement of normal, not markedly diseased ovaries produces no symptoms requiring special attention or treatment; and, finally, that the distress undoubtedly caused by the prolapse of enlarged ovaries is remediable by the cure of that enlargement.

I do not deny that one of the prime factors, if not the prime factor, of ovarian prolapse is ovarian enlargement, from whatever cause; or that the cure of that enlarge-

ment will often be followed by the cure of the displacement. But I claim that the prolapse of normal ovaries is a matter of importance, and I do not believe that the treatment of ovarian enlargement will be permanently successful so long as the organs are displaced. As well try to cure edema or varicose ulcer of the legs while the patient is continually walking or standing. So reliable an observer as Dr. Skene has said,[1] that pelvic pain during the prolapse of ovaries, not markedly diseased, is out of proportion to that expected from any form of displacement of the uterus, and that pain during and after defecation is a prominent symptom. Also, that the hyperemia and hyperesthesia of a prolapsed ovary are due to the obstruction of its return circulation. Barnes says[2] that the ovary "is almost necessarily enlarged by the strangulation caused by the displacement."

In Olshausen,[3] I find the following passage: "In not a few cases one or both ovaries are found displaced in Douglas' pouch, occasionally so deep as to lie below the level of the vaginal vault. Rigby and others look upon this displacement as the chief factor in the whole affection (chronic oöphoritis), and therefore call it ovarian dislocation — a view which certainly cannot be sustained. Still, *in cases of dislocation the sensitiveness is generally very great. and at times so excessive that even the slightest touch with the finger produces the most intense agony, which may last during the whole day.*"[4]

Olshausen is doubtless correct when he pronounces the inflammation of the ovary to be more important than the displacement; but when we consider that normal ovaries, if prolapsed, give rise to a certain amount of distress, and must, in the natural order of events, sooner or later become hyperemic, enlarged, and inflamed, and that inflamed ovaries will certainly not regain their normal size and condition so long as they remain displaced, I can scarcely be accused of exaggerating the necessity, so greatly overlooked in the text-books, of reducing the dislocation, as well as, or even

[1] *Loc. cit.*
[2] *Loc. cit.*, p. 266.
[3] *Loc. cit.*, p. 31.
[4] Italics are mine.

before, attempting to relieve the disturbed nutrition of the organ.

Besides, is it imagining too much to suppose that a prolapsed, enlarged, and chronically inflamed ovary may under the various injuries above mentioned be more liable to cystic, sarcomatous, and carcinomatous degeneration than when it is suspended out of reach of external violence? In some cases of retro-displacement of the uterus the reduction of the simultaneously displaced ovaries becomes imperative through the inability to wear a pessary; for the compression of the ovaries between the instrument and the sacrum gives rise to intense agony. It is often a matter of considerable difficulty in such cases to devise a pessary which will prevent the ovaries from prolapsing after they are once replaced; the mere replacement of the uterus by an Albert Smith pessary does not generally replace or retain the ovaries also.

In short, I can conscientiously add my testimony to that of Skene and Harrison,[1] that the displacement of normal ovaries, if not soon relieved, tends to render them hyperemic and hyperesthetic, — conditions which, I am confident, must ultimately result in organic disease of the organs.

TREATMENT.

The therapeutical indications are obvious, namely, to restore the displaced organs to their normal position. If the ovaries are movable, not bound down by adhesions, this is easily done. The best position for the replacement is evidently that in which the abdominal organs by their own weight glide away from the pelvic cavity — the knee-breast position. It may be practicable to push the ovaries up with the finger in the dorsal or lateral decubitus, but they will usually prolapse again as soon as the finger is removed. Therefore, it is best to place the woman at once *à la vache*, lift the perineum with Sims' speculum, and balloon the vagina to its utmost capacity. Should there be a retro-displacement of the uterus, this procedure will frequently

[1] *American Journal of Obstetrics*, xii., p. 344, 1879.

restore the organ; if not, it should be done by the ordinary means. The uterus once replaced, the ovaries should be sought, and perhaps they may have already disappeared, that is, slid away from the bottom of Douglas' pouch and become replaced. This is liable to happen even more commonly when the ovaries are somewhat enlarged than when they are small, since the very weight of the organs, when they once reach the decline, aids their replacement. If the ovaries are still within reach, both fingers should be pressed into the posterior cul-de-sac of the vagina, and each ovary gently lifted up and pushed forward with a quick motion, so as to cause it to fall forward and downward into the abdominal cavity. Should the fingers not suffice for this maneuvre, the sponge-holder or vaginal depressor may be used, or similar efforts should be made through the rectum. Unless the ovaries are adherent, their reposition is generally easily accomplished, although when they are enlarged the operation is almost invariably very painful. The adaptation of means to retain the prolapsed ovaries when replaced is as difficult as their reposition is easy.

The normal ovaries once replaced frequently need no support whatever, and either do not prolapse again, or, if they do, are again replaced with the same ease. But if they persist in prolapsing again and again, they should be retained by the introduction of a pessary so constructed as to fill the retro-cervical pouch and leave no space between the uterus and the sacrum. Such a pessary is that devised by Thomas, and known as the bulb-pessary. The fitting of such a pessary is, however, not always an easy matter; and several may need to be tried, and perhaps a special shape constructed, before one is found which will prevent the ovaries from sliding down between it and the rectum. One great drawback to these bulb-pessaries also is that the bulb either interferes with

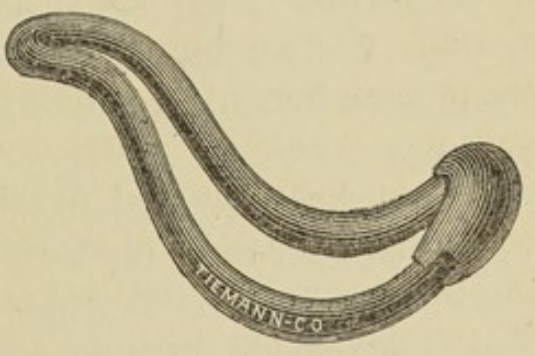

FIG. 1.

defecation, or the whole instrument becomes displaced during the act. In many cases, therefore, a Peaslee's ring-pessary, or that made by Otto & Sons, of fine elastic wires (spiral spring), will sufficiently distend and elevate the posterior vaginal pouch to keep the ovaries lifted out of the pelvis. The farther back into the sacral excavation and towards the promontory the lax vagina allows the ring to press, the more effectual will it be. Such rings should, however, be carefully watched, partly because, on principle, their steady dilating action on the vaginal walls is injurious, and partly because their soft-rubber covering is corrosive. Occasionally, I have found a bulb-pessary with a very sharp curve, like a cradle, tilt the uterus well forward and with it the ovaries, without interfering with the rectum.

