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The history of obstetrics and gynecology seems to follow the course of man's development in knowledge and attitude towards life. In primitive days, childbearing was considered a natural process and therefore was regarded with indifference if not with brutality. But difficulties were encountered, and nature failed to remedy them. Nature, with all the wisdom attributed to it, does not always solve its problems wisely; and one cannot safely leave everything to her.

In his early dawn of cognition, man was greatly impressed and awed by the great things in nature, such as the sun, the moon, the sky, and the stars. Primitive man was beset with many environmental difficulties that perplexed him and which seemed to him unsurmountable. He then postulated that there must be a superior and powerful Being, a Creator of all things, to Whom he could appeal for aid in the solution of his problems, and Who would liberate him from evil.

Midwifery in those early days was solely in the hands of women; and, when trouble arose, priests were called in. These tried to cope with the situation by incantations and prayers.

And so, in the early days, a childbearing woman was mostly left to nature. But during the height of the Egyptian and Greek civilization, when women were regarded more than mere females, some consideration was given to parturients, so that instruments for extracting dead babies, the vaginal speculum, and podalic version, came into use.

Later, instead of the priests, the barber-surgeons and still later, the regular surgeons were summoned when difficulties arose. Not until after the sixteenth cen-

¹ Read at the Inaugural Meeting of the Philippine Obstetrical and Gynecological Society, held August 24, 1946 at the North General Hospital.

tury was there any progress in obstetric practice. This was not only because child-bearing was in the care of midwives, but also because of the general state of medical knowledge then existing. It is said that the first hospital erected was the Hotel Dieu, built in Paris in 660, A.D. By the 16th century, it had 1220 beds, each one of which contained four to six patients. Children were mixed with adults, including delivering women with infected cases or those dying from contagious diseases.

The first outstanding obstetrical contribution is the revival of podalic version, which was practiced by Soranus as early as 200 A.D. It was Ambroise Paré, a famous French surgeon, who in 1572 revived the practice of podalic version after it had been in disuse for thirteen hundred years. However, he erred in continuing to adhere to the doctrine that birth could not take place unless the pubic bones gaped widely. And he failed to correct his error, although as early as 1543 Andreas Vasalius had given the first accurate description of the pelvis and had stated that the pelvis is practically an unyielding bony ring.

Because of Paré's influence this erroneous belief persisted for a long time. Paré gave surgery ligature and the principle of drainage. He introduced to medicine the inductive and scientific or experimental methods. Prior to the sixteenth century, deductive reasoning alone was used. This was good when the premise was true. But the premise was often based solely on authority without proof. For instance, at that time the major premise was that the world or the earth was flat, and all conclusions had to agree with that premise.

The second outstanding contribution which gave impetus to the study of obstetrics is the introduction of the obstetric forceps. This instrument was invented by the elder Peter Chamberlen; but it remained a secret until Hugh, the great grandson of the younger Peter, allowed the secret to leak out so that it was well known by 1733. The Chamberlen forceps had only the cephalic curve. Independently, Levret of France, in 1747, and Smellie of England, in 1751, added the pelvic curve and increased the length of the forceps. In 1877, Tarnier introduced the principle of axis traction.

During Paré's time and before the current use of forceps, male obstetricians were not called in unless difficulty arose. The changes in public sentiment in this regard were gradually effected in England by Smellie and his pupil, William Hunter; in Ireland, by Sir Fielding Ould; in Germany, by Roderer; in France, by Baudelocque and Levret; and, in Vienna, by Boer.

The third outstanding contribution to obstetrics is the introduction of anesthesia. Ether was the first anesthetic discovered, and it was first used in surgery on March 30, 1842, by Dr. Crawford Long of Georgia, one of the first graduates of the University of Pennsylvania. But he did not publish his discovery; and, for a long time, he was not given any credit for it. Dr. William Morton, a Boston dentist, used ether anesthesia for extracting teeth. He was the first to give a public demonstration of the anesthetic effects of ether in the removal of a vascular tumor, an operation performed by Surgeon Warren on October 16, 1846.

James Young Simpson of Edinburgh introduced chloroform anesthesia in obstetrics after his famous experiment of November 4, 1847. He met stiff opposition on the part of the clergy, for it was against the Biblical injunction, "In sorrow thou shalt bring forth children." But Simpson very cleverly answered his critics with

another Biblical quotation, "And the Lord God caused a deep sleep to fall upon Adam and he slept. And he took one of his ribs, and closed up the flesh." Simpson ended by saying, "What God himself did cannot be sinful." Thus he presented God as the first anesthetist.

The discussion raged for six years until 1853 when Queen Victoria accepted chloroform anesthesia during the birth of her eighth child, Prince Leopold. From that time on, chloroform anesthesia during parturition became popular in England. France soon accepted it; and, in honor of the Queen, called it "*anesthésie à la Reine*."

The next drug used to assuage labor pains after ether and chloroform was nitrous oxide and oxygen in 1880 by Klikowitsch of Petrograd. In America nitrous oxide was first used in obstetrics in 1909 by J. Clarence Webster.

Then came the era of Dammerschlaf or what is popularly known as "twilight sleep," which was much publicized in 1918. Twilight sleep, which became a fad and led women to demand it during labor, was accomplished by the use of scopolamin and morphine analgesia as was first suggested by Steinbuchel of Gratz in 1902. Gaus of Freiburg made the first report of its use in 1906. William H. Knipe was the first American to report its use in a large number of cases in 1914.

Jaeger was the first to use pantopon, alone or in combination with scopolamin.

Then came the era of barbiturates as analgesics in obstetrics. This began when Emil Fischer of Berlin syntheticized veronal and called it barbital. Hamlin of Virginia first reported the use of barbiturates in 50 cases. A great variety of barbiturates have been used both in Europe and in America. In January, 1933, Irving and his associates reported a year's clinical research with a number of the more popular analgesic methods. They observed that nembutal with scopolamin was the most effective.