If the prolapsed ovaries accompany retrodisplacement of the uterus, sometimes the Smith retroversion pessary will effectually retain both varieties of displacement, and it is always well to try it first in normal prolapse, before resorting to other instruments. In all cases the repeated daily assumption by the patient of the knee-breast position and the introduction of air into the vagina (Campbell's pneumatic pressure treatment) will prove beneficial and aid the adjustment of a pessary.

In some cases where hyperesthesia of the ovaries themselves, or of the retro-uterine cellular tissue exists, the repeated introduction into the posterior cul-de-sac of tampons of cotton, or marine lint soaked in glycerine, the glycerole of tannin, or glycerine and water, is required before the parts become sufficiently hardened to permit the application of a pessary.

When the prolapsed ovaries are enlarged, inflamed, and hyperesthetic, their reposition may succeed, but the immediate introduction of a pessary is usually impracticable. Occasionally they are so tender that they can only be replaced under anesthesia. If they are very much inflamed, the better plan is to confine the patient to her bed for a few days and by antiphlogistic measures (hot vaginal baths,

tincture of iodine to the vaginal vault, glycerine tampons, perhaps leeches to the cervix) endeavor to allay the inflammation before attempting the reduction and application of a permanent support. An excellent application in my hands in these cases has been the daily introduction into the posterior vaginal pouch of a small bag of muslin filled with flaxseed meal, soaked in hot water and kept *in situ* by cotton and glycerine tampons. In all cases of pelvic congestion or inflammation, daily hot vaginal baths given *lege artis* are a *sine quâ non.*

As soon as the condition of the ovaries permits, they should be replaced in the usual way and a pessary introduced. Should the parts, however, be still too tender, as is very frequently the case, the posterior vaginal cul-de-sac first, and then the whole vagina, should be gently but firmly packed with disks of cotton, sheep's wool, or marine lint, soaked in carbolized glycerine and squeezed dry, and introduced one by one, until the uterus and vaginal roof have been furnished a soft and firm support. This tampon should be removed in from twenty-four to forty-eight hours and at at once reintroduced, after the vagina has been properly cleansed; and this treatment is to be continued until the parts have become sufficiently toughened to stand a permanent supporter, if, indeed, one be then still needed. This method of packing the vagina was first recommended in print by Taliaferro, of Georgia, for cases of cellulitis, metritis, and oöphoritis and displacements in which a pessary cannot be borne; but Dr. Bozeman, I am informed, claims the priority of the principle. It certainly is an excellent measure, and particularly applicable to those cases where hyperplasia and retroversion of a hyperesthetic uterus accompany prolapsus of the ovaries. The steady pressure of the tampon in itself is a potent agent in the reduction of the inflammatory congestion and edema of the pelvic organs, and frequently gives relief even though the prolapsed ovary remains unreplaced. A soft sponge soaked in a disinfectant solution, and compressed by the hand while being introduced, forms an excellent substitute for the tam-

pon. A hole may be cut through its centre to receive the cervix, and if the sponge is then crowded against the vaginal vault by firm packing with a few cotton tampons; by its slow uniform expansion it forms one of the best supports, and at the same time by pressure reduces the inflammation and congestion. Of course, it needs daily removal and cleansing. In many cases, however, it is necessary, after replacing the ovaries, to introduce merely two or three glycerine tampons behind the cervix for several days or a week, and then apply the pessary.

If the applications of iodine to the vaginal vault are badly borne, I have found daily vaginal suppositories containing fifteen grains of the iodide of lead (first suggested to me by Dr. Barker) unirritating and beneficial; they must be retained behind the cervix by tampons. As a rule, I think it advisable to endeavor to reduce the congestion and inflammation of the ovaries while they are prolapsed and accessible; but as such relief will be but temporary so long as the organs are displaced, of course their replacement should then be at once effected. If the ovaries are but moderately sensitive, however, and easily replaced, it is just as well to restore them to their normal position, retain them there, and then treat the oöphoritis in the usual way. In these cases I have found some benefit from the chloride of gold and sodium given in one twentieth to one eighth grain doses three times daily. The bromide of ammonium may also be given in addition as an ovarian sedative; the bowels should be kept loose by saline laxatives, and acute pain relieved by narcotic rectal suppositories, preferably hyoscyamus, cannabis indica, and iodoform, if sufficiently powerful, instead of opium. Entire sexual abstinence is, of course, imperative in all cases where the ovaries are inflamed. When the ovaries have been replaced and a permanent support can be borne, the ingenuity of the physician and the perseverance of the patient are frequently severely taxed before a proper pessary can be found which the patient can wear with comfort and benefit. The Albert Smith, the Thomas' bulb, Noeggerath's cradle pessary,

the flexible ring pessary, the soft rubber Hoffmann, the various forms of inflated soft-rubber ring and ball pessaries, may all be tried in turn. I have found the Thomas' anteversion pessary, with movable anterior bar, the so-called buckle pessary, do well, the movable bar being left in apposition with the posterior bar, thus forming a thick bulb behind the cervix. If so used it requires frequent renewal and cleansing.