In accordance to American experience, the barbiturates are safer when administered orally than when given intravenously; but Rucker in Virginia and Calvo in Bogota, Columbia, champion the intravenous use of sodium pentothal for delivery. All conclude that the barbiturates are more effective when supplemented by scopolamin.

Demerol aided by scopolamin is an effective analgesic in obstetrics.

Another popular method of analgesia is the rectal instillation of ether in olive oil as proposed and practiced by Guathmey in 1931. Kane combined the oral and rectal routes, using paraldehyde instead of ether.

At about the same time, caudal analgesia was first used in obstetrics by Stoeckel (1909) and Schlimpert (1911) of Germany. Following the method of Sicard and Cathelin of France (1901), who first used caudal anesthesia in urology, they injected novocain in the extradural space at the sacral hiatus to block the nerves transmitting pelvic pain. Many in Europe and America reported success with this form of analgesia during parturition; but, along with the successes, came also reports of death so that many enthusiasts abandoned it.

Other forms employed in obstetrics are: the pudendal block anesthesia in which 5 cc. of one per cent of procaine adrenalin solution is injected in the region of the pudic nerve; and the parasacral anesthesia where the anesthetic drug is infiltrated in the region of the anterior surface of the sacrum and coccyx and block the anterior

sacral branches, the sacrococcygeal plexus, and the sympathetic chains on the anterior aspect of the sacrum.

When obstetric analgesia was first introduced, many objected to it, on religious grounds. Now the objection lies on the effect of the analgesic drug on the health of the mother and the vitality and life of the fetus. No drug has yet been discovered that would entirely eliminate labor pains and at the same time not adversely affect the fetus. Whenever any analgesic is used, the patient should be constantly watched and instantly revived with oxygen and stimulants, should any complication arise.

Strange as it may seem, after much clamoring of women for drugs to relieve their pain, and the energetic search of physicians for a safe drug, so that now the rule in most American obstetric clinics is that mothers be entirely oblivious and unconscious of the birth of their babies, there are a few brave women who refuse to be unconscious when their babies come. They wish to experience the joy of hearing the first cry of their baby. They are willing to undergo the pain of a normal labor for the sake of their infants.

If it is at all possible, the ideal method of analgesia during labor which should be developed by every obstetrician is that of Dr. Grantly Dick Read, an English obstetrician, who can effect painless delivery by eliminating fear in the parturient by encouraging her and focusing her mind on her baby. There seems now to be a move in the opposite direction — from making almost all deliveries interventional with the use of drug analgesia and anesthesia, to allowing normal labors to take their course without any analgesic drug to impair the vitality of child and mother.

The one important advance in obstetrics throughout its course is that of asepsis. In the 18th century, the care of the parturient passed from the midwife to the trained *accoucheur*. Even after such important procedures as podalic version, forceps extraction, and Cesarean sections were followed by surgeons and later by trained obstetricians, the maternal mortality continued to be high. Indeed, the mortality of lying-in women taken care of by physicians was even higher than among those cared for by midwives.

In 1652 puerperal infection was rampant in Europe and was at its zenith in 1789, especially in the *Maternité* of Paris where the maternal mortality was 33 per cent. The lowest maternal mortality in hospitals was 10 per cent.

The first one who called the attention of the profession to the contagiousness of puerperal fever was Dr. Alexander Gordon of Aberdeen, Scotland, in 1795. He said it was a specific contagion that physicians, nurses, and midwives transmitted from one patient to another. No one paid attention to him. Half a century later, especially in 1840, puerperal infection also became rampant in the United States. In 1843, Oliver Wendell Holmes, who, besides being a literary man, was also a Professor of anatomy in Harvard University, wrote a moving essay on the contagiousness of puerperal fever and on the way it was transmitted by the physician or the midwife from one patient to another. He met, not only indifference on the part of the profession in general, but even violent opposition in the person of Meigs, the same prominent obstetrician who had strenuously attacked Simpson for introducing chloroform anesthesia during labor.

In 1847, Semmelweis, a Hungarian obstetrical instructor at the Allgemeine Krankenhaus in Vienna, clearly demonstrated the contagiousness of puerperal fever and

introduced the first disinfectant — chloride of lime. It troubled him greatly to note that the women assisted by midwives in another division of the same hospital had a much lower mortality than those assisted by him and his medical students. The death of his friend Kolletschka from infection after a pupil had accidentally pricked his finger with the knife while performing an autopsy, at once gave Semmelweiss the idea that the cause must be a putrid or dirty material. He as well as his medical students regularly performed or attended autopsies; and, from the autopsy room, they examined parturient women or assisted deliveries without even washing their hands. He then established the rule that all those who were to examine or attend deliveries, should first soak their hands in a solution of chloride of lime, a disinfectant closely akin to the modern Carrel-Dakin solution. Immediately the mortality in his division fell down to less than 3 per cent, even lower than the mortality among those assisted by midwives. But the obstinate unbelieving medical profession did not only refuse to listen to him, but also derided and mocked him. He was so much affected by his failure to convince his colleagues who continued to decimate the parturients that he lost his mind and died in the psychopathic section of the same *Allegemeine Krankenhaus* from wound infection, the very illness he had so zealously tried to combat.

And why was medical profession so obdurate in its ignorant, if not criminal, practice in the face of clear facts demonstrated successively by three prominent observers? It was because Pasteur had not yet knocked out the old belief in spontaneous generation.

In 1773, Charles White, a Manchester surgeon, anticipating Lister, emphasized absolute cleanliness in obstetrics.

Profiting from Pasteur's finding of the cause of the fermentation of wine, Lister, in 1867, presented to the world the principle of antiseptis in surgery. He first used carbolic acid on the stump of fractures and on his hands, then boiled all gauze and instruments.

Years afterwards, by ingenious experiments, Pasteur succeeded in disproving the theory of spontaneous generation.

In 1877, Pasteur, though not a medical man, definitely demonstrated the cause of puerperal infection. By inoculating media in test tubes with the lochia of women dying from puerperal fever, he found pure cultures of what are now called cocci — staphylococci in some, and in other streptococci. It was only then that obstetricians became convinced of the truth of the observations of Gordon, Holmes, and Semmelweiss, at whose frantic appeals to the medical profession on behalf of the parturient they had scoffed.

So it was not until the second half of the 19th century that asepsis dawned on surgery and obstetrics.

Obstetrics at the beginning was part of surgery; for, whenever dystocia was observed, the midwives called in the surgeons. The first course of lectures in midwifery to men was given by Gregorie the younger in 1733. Three years later, Smellie, who founded obstetrics in England, gave private lectures in London. He was soon followed by doctors in Strassburg, Berlin, and Gothenburg. In the second half of the 18th century, obstetrics became part of clinical instruction and gradually

became separated from surgery. This was brought about by the introduction of forceps and by the writings of independent teachers.

In America, obstetrical practice began in the same manner as in Europe. It was at first in the hands of midwives, then in the hands of surgeons. The same prejudice against man midwives and against anesthesia in obstetrics existed. Puerperal fever too, exacted a high toll of women's lives, notwithstanding Holmes' clarion call to the contagiousness of puerperal fever and to the roll of the *accoucheur* in its causation.

James Lloyd and William Shippen of Philadelphia were the first obstetricians in America. Shippen delivered the first course of lectures on obstetrics in 1762. The first teaching clinic in America is said to have been in Buffalo. But the first systematic clinical instruction in obstetrics was given by Rohes in Baltimore in 1874. Teachers in obstetrics had always endeavored to gain for obstetrics the same recognition enjoyed by surgery and medicine, but until now training in obstetrics in most medical schools is the weakest in the curriculum.

Gynecology was at first attached to medicine, then to surgery. Now it is coordinated with obstetrics. Simpson, in 1839, made the earliest systematic study of diseases of women. Tait, who was called by William Mayo the father of abdominal surgery, was the first to perform a pelvic operation, which was the removal of an ovarian tumor. He was also the first to perform salpingectomy for diseased or pregnant tubes. Before the advent of anesthesia, quickness of performance was a necessity. After anesthesia came, dexterity and finesse were developed; but many cases were lost because of infection. The early Americans who contributed to gynecology were McDowell (1809), Marion Sims, Robert Batten, Nathan Bozeman, Emmet, and the brothers Atlee.

As in other countries, obstetrics in the Philippines was first in the hands of midwives, who possessed no knowledge of technique or of asepsis; then in the hands of general practitioners who took also some surgery and gynecology.

As late as 1910, when I returned from the United States, obstetric cases were delivered at home under the care of *hilots*, who had no instruction whatsoever as to asepsis, and whose main claim in their trade was that they had delivered so many cases. The Filipino women, much more than those of other races, were ashamed of being seen by men and would often rather die than be attended by them. At that time, it was true, we had the old San Juan de Dios Hospital, the oldest hospital in the Philippines; but women did not deliver there.

On my arrival in Manila in 1910, the Philippine Government had already established a medical school with teaching clinics in surgery, obstetrics, and pediatrics at St. Paul's Hospital. Most of the members of the faculty were Americans. The only Filipino members were Dr. Ariston Bautista, Chief of Medicine; Dr. José Albert, Chief of Pediatrics; Dr. Luis Guerrero of the Department of Tropical Medicine; Dr. Fernando Calderon, Chief of Obstetrics; and Dr. Baldomero Roxas, Associate in Obstetrics. Drs. Potenciano C. Guazon and Antonio G. Sison were respectively the residents in surgery and medicine. The Department of Obstetrics was the only one entirely manned by Filipinos. The residents and instructors in obstetrics were then Dr. H. Acosta-Sison and Dr. Marfori. Gynecology was then part of surgery, whose staff was entirely composed of Americans, with the exception of Dr. Guazon.

In obstetrics, we had both hospital and outside service. Most of our cases were delivered at home, for the patients were prejudiced against, and had a great fear of, the hospital. It meant separation from their families and perhaps, they thought, the end of their lives. The general population had not then yet realized the benefits conferred by a hospital. Our monthly admissions to the obstetric clinic barely reached eight to ten cases, which usually were so abnormal as to necessitate operations. The vast majority of parturients, both rich and poor, preferred to deliver at home, assisted by *hilots*. It was only when something abnormal happened which the *hilot* could not remedy that physicians were called in.

I saw the complications that resulted from the *hilot* practice of *salag*, *sará*, pulling on the cord for hastening the delivery of the placenta, and the insanitary dressing of the cord. Babies did not infrequently die of tetanus. I well remember the case to which I was called because of the baby's high fever. On opening the cord dressing, I found the cord ten inches long coiled several times around the umbilicus and covered with black earth. It was the common practice among *hilots* to leave the cord as long as its lower extremities. The abdomen of the baby was greenish in color from severe infection. No amount of disinfectant could remedy the infection that had already become generalized.

The remedy of *hilots* for difficult delivery is *salag* or the forceful pushing downward of the fundus, done preferably by two persons, one on each side. No wonder rupture of the uterus from this outrage was common. Even today, we see cases of rupture of the uterus from this cause.

Sará is another *hilot* practice which leaves terrible consequences. This consists of making the woman squat over hot embers a few days after delivery. One of the women so treated came to us with severe burns of the vulva and buttocks.

The *hilot* practice of treating postpartum hemorrhage is to elevate the head to the height of six fat pillows, if these are available.

After all is said against the *hilots*, however, there is one thing to be said for them. They are very solicitous for the comfort of the patient. As soon as the placenta is out and her soiled clothing removed and changed, the patient is fed with a hot bowl of *lugao* and two soft boiled eggs, which parturients find soothing and satisfying. This is something our nurses do not give, especially since the Japanese occupation. Another comfort parturients told me they derive from the *hilots* is that they feel strengthened after the daily massages given them by *hilot* for ten days. Massage in the back and extremities in the absence of puerperal infection must be helpful. But I have seen a case of embolism resulting from uterine massage done after the first day of puerperium.