The object in the selection of a pessary is to choose one which will either push the posterior cul-de-sac, and with it the broad ligaments on the lateral stretch, or fill out the cervico-rectal space, or accomplish both of these ends. An instrument which will do this, will keep the ovaries away from the bottom of Douglas' pouch, relieve them from torsion and pressure and give their supports an opportunity to regain their tone and elasticity. At the same time, those pessaries which tend to antevert the uterus, will give to the ovaries a forward inclination. But frequently the ordinary supporters in use press upon one or the other of the inflamed ovaries so much, even after they are replaced, that a new instrument has to be constructed to relieve this pressure, and at the same time support the organ and the broad ligament of the affected side. Thus we may be obliged to have the Smith or Thomas' bulb pessary made with an unusually broad posterior bar, with the lateral edges more square than usual [1] (those in the shops

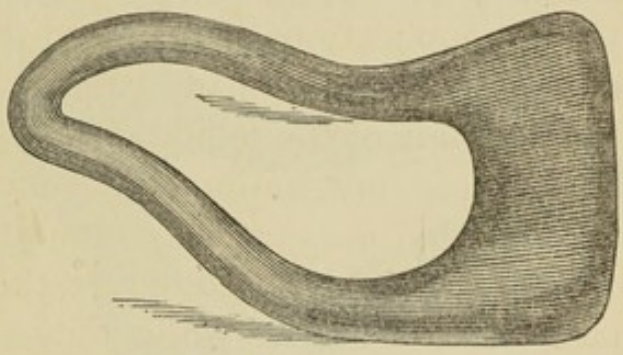

FIG. 2.

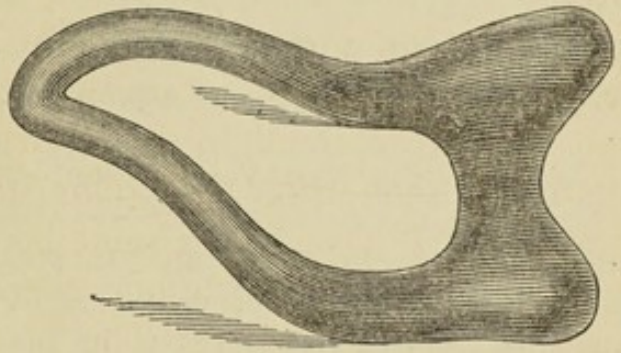

FIG. 3.

[1] A very instructive case of this kind was reported by Dr. Clement

are hardly ever sufficiently broad); or if the median pressure is to be avoided the posterior bar may have to be grooved in the middle; or, if the pressure be too great on one ovary the pessary must be so bent as to derive greater compensating support from the broad ligament of the opposite side. Dr. Emmet, with the mechanical ingenuity peculiar to him, has constructed a pessary of malleable block-tin for unilateral cellulitis of the broad ligament, which acts on this principle and will answer very well for unilateral ovarian prolapse and inflammation. The diagram is to be

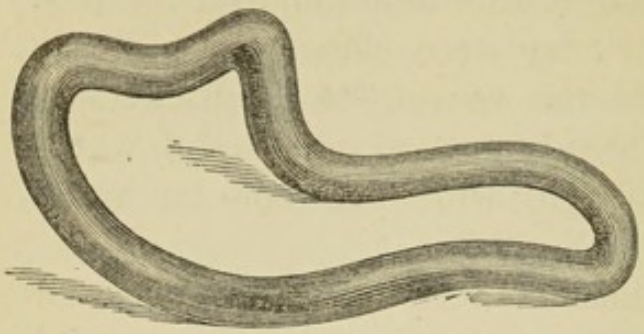

FIG. 4.

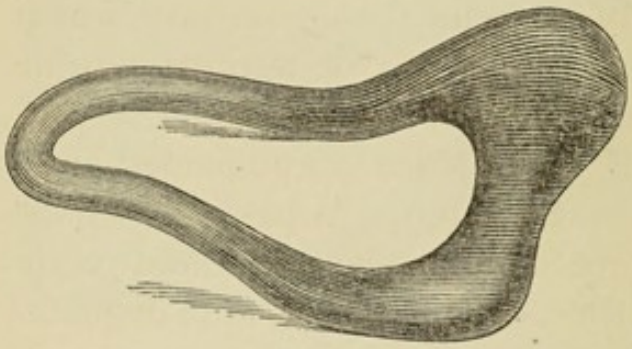

FIG. 5.

Cleveland to the New York Obstetrical Society, at its meeting of November 7, 1876. (See *Am. Jour. Obst.*, vol. x., p. 109.) He had a patient with a retroverted uterus bound down by adhesions, and a prolapsed and sensitive left ovary. A Thomas' modified Cutter pessary gradually restored the uterus to its normal position, and an ordinary Thomas' bulb pessary was introduced. This caused sharp pain on the left side, with nausea, and was forced out. The latter difficulty was obviated by increasing the curve of the pessary, but the ovarian pain still continued. Several forms and shapes of pessaries with different curves were then tried to avoid pressure on the prolapsed ovary, but in vain. The pain in the left side prevented the patient from wearing them. Finally, Dr. Thomas saw the patient and found the ovary lying between the sacrum and the pessary, the uterus being perfectly replaced. The ovary was replaced, and a bulb pessary introduced, the bulb of which was two and a quarter inches broad laterally. This kept the ovary up perfectly, but the bulb was too large. Dr. Cleveland then had one made with a bulb only one and seven eighths inches broad, which answered the purpose admirably, and was still being worn three months later, when the case was reported.

found on p. 286 of his book. In cases where the retrocervical pouch is so shallow that it affords no hold for the posterior bar of a pessary, it may need elongating by daily packing with tampons, or by the wearing of a Cutter's supporter for some time, the steady upward pressure of which (if it can be borne long enough), will make room for an intravaginal pessary.

The objection to all instruments with thick posterior bars, is that they are apt to interfere with defecation. I have already stated above how this may occasionally be obviated. Still, it frequently happens that a pessary which apparently was a perfect fit, may sooner or later have to be changed or entirely omitted for a short time.

If posterior prolapse of the ovaries accompanies ante-displacement or descent of the uterus, a pessary will be needed which tends to correct the displacement and retain the ovaries at the same time. Such is for ante-displacements, Thomas' buckle pessary, the posterior bar being made bulbous, if necessary. As a rule, however, the ovarian prolapse in these unusual cases is moderate in degree, and the treatment should be confined more to the uterine displacement. In descent, one of the pessaries above mentioned will do (as there is generally retroversion also), or an ordinary Hodge, or Noeggerath's cradle pessary. While the treatment of these cases is liable not to be as successful as could be desired,[1] it certainly does not warrant the verdict rendered by Beigel,[2] that "the treatment of intrapelvic displacements of the ovaries is out of the question." Very much can be done by patient, persevering, and systematic treatment.

If the prolapsed ovaries, besides being inflamed, are attached to the bottom or sides of Douglas' pouch, by fresh or old adhesions, our therapeutical measures are restricted to the removal of the inflammatory signs and the relief of pain by the remedies already indicated. The gentle and steady pressure of sponge or glycerine cotton tampons, with or without narcotic ingredients, is one of the most

[1] Skene, *loc. cit.*; Schroeder, *loc. cit.*

[2] *Loc. cit.*, p. 437.

beneficial agents in these cases. Vaginal injections of a solution of one of the bromides (ʒj. to ʒjj. to the quart) frequently help to allay the pain.

In those not very uncommon cases in which none of these remedies afford relief, and the constant local pain with frequent exacerbations renders the patient's life a burden, and the regularly recurring menstrual oöphoro-neuroses endanger her intellect, the question of the removal of the offending organs comes up for serious consideration, and offers the only hope of cure. When the ovaries are firmly bound down, even this hope is a scant one, since statistics show that the relief usually obtained from the operation in these unfortunate cases is that of death.

In conclusion, I wish to formulate briefly the deductions to be drawn from this paper: —

1. The subject of prolapse of the ovaries has not received in the text-books and periodicals the attention which its importance, as a separate affection, demands.

2. Ovarian prolapse, owing to the normal mobility of the organs, is a very common affection, frequently accompanying retro-displacements of the uterus. In by far the greater number of cases the displacement is backwards into Douglas' pouch.

3. The normal, not markedly enlarged, ovaries frequently prolapse, either in consequence of retro-displacement of the uterus, sudden physical shock, puerperal sub-involution, or menstrual congestion. More frequently still does prolapse occur in consequence of moderate enlargement of the ovaries through engorgement or inflammatory hyperplasia.

4. Their prolapsed condition causes even normal ovaries in time to become hyperemic, hyperplastic, and hyperesthetic, partly through vascular obstruction and partly through the injuries to which they are subjected during defecation and coition. Already enlarged and degenerated ovaries for similar reasons naturally undergo a more rapid pathological change in consequence of their displacement.

5. In rare instances displaced ovaries have been found

to become spontaneously replaced; thus, after cessation of the menstrual engorgement, and through accidental favorable positions of the patient. As a rule, however, a displaced ovary requires to be replaced by artificial means.

6. The symptoms caused by displacement of the normal ovaries, while more or less vague, are sufficiently severe to attract the attention both of the patient and the physician. Those of displacement, of hyperemic and inflamed ovaries, while also vague in a diagnostic sense, are frequently agonizing in the extreme, and entirely out of proportion to those experienced during ordinary uterine disease. Although the rational signs of ovarian displacement in themselves present nothing characteristic, collectively they are of significance.

7. The diagnosis of ovarian prolapse is exceedingly easy to the practiced touch, per vaginam, rectum, or by conjoined manipulation.

8. The treatment consists in replacing the organs manually, or by position, or by replacing the uterus if displaced, which is readily possible if the ovaries are not adherent; and then by retaining them in position by tampons, or properly and peculiarly constructed pessaries adapted and moulded according to the needs of each individual case. Thus the posterior bar of the pessary may be made unusually broad and thick, or beveled in the centre, or depressed on one side, so as to relieve the prolapsed and tender ovary from excessive pressure. After being fitted in malleable material, the shape may be permanently fixed in hard rubber. If the ovary be too tender to permit replacement, the hyperesthesia should be reduced by proper antiphlogistic and sedative means, and the reduction then accomplished. Indeed, if feasible, it is advisable in any case to endeavor first to relieve the hyperemia and hyperplasia, so long as the organs are readily accessible, and then replace and retain them.

9. Much ingenuity and patience may be required to devise proper means for supporting the inflamed and tender

ovaries, which, once replaced, should be treated by the well known remedies for chronic oöphoritis.

10. If the ovaries are adherent, the treatment resolves itself into antiphlogistic and narcotic measures. In case of great local or constitutional disturbance the last resort of their removal may be suggested and adopted.

DISCUSSION.

Dr. Battey, of Rome, Ga. — I am not prepared to deny that this is a subject upon which I should entertain decided opinions, but am obliged to admit that I know almost nothing. Of course it has been my lot to have seen quite a number of cases of prolapse of the ovaries; but my most careful thought has failed utterly to connect as cause and effect prolapse of the ovary with disease of that organ. In fact, I have failed in cases of prolapse of the ovary to find any positive evidence of disease as a general rule. It is true, there is a common co-existence of prolapse and disease of the organ; yet I recall a number of cases in which there was no positive evidence of disease of the organ. On the other hand I remember numerous cases of diseased ovaries, such as Dr. Mundé describes in his paper, which have not been prolapsed. As to treatment, mechanical expedients have not commended themselves to my judgment. I am not prepared to deny that the use of pessaries, such as described, may, in individual instances, relieve pain. It would not do to stand upon this platform and pretend that there is any science or utility in Mrs. Bett's utero-abdominal supporter, but I am prepared to assert from personal observation that there is often more than a coincidence between the wearing of this external compress upon the lower abdomen and the relief of uterine and ovarian pain.

Dr. Skene, of Brooklyn. — At the time I called the attention of the New York Obstetrical Society to the subject under consideration I was aware then, as now, that in the literature of the subject of prolapse of the ovaries, attention had not been given to the subject in proportion to its merits, so far as my investigations could ascertain. I am gratified to know that Dr. Mundé since that time has wrought up this most important subject. I am not disposed to discuss the paper, I am only prepared to praise it. I think I have verified nearly all that is stated in the paper, and can only add the weight of my testimony to corroborate what he has already said. So exhaustive and so complete is the paper that I am unable to add anything of real value to it. I will, however, mention a few points that occurred to me while listening to Dr. Mundé, and which may be of some interest. First, with reference to causation. I have been led, from observation, to believe that a peculiar kind of pelvis favors prolapse of the ovaries, and that is a large, shallow pelvis standing at an obtuse angle to the body. I have found that form of pelvis in the great majority of cases of prolapse of the ovaries that have come under my observation.