To attract our poor parturients to the hospital, we used to go around the poor districts of Manila; and, whenever we saw any pregnant woman, we stopped her, talked to her, and invited her to see us at St. Paul's Hospital — and later at the Philippine General Hospital, when this institution was ready to receive patients. Dr. Calderon used also to give Tagalog lectures to gatherings of women in poor districts. In this way, we gradually won their confidence, so that a few years afterwards, instead of going out of our way to make patients enter the hospital, we had to discharge them earlier than usual to accommodate new applicants. And today

in spite of the many hospitals in Manila and in the provinces, there is lack of beds to receive those who would like to be treated.

The College of Medicine of Sto. Tomás University and the San Juan de Dios Hospital are to be credited for the early introduction of Western medicine among Filipinos. These centers produced such men as Singian, Miciano, Quirino, Jacinto, and Gerardo Vasquez in surgery; Quintos in pediatrics; Ariston Bautista and the Guerreros of two generations in medicine; Ramon Lopez, Zamora, Blanco, Delgado, and Herrera in obstetrics; and Enrique Lopez, José Genato, and Alfredo Hocson in gynecology. These men have been topnotchers in their respective fields and reflect glory on the institution that gave them light. Many of them are still doing active work.

The era of scientific medicine and its practical application, however, really began with the advent of the Americans, when the Philippine Government established the Bureau of Health and created the School of Nursing, the Philippine Medical School, and the Philippine General Hospital. The Philippine Medical School later became the College of Medicine and Surgery which was the first unit of the present University of the Philippines. It was only then that the era of modern sanitation began.

Although the people were still deeply religious and attributing to the will of God the cause of their miseries, yet they began to take interest in medical science; and gradually our women went, not only to the physician, but also the obstetrician, when they became pregnant. The free service given in government hospitals and the great number of medical graduates, nurses, and midwives are gradually doing away with *hilot* system — though I believe it to be still prevalent among the lower classes and in remote barrios where physicians and nurses are very few, if there are any at all.

The changes in obstetrical practice since 1910 have been many. We abandoned the use of Bossi's dilator to dilate the cervix forcibly — a favorite procedure with the first chief of the obstetrical department. We never performed *accouchement forcé*, an operation mentioned only to be condemned.

We no longer perform Cesarean section as a routine in cases of eclampsia. We perform it only in the interest of the child when the conservative treatment fails, or when there is cephalopelvic disproportion.

Pituitrin, when first introduced into the Philippines, had quickened the expulsion of the child in many cases. The drug had been popular, not only among physicians but also among midwives and *hilots*. It is because of ignorance as to its contraindications that not a few cases succumbed to uterine rupture caused by its injudicious use. We were responsible for the enactment of a law which prohibited non-physicians from using the drug before the birth of the child.

We have become radical in the management of cases of placenta previa and ablatio placenta where the cervix is undilated or very slightly dilated, and in cases of rupture of the uterus. This, with the aid of blood transfusions, has reduced our maternal mortality in these complications.

The mortality for Cesarean section has been reduced, not only because of the selection of cases and its timely performance, but also because of the employment

of the low Cesarean technique, which had been introduced into the Philippines for the first time in 1927.

Asepsis, the use of rubber gloves, and of late the sulfa drugs and penicillin have markedly reduced our mortality in puerperal infection. The sulfa drugs and penicillin are so effective that they even make unnecessary the performance of extra-peritoneal Cesarean section.

Symphyseotomy in place of pubiotomy is being done in cases of not too great cephalopelvic disproportion where the baby is alive and where the mother has been exposed to infection, as in cases of an unsuccessful attempt at forceps, especially when this has been done by an outsider in the patient's home. The operation is delicate, on account of the danger of injuring the bladder and urethra; but in trained hands it is a life-saving procedure, notwithstanding its disrepute in the United States. This I mention as a tribute to Dr. Baldomero Roxas, the second Chief of our Obstetric Department, who revived the operation and whose zeal in its timely performance in indicated cases have saved many an infant's life which otherwise would have been mutilated.

Beriberi as a complication of pregnancy was formerly of frequent occurrence. We are endeavoring to pay greater attention to prenatal care. The weight scale, urinalysis, sphygmomanometer, and stethoscope are of great help in this regard. But until now most of our abnormal cases have had either very inadequate prenatal care or none at all. This means that greater instruction should be given to the public and to medical students who are later to take charge of puericulture centers. In teaching obstetrics to medical students who are not expected to become obstetricians, great emphasis should be placed on prophylaxis and the early recognition of pathologic conditions.

In hospitals where asepsis is obtainable, greater use of low forceps and episiotomy in primipara is being made. This, of course, requires greater skill in technique and care on the part of the *accoucheur*. Analgesia in labor and anesthesia in the perineal stage are gaining ground among highly sensitive nervous women. We favor analgesia in hypertensive women, but we do not find it necessary as a routine on all parturients.

We have also become more liberal in allowing parturients whose perineum has not been sutured to be out of bed two or three days after delivery.

We were able to present to the medical profession two new instruments, namely, a pelvimeter for accurately measuring the posterior sagittal diameter and a one-bladed forceps for extracting a non-engaged head in low cesarean section.

PECULIAR PHILIPPINE OBSTETRICAL CONDITIONS

1. The pelvis of the Filipino woman is smaller than that of the American or the European. But we have our own normal standard and also that of different contracted varieties as described by Caldwell and Moloy. Because of our own normal standard, one cannot agree with Williams who considers all pelvis with diameters shorter than that of the American as contracted or abnormal pelvis.

2. Placenta previa is four times more frequent in the Philippines than in America. This may be due to the greater number of children the Filipino woman bears,

to her habit of carrying heavy loads, and to the squatting position she frequently assumes.

3. These conditions may also be the reason that procidentia uteri is frequent in Filipino women after 40. This complication was specially noted towards the latter part of the Japanese occupation when women had to run about carrying heavy bundles or large water container.