With reference to physical exploration with the view to diagnosis, I have not had much success with the bimanual examination. I have endeavored to do as Dr. Mundé has explained ; to carry up the ovary and grasp it between the external and the internal hand, but I have not succeeded in many cases, consequently I have adopted the plan of attempting to get the ovary between the two fingers (in the vagina) and the sacrum, and have succeeded in that manner in outlining the ovary and also in testing its tenderness.

With reference to symptomatology, I would like to correct what appeared to me to be an omission, or else the author's experience has differed entirely from my own, and that is with reference to painful defecation. He mentions painful defecation as a prominent symptom, but I have observed that the pain *follows* defecation, and I look upon it as almost pathognomonic. I remember a case of Dr. Sims', formerly under my care, in which there was violent pain in the pelvis and lower portion of the abdomen for two hours or more after the bowels moved. The pain differed from that which is caused by hemorrhoids or fissure of the anus. The ovary was prolapsed and diseased, and Dr. Sims removed it. I hope the doctor will recall the case and correct me if I am mistaken.

The character of the pain, the location of it, and the time at which it occurs in relation to the act of defecation are peculiar to displacement of the ovary and therefore are valuable symptoms of that affection.

With reference to the question of treatment, I have not been able to find any pessary which answers the purpose; because any pessary which goes far enough underneath a prolapsed ovary to keep it up and allow it to rest on the instrument, will press so firmly against the sacrum as to interfere with defecation and become intolerable. So far as my observation goes, position with the tampon is the only thing which gives satisfaction. To place the patient in the knee chest position night and morning and apply the tampon to sustain the organ in its place has given to me by far the most satisfaction in point of treatment of any method that I have employed. When the prolapsus has become less under this treatment, and the tenderness of the ovary has subsided wholly or in part, then a pessary will answer very well.

Dr. Goodell, of Philadelphia. — I have but little to add to Dr. Mundé's most able paper, but there are certain points in the symptomatology and etiology of this dislocation of which I would like to speak. So also with regard to the treatment, although I find myself more or less in accord with the conclusions reached by the author. There are certain symptoms which I have observed, which are a little different from those alluded to by Dr. Mundé. One is that, if the ovaries are low down, the aching begins when the rectum is loaded, and it goes on increasing until the culmination is reached, during the act of defecation. To avoid this agonizing pain the woman schools herself into the habit of postponing the evacuation of her bowels, and thus becomes constipated. The pain induced by the passage of hardened feces, to which Dr. Skene has referred, often lasts for hours. I have also found that pain is usually complained of during the act of coition. Sometimes this is so acute as to put an end to cohabitation. Another very common symptom is gusts of nerve-pain radiating from the prolapsed ovary as the centre. Usually these come from the left ovary, for, as Dr. Mundé has shown, it is the left ovary which is more frequently dislocated.

With regard to causation, I have been satisfied that, in a great many cases, prolapse of the ovary is due to such imperfect and perverted sexual relations as keep the ovaries turgid. I have seen two very marked cases in ladies who were married to hus-

bands very much older than themselves, and who of their own accord attributed their local troubles to this disparity of age. The endometrium of each woman was studded with an exuberant crop of vegetations. One was sterile, the other had borne one child. In both, the turgid and very sensitive ovaries were low down in Douglas' pouch, and both acknowledged unsatisfied desires. Prolapse of the ovaries also occurs, in my experience, in those women who seek to avoid maternity, and especially by the means of withdrawal. Again, I have occasionally discovered this dislocation in girls who are addicted to self-abuse. I now have a case under treatment in which the left organ is prolapsed into the left lateral pouch. The organ is turgid and excessively sensitive, and both her attending physician and myself are sure that the patient is addicted to the habit of masturbation, although we have not put the question to her point-blank. There is very great congestion of the entire reproductive apparatus, and there is also present the most marked ectropion of the cervical mucosa I ever saw in a woman who had not a torn cervix. She is probably a virgin, and undoubtedly a nullipara, for there are no evidences whatever that she has ever given birth to a child.

From an extended experience with such cases, I think there can be no question that imperfect sexual relations or perverted sexual excitations are often the causes of prolapse of the ovaries.

Now with regard to treatment, I have, as have both Dr. Skene and Dr. Mundé, found great difficulty in accomplishing much by the use of mechanical means. But I have had two cases in which a cure was gained by the treatment of rest, massage, and forced feeding.

I have observed that in a majority of cases this dislocation occurs in lean persons, persons with lax fibre, and with the retentive power of the abdomen much weakened by the loss of fat. Now, the rest in bed, the massage, and the forced feeding fatten up the patient very rapidly, and the result is an increase in the retentive power of the abdomen, and an ascent of the ovaries. By this treatment we avail ourselves of a principle or a law set forth by our esteemed secretary in one of our Society meetings, that when we have fatness of the abdomen we have increased retentive power over the abdominal viscera. This is due not only to the packing of fat but also to the projection and the sagging of the fat belly wall over the pubes, by which is gained corresponding suction acting upon the pelvic organs. For instance,

as a homely example, I have no doubt that most of the gentlemen have noticed how high up the womb is in women who are very fat. I should like to speak further on the subject, but I am reminded by our president that my time is up.

Dr. Bozeman, of New York. — According to my observation prolapse of the ovaries is of very frequent occurrence, and it is a subject which has interested me for many years. I agree fully with Dr. Skene and Dr. Goodell with reference to the mechanism by which the symptoms are produced. I am not sure, however, but that, in the majority of cases, it is the retroflexion, which is almost invariably associated with the prolapse, that gives rise to the pain, rather than the difficulty in defecation. I have seen cases in which there was almost complete obstruction of the bowel, in which not only was pain occasioned by the retention of the feces, but the habit of constipation was the result.

With regard to sexual fitness of the organ, I am quite sure that Dr. Goodell is correct, but I differ from him somewhat regarding the mechanism of the pain experienced during the act of coition; it is, I think, due to pressure of the male organ upon the posterior surface of the uterus where the ovary is almost always fixed by the preternatural shortness of the vagina.

With reference to disease of the organ, it certainly exists in many cases, although, as Dr. Mundé has stated, the organ is not, to all appearance, diseased in many cases. I recall one case in which the ovary was prolapsed into the left lateral pouch, where it became fixed to the uterus, and underwent cystic degeneration, ruptured, and discharged into the uterus at two different times.

The treatment which has been proposed by the author of the paper is very good, so far as it applies to simple cases. But where the organ is prolapsed, and has become fixed, I think he has not given sufficient importance to pressure while the patient is in the knee and elbow position; this can be carried out by making cylinders of cotton in the vagina so as to bring pressure directly against the fixed ovary.

I have found iodoform ointment, applied to the cul-de-sac and kept in place by a column of carbolized cotton, of great value to relieve the tenderness and hyperesthesia which always exists in these cases. As Dr. Mundé has mentioned my name in connection with support of the prolapsed organ by means of the cotton vaginal tampon, I will only say that such has been my practice for the last twenty years.

I have seen fixation of the ovary not only by retroflexion and latero-flexion of the uterus, but it is also often fixed in the posterior cul-de-sac low down, thus giving rise to the same symptoms that have been mentioned at considerable length. I have seen the greatest relief to the symptoms from the use of pressure when the ovary is prolapsed and adherent. Of course if the ovary is firmly fixed in that position it is not to be supposed that by pressure it can be disengaged, but it is possible to carry the uterus up and with it the ovary, by which means the vesical symptoms are relieved.

Dr. Reamy, of Cincinnati. — If I understood the author of the paper correctly, he did not direct special attention to displacement of the ovary associated with retroflexion of the uterus; but his object was, as I understood it, to call attention to the fact that this displacement exists as an independent malady. Every one recognizes the fact that retroflexion of the uterus, if of long standing, produces displacement of the ovary by dragging it in the direction of the right or the left lateral pouch, but not necessarily into Douglas' cul-de-sac.

I arose to make two observations: —

First. Prolapse of the ovaries occurs by preference in those women who have lax abdominal walls, generally in those who are very thin. I think this remark has a practical application, because we shall be led by it to look for the disease in a special class of subjects.

There are two conditions which prevent differentiation of the normal from the diseased ovary by conjoined manipulation. 1. Obesity often associated with a deep pelvis; and 2, rigidity of the abdominal wall induced by fear. The fact that in the majority of cases the displacement occurs in lean women, removes to a very great degree the first obstacle, and anesthesia certainly removes the second.

Now, this is not an unimportant fact, because if we can demonstrate a normal ovary without its being displaced, tender, and enlarged, especially in lean women, it encourages every one to seek for ovarian displacements.

Second. With reference to treatment, while I consent to every statement upon the part of the author of the paper, it is a marvel to me that he did not recommend a bulb pessary which should have its support external to the vagina. Because any man who will practically test the efficacy of a pessary which has a bulb to

elevate the floor of Douglas' pouch, in retroversion, and is supported externally, will soon learn that the same amount of support cannot be derived from an instrument that is entirely within the vagina. For any pessary, to make pressure sufficient to hold up the ovary, must be supported externally, after the plan of Babcock's pessary. Any instrument may be chosen if only this principle be held in view.

DR. BARKER, of New York. — I will preface my remarks by saying that all who speak or prepare papers to be read should assume that the members of the Society and our guests know something, and therefore we have no right to occupy time in discussing merely elementary principles which every well-informed man should know perfectly before coming here.

I do not propose to say anything with regard to the pathology or symptoms associated with prolapse of the ovaries, for I think that has been thoroughly treated before, although two or three assertions have been made to which I should hesitate to assent, especially in connection with diagnosis, but will confine my remarks to certain practical points connected with the treatment of prolapse of the ovaries.

In the first place I believe it to be quite a frequent affection. My own experience is also in accord with that of the writer of the paper, and I think with most authors, that it is much more frequent on the left than on the right side, which fact is explained by the position of the rectum and the habitual constipation which acts to maintain the prolapse. Now, what are the indications as to treatment? I should say, *first*, so far as possible to restore the organ to its true normal position; *second*, to keep it there; and *third*, to obviate or remove all the causes which develop and perpetuate this pathological condition.

With regard to the methods of replacing the prolapsed organ it is not necessary to say anything because these have been sufficiently indicated. In cases in which the organ has been made adherent by plastic exudation as the result of coincident inflammation, we cannot always be successful in replacing it by mechanical means alone; and yet it is even worth while to make the attempt to overcome the plastic exudation, and perhaps in certain classes of cases we may be materially aided by the use of hot water vaginal injections. Another agent upon which I place considerable reliance in these cases of adherent prolapsed ovary is mercury. The use of minute doses of the proto-iodide of mer-

cury for a considerable period of time, has in my hands yielded very satisfactory results. These two agents are of great service in facilitating the absorption of the plastic material which binds the ovary in the pelvic cavity.

The next point is to keep the ovary in its place. I am in accord with some of the speakers regarding the utility of pessaries, in that they seldom are fully adapted to the cases in which they are used. Oftentimes the irritation which they produce by continued pressure, and the interruption to the circulation are sources of injury, and the instrument does harm rather than benefit. I venture to say that we are able to keep the organ in place as well by the use of the tampon of cotton, when it is properly adjusted, as by any means that has been employed, and in addition to this I have found, in my own experience, great benefit from having this tampon saturated with a solution of tannic acid. The preparation of tannic acid which I use is one dram of the acid to one ounce of water, the object being to obtain its effect in contracting the tissues which surround the pelvis, and thus increase their tonicity and the normal supports which keep the organ in place.

To correct the habit of constipation the best pill that can be used is one composed of such agents as have a tendency to restore the habit of having regular fecal discharges, which of itself involves no muscular effort on the part of the pelvic tissues such as would have a tendency to again displace the organ. For this purpose I am in the habit of giving my patients a laxative composed of equal parts of sulphate of magnesia, carbonate of magnesia, tartrate of potassa, and sulphur. This produces a soft pultaceous evacuation without any muscular effort, and the great advantage is that its continued use does not oblige an increase of the dose ; on the contrary, the habit of action is established.