4. For still unknown reason hydatidiform mole and chorioepithelioma have an unusual frequency here. Because of this, Philippine obstetrics has contributed, in a small way, the method of early diagnosis of both of these conditions, thus making possible their complete eradication provided the patient is seen early.

Gynecology in the University of the Philippines, as in Europe and in America, began as part of surgery, but in 1918, after the return of A. G. Sison and H. A. Sison from the United States, it became separated from surgery to constitute a new department. Calderon who was then the Dean of the College of Medicine and Surgery appointed himself as the Chief of the Department. Noris had said that "gynecology being sired by surgery and the legitimate offspring of obstetrics has shed off its swaddling clothes and is destined to be one of the foremost specialties of our time."

True enough the personnel of the staff of the new department of Gynecology were taken from the staffs of both surgery and obstetrics. Besides Chief Calderon himself who was also the obstetrician, the other members were Carmelo Reyes, Aniceto Mandanas, Cecilio D. Franco, José R. Reyes from the surgical staff and H. Acosta-Sison from the obstetric staff. When Dr. Calderon resigned in the latter part of 1936 because of illness, Dr. C. Reyes became his worthy successor.

As already mentioned, in Europe and America, gynecology was part of surgery; but now it is being related to obstetrics. Indeed, obstetrics and gynecology must go hand in hand; for perhaps 60 per cent of gynecology is a sequel of obstetrics, and gynecologic conditions complicate obstetrics.

The studies and deliberations of this obstetrico-gynecologic society will, I am sure, help much to elucidate problems that confront both.

GERIATRICS AND GYNECOLOGY: THE ROLE OF SURGERY IN THE AGED¹

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There has swept into prominence a new specialty in medicine to which has been given the name Geriatrics. Its definition varies. To some, it means the cure of the aged alone. To others, its scope is wider. It does not merely mean the palliation of the ills that seem to come with senility, it also includes the cure of the aging. It thus attempts to prolong life by protecting the senescent from the infirmities of the old. To the already aged, it tries to give vitality, by extending to them the benefits of medicine and giving the lie to the remark so often made "the patient is too old to live long anyway." Irving Fisher has happily put this thought in the remark, "There is a breadth of life as well as length, and there is no area in a straight line."

In no field is this attitude of mere palliation so often used as in surgery, which has, for a long time, denied its benefits to the old, thus relegating the aged each to his own particular limbo because "the patient is too old". Incapacitating hernias, for example, are treated palliatively when a repair properly done might not only give relief from the localized disturbance, but also give the individual a greater sense of general well being and usefulness.

Surgery in the aged should not be withheld if it could be given with safety. A more complete and thorough evaluation of the physical status of the patient and a more careful preoperative understanding of the limitation of the cardio-vascular and urinary reserves in each particular case are required. The nutritional state should be well checked, and the necessity of the operation should be properly appraised. Against these, are weighed the risks made up by the type of operation, the kind of anesthesia, and the surgeon's particular skill. Lastly, shock should be prevented, for the prevention of shock is still its best treatment. In the aged, the venous and arterial pressures should not be subjected to sudden decreases, for the cardio-vascular systems are no longer resilient. Moreover, hypotension is in many instances the start of thrombosis, embolism, infarction, and pneumonia. It is, therefore, a good precaution to start intravenous fluids or plasma in the major procedures.

A review of 287 major surgical operations performed in the Department of Gynecology of the North General Hospital reveals that, during the period from April 1, 1945 to July 31, 1946, fifty major surgical procedures, comprising 17% of the total, were on women fifty years old or older. The average of the group is 58.2 years.

¹ Read at the Inaugural Meeting of the Philippine Obstetrical and Gynecological Society, held August 24, 1946 at the North General Hospital.

Minor operations, like biopsies, dilatation and curettage, and so on, are excluded in this study, even though a considerable number were performed on elderly individuals.

TABLE 1-A.—*Pelvic Operations performed on 33 patients aged 50 years and over. The average age of the group is 58.7 years.*

PELVIC OPERATIONS	33
Vaginal hysterectomy with anterior and posterior colporrhaphy and repair of enterocele	24
Manchester operation with colporrhaphy	3
Watkins Interposition	1
Richardson-Spalding operation	1
Le Fort's Colpocleisis	2
Repair urethro-vesico-vaginal fistula	1
Myomectomy	1

TABLE 1-B.—*Abdominal operations performed on 17 patients aged 50 and over. The average age of the group is 56.*

ABDOMINAL OPERATIONS	17
Hysterectomy total with salpingo-oophorectomy or salpingo-oophorectomy	5
Hysterectomy, subtotal with salpingo-oophorectomy or salpingo-oophorectomy	2
Hysterectomy, Wertheim	2
Salpingo-oophorectomy	4
Incision and drainage	1
Exploratory laparotomy	2
Repair postoperative ventral hernia	1

The indications for the pelvic operations are clear, since these operations were mostly on cases of prolapse of the uterus, cystocele, rectocele, and associated enteroceles of varying degrees, which were treated in the different methods already mentioned. In one case of prolapse of the uterus, both a pelvic operation (vaginal hysterectomy and anterior and posterior repair) and an abdominal procedure (repair of ventral hernia) were performed. This was a case in which prolapse of the uterus had been treated ten years before by a ventrofixation. The uterus prolapsed within two months after the operation. The failure of ventrofixation as a treatment of prolapse of the uterus is well illustrated by the fact that the uterus had become markedly elongated and had prolapsed through the introitus, although the fundus was still well fixed to the anterior abdominal wall, which had dimpled inwards.

The indications for the abdominal operations are outlined in Table 2. The diagnosis in each instance has been supported by histopathologic study of the material removed at operation.

TABLE 2.—*Indications for abdominal procedures carried out in 19 cases.*

Adenocarcinoma, endometrium	1
Carcinoma, epidermoid, cervix	3

Myoma, uterus	5
Cystadenoma, serous, ovary	4
Cystadenocarcinoma, ovary	3
Cystadenoma, papillary, benign	1
Cyst, dermoid, bilateral	1
Abscess, tubo-ovarian	1

Of these 49 patients whose average age is 58.2 years, twenty showed hypertensive-cardio-vascular disease. The renal function in all was within normal limits. The nutrition of all these patients was poor. All these considered, it is necessary to find out whether the relief from discomfort, pain, and invalidism is worth the price they may have to pay. The objective of surgery is to relieve the patient of these ills and to hasten his return to health. The means used, therefore, should be safe; and the risk involved should not be more than that of the disease. Can surgery as practised today accomplish this, and if so, to what extent?

The pelvic operations undergone by 33 patients are itemized in Table 1-A. With two exceptions, the case of the submucous myoma and that of the urethro-vesico-vaginal fistula, the group composed of patients with prolapse of the uterus, cystocele, and rectocele were of such severity as to incapacitate them and, in many instances, to result in bleeding, ulcerated cervices. The indication for the myomectomy is obvious, and in gynecology nothing seems to surpass the relief and happiness of a patient whose vesical fistula is successfully repaired.

There were no deaths in this group. A follow up of the repairs showed no recurrences. The urethro-vesico-vaginal fistula healed at the first sitting.

There were seventeen abdominal procedures. The necessity for treatment in the cases of the malignant tumors cannot be gainsaid. The patients operated on for ovarian cysts represented a group where the size of the cyst was such as to cause marked abdominal distention, dyspnea, and pressure symptoms. The only small cyst in this group was one in which operation was demanded because it had twisted itself on its pedicle.

There was a death in this group, a 55 year-old patient, toxic and cachectic on admission. Exploratory laparotomy revealed ovarian malignancy with extensive metastases. The mortality in this group is 5.8%. On the credit side we have two patients who underwent the extensive Wertheim operation, Radium and X-ray therapy not being available. To date, the postoperative result has been excellent. No evidence of recurrence has been seen. It is, of course, too early to make any statement as to their ultimate prognosis; but today they are very much alive, they are free from symptoms, and they can look forward to the future at least with some hope and equanimity.

The same statement, even with more justification, may be made of the patient with carcinoma of the endometrium. In the three cases of carcinoma of the ovary, although excision of the tumor and pelvic organs was carried out completely, only time will tell whether the operation was justified or not. True, the prognosis of ovarian cancer is, at best, poor. However, for the time being, these patients are up and about and asymptomatic.

C O M M E N T

For the sake of straight thinking, the objective of surgery in the aged is reiterated. Its purpose is to relieve pain, correct deformity, and attempt to make the patient ambulatory again. Not only is the localized disease corrected, but the patients are given a new lease on life. They are placed on their own two feet, so to speak, unburdened by handicaps which would otherwise restrict them.

A review of our cases makes us feel justified in the claim that this can be done. All cases should be evaluated properly, anesthesia should be chosen wisely, shock should be prevented, and surgery should be employed with gentleness and respect for tissue and should be as conservative as the circumstances demand. We feel that in the aged especially, the vaginal approach is better and safer than the abdominal. The patients who underwent vaginal operations showed less morbidity, complications, anorexia, and distention; and in general presented a smoother convalescence. Interestingly enough, since we took special pains to observe the course of these aged individuals, we have noticed that on the whole there is a relative absence of severe postoperative systemic reaction in the aged. They exhibit less morbidity and less prostration, and they feel better than a group of younger patients undergoing the same procedures.

C O N C L U S I O N

1. A study of fifty major surgical procedures in patients handicapped by poor nutrition, by hypertensive vascular disease, whose average age is 58.2 years suggests that surgery may be employed safely in the aged to expedite their return not only to health but to usefulness as well.
2. Meticulous preoperative postoperative care, proper anesthesia, prevention of shock, gentleness in the handling of tissue, and early ambulation are important.

MANAGEMENT OF PLACENTA PREVIA¹

With Special Reference to Willett's Method.

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This report covers 369 cases of placenta previa occurring in the Maternity Service of the Philippine General Hospital from January 1, 1930, to December 31, 1939, inclusive. During this period 42,472 obstetrical cases were admitted, showing the incidence of placenta previa to be 0.86%. The results of the different methods of delivery in this series are shown in Table 1.

TABLE 1

METHOD OF DELIVERY	Cases	Maternal Mortality	Fetal Mortality
Willett's Method	61	1.63%	69.46%
Spontaneous delivery, rupture of membranes and tamponade	124	2.41	51.67
Braxton-Hicks version	67	5.97	91.05
Podalic version and extraction	13	15.39	84.61
Breech extraction	17	5.88	88.24
Forceps	10	30.00	90.91
Embryotomy	2	0.00	100.00
Cesarean section (57 low; 16 classical)	73	2.74	32.77
Cesarean section, postmortem	2	—	100.00

The results obtained from this study are not sufficient to enable one to determine the superiority of any of the methods of delivery employed in this series, on account of variations in the preliminary treatment and in the condition of the patients upon admission. Nevertheless, this analysis may serve as a guide in the selection of a safer method, both for the mother and for the child.

Table 1 shows that Willett's method of treatment of placenta previa had better results for the mother but showed a very high fetal mortality. Out of 61 cases of Willett's method of delivery, only one mother died, or 1.63%. Of the children, 37 were stillborn and 5 died within ten days following delivery, a fetal mortality of 69.46%. Spontaneous delivery, following rupture of the membranes gave 2.41 per cent maternal mortality, and 51.67 per cent fetal mortality. Cesarean section had 2.74 per cent maternal mortality and 32.77 per cent fetal mortality. The deaths of the 2 patients from Cesarean section were due to infection. These patients were subjected to internal examination several times before the operation was done. Brax-

¹ Read at the 39th Annual Meeting of the Philippine Medical Association, held May 10, 1946.

ton-Hicks version showed 5.97 per cent maternal mortality and 91.05 per cent fetal mortality. Podalic version and extraction gave 15.39 per cent maternal mortality and 84.61 per cent fetal mortality. Forceps application showed 30.00 per cent maternal mortality and 90.91 per cent fetal mortality.