Dr. Battey, of Rome, Ga. — It has occurred to me, after the hasty remarks I made at the opening of this discussion, that I laid myself open to misconstruction in failing to express hearty thanks to Dr. Mundé for the fair manner in which he has brought this subject before the Society. I take occasion to speak now in view of the great interest of the literature on this subject and of my personal interest. These remarks should have been made at the time I opened the discussion.

Dr. Busey, of Washington, D. C. — It is a somewhat inopportune moment to discuss such a question as this, so soon after

lunch, still I may say at the outset that my experience corroborates almost entirely the views expressed by the author of the paper. There are one or two points on which I would not differ, but on which I would add, perhaps, to the paper, read by Dr. Mundé.

I draw the inference from what the author states that he regards structural changes in the ovary as the beginning of the trouble, whereas my experience would teach me that the structural changes are secondary. In nearly all instances in which prolapse of the ovaries has come under my observation, it has been associated with displacement of the uterus, and I have inferred that the displacement of the ovary was the result of the displacement of the uterus, and the changes which took place in it; consequently the result of interruption in the normal circulation. I have been induced to believe that the tenderness, the enlargement, the inflammation, and other changes which may occur in the prolapsed ovary are secondary to the displacement.

In the second place, in all the cases which I have seen, there has been one symptom present which the author of the paper has omitted, which is not, however, pathognomonic of displacement of the ovary, and that is a localized, circumscribed pain, to which the patient directs attention, upon some part of the buttocks. I have frequently had patients call my special attention to this circumscribed pain, which they have localized by saying that it was at a certain spot, not larger than a half dollar or a dollar; and when by vaginal examination the prolapsed ovary was touched they have referred the special pain to this particular spot. I have found this circumscribed pain so frequently associated with prolapse of the ovaries that I have come to regard it as a symptom which points in that special direction, and one which warrants an examination specially to determine whether or not prolapse of the ovaries exists.

One other point alluded to by Dr. Battey with reference to the utility and value of abdominal compresses or bandages in relieving the pain. The doctor ascribed the relief to pressure on the abdominal wall. Now, this is too large a subject to be discussed properly at the present time, but I am inclined to think the relief is due not so much to pressure as to the correction of the defects which exist in the elevation of the viscera by the abdominal walls. In other words, the effect is to restore the equilibrium of pressure which the superincumbent abdominal viscera

exert upon the pelvic viscera in general. Upon that hypothesis I think the benefit arising from abdominal compression and support can be explained. The relations of the abdominal to the pelvic viscera have been disturbed, and the abdominal support restores the retentive power of the abdominal cavity. These are all the addenda I have to offer.

Dr. SMITH, of Philadelphia. — There is certainly no ailment among women who suffer from pelvic trouble which is less fully and justly recognized than this subject of dislocation of the ovaries. I think that if it was more fully recognized, and that if diagnosis was more carefully made out, such cases as those in which the patients go about from one physician to another, one treating them by powerful acids, another by nitrate of silver, another by some other method, — I say, if the diagnosis in these cases was more carefully made, they would be less frequent. I believe that in most of these cases of prolonged pelvic trouble, painful in character, in women who have been subjected to various inappropriate methods of treatment, prolapse of the ovary or the ovaries is the pathological condition. It is easy to make a diagnosis of enlargement of an ovary when the organ has reached two or three times its normal size ; but the class of cases in which mistakes are especially liable to occur are those in which the woman goes on suffering from month to month and year to year, and in which there is not sufficient displacement of the uterus or engorgement of the cervix to account for it. Finally at some examination the physician finds upon more careful touch, as the finger passes up behind the cervix, that suddenly the patient has a twinge of pain accompanied by a new and peculiar sensation. I have usually found under such circumstances, that the patient has complained of pain in the normal site of the ovary. If, for example, it is the left ovary that is displaced, by carrying the finger up into the pouch over the diseased ovary and making pressure, the pain will be referred to the region from which the organ has been displaced. Besides that, I have always thought that the permanent pain is most commonly referred to the same region. As I have already said, it is easy to diagnosticate prolapse of the ovaries when they have attained to considerable size ; but sometimes after prolonged effort at making a diagnosis we are foiled, until, perhaps, passing the finger high up in the posterior cul-de-sac it comes in contact with a soft body which presents a slight resistance, and then recedes from the finger

I do not believe there is any positive method of diagnosis in these cases except the postural. If, under such circumstances, you pass the finger into the vaginal pouch, catch the mass between it and a finger passed into the rectum, and then, placing the patient upon her knees and chest, you find that the body, as it recedes from your fingers, falls downward with relation to a horizontal line, you may be positive that you have to deal with a prolapsed ovary. Sometimes you can make a diagnosis accurately by simply passing one finger into the vagina and another into the rectum and catching the ovary between them.

With regard to treatment, I am sorry that I cannot be so enthusiastic as is Dr. Mundé regarding the relief that can be afforded by using pessaries. I have not seen good results in the treatment of prolapsed ovaries by means of pessaries. The amount of pressure, to be of any service so far as holding the ovary in position is concerned, is usually such as prevents the pessary from being tolerated. I have tried all forms of pessaries, and that which Dr. Chadwick devised, and which prevents all pain by preventing pressure in the posterior cul-de-sac of the vagina and upon the cervix, — a stem pessary retained in position by means of an elastic ring, — has answered for a time, but no permanent relief has followed because the stem will gradually imbed itself in the wall of the cervix, and must soon be removed. I have derived the best results from simply using a small bag made of tarlatan and distended with tannic acid. I believe there are many of these cases in which relief will not be obtained unless it be through Dr. Battey's operation ; and should an obstinate case come under my care I should look for authoritative statistics to aid me in determining whether or not I should be justified in resorting to the operation for the relief of such cases as we are considering. I have met with cases in which the patients suffered severely and continuously from this affection, and yet in which there was no interference with the functions of organic life so long as they kept perfectly still in the horizontal position, and yet they were cut off from all capacity for social enjoyment because of this peculiar affection of the ovaries.