Out of 56 cases of placenta previa centralis, 4 died, or 7.14 per cent; of 187 cases of placenta previa lateralis, there were 9 deaths, or 4.81 per cent; and, of 125 cases of placenta previa marginalis, there were only 3 deaths or 2.49 per cent.

In this series, 80 women were admitted in a state of shock and in an almost dying condition from loss of blood. These patients were advised by their physicians or midwives to apply for admission only after the bleeding had continued for days and weeks. The common belief among the lay people that such hemorrhage from the genitalia during the course of pregnancy is merely a maternal relief of an excess of heat or of blood was also responsible for the delay in their applying for admission to the hospital. Out of these 80 patients who were admitted in a serious condition, 16 died; 2 died before delivery; 5 died of puerperal infection; and 9 died a few hours after delivery from acute anemia. These 16 deaths represent a maternal mortality of 4.34 per cent in 369 cases of placenta previa occurring among 42,472 obstetrical cases.

The gross fetal mortality is 61.24 per cent; the stillbirth rate is 52.33 per cent; and 8.94 per cent died within the first ten days.

T R E A T M E N T

While we agree with Henkel in the individualization of cases of placenta previa and that each case should be treated as an individual case, we also believe that treatment of placenta previa can be standardized. The treatment of this condition may be outlined as follows:

The first thing to be done in the treatment of placenta previa is to stop the hemorrhage, and the only sure way to stop it is to terminate the pregnancy. There is no room for conservative treatment in a condition as treacherous as this, in the words of Miller. Which method of delivery is best, however, may be decided by taking into consideration the period of pregnancy, the degree of dilatation of the cervix, the type of placenta previa, and the condition of both mother and child.

Every patient who has placenta previa must be sent to a hospital. Nowadays, with the large number of hospitals available and with the aid of Army vehicles which greatly facilitate transportation, there is practically no excuse for treating a patient with placenta previa in her home.

Upon admission of a patient with placenta previa to the hospital, her blood must be properly typed and matched so that, if blood transfusion is indicated, a donor may be ready to supply the necessary blood. Plasma, which is now available, can be used as a substitute. Dextro saline solution should be given while waiting for the donor. Vaginal examination under the greatest aseptic precaution should be made; and, if the cervix is closed and rigid and the hemorrhage rather profuse, the vagina must be firmly packed with rolled yellow gauze that fill up the fornices, thereby exerting pressure upon the blood vessels running along the bases of the broad ligaments. Counter pressure should also be applied from above with a firm abdominal binder.

This tamponade of the vagina must be done only as a measure to control the bleeding at a time when other methods are not available. However, if the bleeding is not controlled, the best indication is Cesarean section (either classical or low) regardless of the condition of the fetus. If the cervix is sufficiently dilated to admit two fingers, the head is presented, and the amniotic sac can be felt by the examining fingers, it is best to rupture the membranes. Then the policy of watchful waiting must be observed.

If, following the rupture of the membranes, the bleeding is not controlled, and the fetus is either dead or alive, the Willet's method should be preferred to the Braxton-Hicks version. Willet's method of treating placenta previa has found widespread use in European Clinics as well as in America and has been used in our Maternity Service with good results since 1935. Its value lies largely in its simplicity, which extends its usefulness to the general practitioner, who still delivers the large majority of the babies. The technic is as follows:

"An assistant forces the head down into the pelvic inlet. Two fingers are inserted into the vagina, and the membranes are ruptured with a hook or with scissors in a clear area to one side of the placental tissue which is felt by the examining fingers. Without withdrawing the fingers in the vagina, a strong double volsella is inserted into the vagina, guided up to the fetal scalp, opened, pressed firmly against the scalp, and closed tightly. Before the fingers are withdrawn the grip on the scalp should be tested by traction on the volsella. Bleeding usually ceases immediately. A string carrying a weight of 1 lb. over a pulley or the foot of the bed is attached to the handles of the volsella. When abdominal and rectal examination indicate that the fetal head has passed through the cervix, the volsella is removed. This mode of treatment combines the advantages of simple rupture of the membranes and maintenance of continuous pressure on the denuded portion of the placental site."

On the other hand, Braxton-Hick's version is rapidly losing popularity in most clinics. The technical difficulties of the procedure limit its use to trained obstetricians, so that it rarely can be resorted to by the general practitioner when faced with a patient who is bleeding profusely. In this operation, one foot is brought down with the fingers or with a long placental forceps. The breach of the fetus is thus used as a tampon to control the bleeding. The obstetrician must wait for nature to expel the child, and he should not leave the patient until the child and the placenta have been delivered and bleeding has stopped.

If the placenta is found to cover the internal os of the partially dilated cervix—either the Willet's method or Cesarean section may be considered. In this particular case, Cesarean section should be preferred to the Willet's method, because the former can be done in a very short time and therefore it can avoid the dangers of slow dilatation and save the patient from loss of great amount of blood; while the latter method, if done in this case, usually causes much bleeding, following perforation of the placenta with forceps.

If the patient is in labor and there is complete dilatation of the cervix, artificial rupture of the membrane is indicated, and spontaneous delivery can be waited for; but, if, following the rupture of the membranes, there is a long time to wait before

spontaneous delivery takes place, the child may be delivered either by forceps or by version and extraction, depending upon the station of the head. In this condition, if the case is clean and the head is high, particularly if there is malposition of the fetus, Cesarean section is to be preferred.

Cesarean section is, we may say, absolutely indicated in all cases of placenta previa centralis; and, inasmuch as this condition can be diagnosed only after complete dilatation of the cervix, it is suggested that Cesarean section, either classical or low, must occupy a prominent place in the treatment of placenta previa in all cases in which the placenta is found to cover the internal os of the partially dilated cervix, regardless of the condition of the fetus.

In conclusion, we wish to state that Willet's method as well as Cesarean section has its own place in the management of placenta previa. Willet's method is particularly indicated in cases of placenta previa lateralis and marginalis in which, following the rupture of the membranes, the bleeding is not controlled. Cesarean section, on the other hand, is the choice when the placenta is found to occlude the internal os of the partially dilated cervix regardless of the condition of the fetus.