Dr. Chadwick, of Boston. — The point which I regard as the most important in relation to the treatment of prolapse of the ovary, has been mentioned by Dr. Mundé in his paper, but, as it seems to me, with inadequate appreciation of its significance ; by the other speakers it has hardly been alluded to. I refer to

the close connection between the ovary and the fundus of the uterus. In my experience a large proportion of the cases of non-adherent prolapsed ovary are complicated by a greater or less degree of retroversion of the uterus; in other words, the ligament which binds the ovaries to the fundus is rarely elongated, but the causes which bring about the descent of the ovary into Douglas' pouch generally operate to retrovert the uterus. If this be true it is evident that the prolapse of the ovary may be corrected by putting and keeping the uterus well in anteversion. This has been my aim in the treatment of such cases, and for this reason is it, as I believe, that the pessaries recommended by several speakers have been efficacious. I do not believe that an ovary can be directly elevated by a pessary without giving rise to almost constant pain, and rendering the patient very liable to local inflammatory attacks. When the utero-ovarian ligament has, however, been so stretched as to allow the ovary — generally an enlarged one — to sink into Douglas' pouch, while the uterus is in anteversion, a pessary will sometimes, when the vagina is lax and voluminous, so elevate Douglas' pouch as to render it the highest part of an inclined plane, and thus cause the ovary to gravitate forwards to the side of the uterine fundus. The possibility of this will be apparent to those who have been in the habit of making vaginal examinations in the erect posture.

Thus far I have been speaking only of movable prolapsed ovaries. When, however, the organ is adherent in Douglas' pouch as a result of antecedent peritoneal inflammation, all continuous pressure upon it, by whatsoever form of pessary, is strictly contra-indicated as involving imminent danger of inflammation. My practice, then, is to strive to antevert the uterus, either by means of a simple circular pessary which presses the posterior vaginal cul-de-sac backwards, and not upwards, against the ovary, thus dragging the cervix backwards and tilting the fundus forwards; or to push the cervix backwards through the instrumentality of an intra-uterine stem, as alluded to by Dr. Smith. The stem will not cut through the cervix if the backward pressure upon the stem be made moderate at the first, through the choice of a small-sized vaginal ring, or be occasionally intermitted for a brief time by withdrawal of the two instruments. By these two procedures I have repeatedly been able to dislodge an adherent ovary by the traction of the utero-ovarian ligament.

I should hesitate to comment upon the report of Mr. Wells'

case in his absence, did I not feel assured that he, if consulted, would disclaim exemption from criticism on that score. It does not seem to me that the symptoms in his case were properly ascribed to the ovaries, but that they were characteristic of the cystic state of the Fallopian tubes which was found to exist at the operation. The recurrent attacks of pain began habitually about ten days before the monthly periods. For five or six days the pains are described as having been "very frequent and very severe. Then a slight show of the period, with less pain, perhaps for a day, and then two or three days of very great suffering, as if blood had collected and could not pass. The pain would last from one to two hours, and then leave me suddenly as if something had righted itself." Now, I have had several cases presenting a similar succession of symptoms, in which I have been able to detect a cyst on one side or the other of the uterus, which I have diagnosticated as cyst of the Fallopian tube, but have never verified my opinion by operation or autopsy. My explanation of the symptoms is this: that fluid collects in the tube, of which the fimbriated end is occluded until it is greatly distended; as the monthly period approaches, peristaltic action repeatedly occurs in the tube, attended with great pain, which tends to expel the fluid through the uterine end temporarily occluded. This action continues at intervals with increasing violence, until, during the catamenial relaxation of the uterus, the fluid contents of the tube is forced through the opening into the uterine cavity with immediate relief. If this view be correct, the removal of the ovaries was of no consequence, though the operation was quite as urgently called for as the best and perhaps the only means of relieving the cystic condition of the tubes, and securing to the patient immunity from her sufferings.

Dr. Mundé, of New York. — I desire, above all things, to thank Dr. Battey for correcting an unpleasant impression created in me by his earlier remarks. My aim in the paper was simply to show that prolapse of the ovaries is a pathological condition worthy of special consideration and treatment; and it seems to me that every gentleman who has spoken favors this idea.

The brief time allowed for the reading of my paper necessitated the omission of many points, to which reference has been made, which, as I was compelled to skip something, I regarded as of less importance than those which were mentioned. The use of iodoform, for instance, is referred to in the portion of the paper that was not read.

Dr. Skene has spoken of pain following defecation. That is a symptom which I omitted to mention. I must confess, however, that I have heard it most frequently spoken of as occurring during defecation. Still I think that he is correct.

Dr. Reamy states that I failed to mention external support in the shape of pessaries. I spoke of pushing up the posterior cul-de-sac with cotton pessaries supported externally in cases in which the posterior cul-de-sac is not sufficiently deep to allow the proper amount of support. With regard to the remarks made by Dr. Barker, I may say that I learned from him, when I had the honor of being his assistant in the Woman's Hospital in New York, the value of hot water injections and tannic acid in exactly this class of cases, and mention is made of that plan of treatment in the paper. He also taught me something else which is in the paper, and that is, to use, when applications of iodine to the posterior vaginal wall produce too much irritation, a fifteen-grain suppository of the iodide of lead. I have seen excellent results from this application.

Dr. Busey says that he differs with me regarding ovarian displacement as to whether it is primary or secondary. I mentioned that I inclined to the opinion that enlargement of the ovary is primary, although there are plenty of cases in which the ovary is prolapsed without being enlarged.

Dr. Smith speaks of examination by the rectum, and with his remarks I have been particularly well pleased. I must say, however, that I have not found that method better than examination by the vagina. He speaks, also, of relief given by pessaries, and says that he has not derived any great encouragement from their use. I simply spoke of pessaries which can be used, but it would have appeared if the paper had been read in full that I say there are plenty of cases in which pessaries will not do any good, and that it will require all the ingenuity and patience of the physician to devise any means which will give relief. In fact I think that packing the posterior cul-de-sac is one of the best methods of treatment of which I have any knowledge Of the ring pessary mentioned by Dr. Chadwick I have also spoken.

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