PYELONEPHRITIS OF PREGNANCY¹

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Although pyelonephritis complicating pregnancy and puerperium has long been recognized, it appears that it has not been given in this country the attention that it deserves; and the dangers to which it can expose both mother and the fetus have not been fully appreciated until recently. Our main object in presenting this preliminary report on 40 cases is to invite attention to this condition, which many obstetricians abroad have now considered one of the major complications of pregnancy from the point of view of its frequency and its potential hazards.

Etiology—Certain fundamental concepts, fully established by clinical observation and research on experimental animals, must be emphasized in the consideration of the etiology of pyelonephritis of pregnancy.

Three conditions usually pre-exist in the pregnant or puerperal woman that predispose to the development of pyelonephritis. These are urinary stasis, presence of bacteria pathogenic to the urinary tract, and trauma.

Urinary stasis found in 80%⁽¹⁾ of pregnant women, is induced mainly by (a) hormonal⁽²⁾ changes leading to atonic dilatation of the kidney pelvis, calyces, and ureters; (b) hyperplastic and hypertrophic changes in the fibromuscular wall of the ureters, especially marked in the juxtavesical region; (c) mucosal congestion and adema also marked in the lower portion of the pelvic ureters leading actually to strictures in many cases; (d) angulation of the right ureter at the distal end of its juxtavesical portion following the frequent dextrotorsion of the pregnant uterus, probably explaining in part the more frequent involvement of the right side; (e) and later on, as the enlarging uterus presses on the pelvic brim, mechanical compression of the ureters.

Bacteria, which are pathogenic to the urinary tract, and which are represented in the majority of instances by the colon bacillus group, are normal inhabitants of the human large intestine. Constipation, hemorrhoids, and anal fissures, frequently associated with pregnancy, allow for the rapid multiplication of the colon bacillus.

Trauma of the lower urinary tract is practically inevitable during labor, especially if it has been dystocic. Scott has shown conclusively that the simple passage of the catheter in males may cause enough excoriation of the mucosa to permit large numbers of micro-organisms to gain entrance to the blood stream and to produce the well known catheter fever.

The route⁽³⁾ of infection seems to be usually the blood stream; the lymphatics have been pointed out by many workers as the next probable avenue of kidney

¹ Read at the 39th Annual Meeting of the Philippine Medical Association, held May 10, 1946.

invasion. In the postpartum period, ascending infection from the bladder is not probably uncommon, especially in the presence of urinary retention and stasis. Current bacteriologic studies, however, tend to refute this conception.

The pyelonephritic disease in pregnancy may be also an acute exacerbation of a pre-existing, latent, or asymptomatic chronic condition. The latter may be a left-over from a previous pregnancy, or from childhood.

Diagnosis—The diagnosis of the cases has been based mainly on pyuria and bacteruria. Chills and fever, tenderness at the costovertebral angle, changes in the architecture of the urinary tract, and anemia have also been considered as suspicious signs of the disease. The peculiarities⁽⁴⁾ of pyelonephritis associated with pregnancy are distinct from those of the non-pregnant state, as Eastman has pointed out; and De-Lee has warned against the pitfalls in the diagnosis of pyelitis from urinary findings in puerperium. These peculiarities were given due regard in the analysis of the cases herein presented.

Pyuria is said to exist when more than 5 pus cells to the high-power microscopic field are found in a catheterized uncentrifuged specimen of bladder urine. The same findings from a specimen of kidney urine obtained by ureteral catheterization have been considered highly diagnostic and confirmatory. When the pus cells appear clumped together, non-draining pockets of pus very probably exist.

The bacteriologic studies require a stained smear of the urine sediment as a first step; this would reveal the organisms present actually, confirm the results of subsequent cultures, and explain occasional negative results by culture.

Because we have found quite a number of cases of apparently normal pregnant women with positive cultures from the urinary bladder, we have not considered bacteruria of diagnostic significance, unless it is coupled with pyuria. As a matter of fact, Eastman believes that another factor may be considered in the etiology of pyelonephritis of pregnancy. This factor is individual resistance to infection. For, although bacteruria is common in pregnancy and urinary stasis the rule, yet pyelitis is not a very common complication.

The bacillus coli organisms are known to grow more luxuriantly than cocal organisms. Hence the smear, which may show both the two types present in the kidney urine, will not always agree with the cultural results. In the latter, *B. coli* may grow to the exclusion of the others; or — this may seem paradoxical — no growth may be obtained. Such cases are occasionally termed "amicrobic pyuria."

Amicrobic pyuria is also explainable by the cicatrizing and stenosing effects of chronic urinary infections of the kidney tissues. No organisms are thus isolated from the urinary tract. Although the bacteria may actually have disappeared, the pyuria remains as the residual manifestation of toxic or chemical action.

Incidence.—The local incidence of the disease has been found to be 2.10%, which is about the same as the incidence in New York Lying-in Hospital as reported by H. Traut in 1937⁽⁵⁾. According to this report, pyelonephritis ranks with chronic nephritis and cardiac disease in pregnancy.

A rather close association between pyelonephritis and the toxemias of pregnancy (eclampsia and preeclampsia) seems to be shown by the fact that, of the 133 cases of toxemia admitted during the period of study, 21 had pyelonephritis; and, out of the 40 cases of pyelonephritis, 21 had, of course, an associated form of toxemia. The

limited period of observation and the limited number of cases studied do not warrant any statement for or against Peter's contention that there is an etiologic relation between pyelonephritis and the toxemias of pregnancy, or for or against the contrary view of C. M. McLane and many others.

Mortality.—The maternal mortality is quite high, about 10%. A disturbing factor, however, is to be considered in the coexisting eclampsia in one of the cases of death.

The fetal mortality is also high (18%) and is brought about mainly by abortions and premature labors. Only 24 cases terminated at term; 14 ended in abortions or premature labors. There were two cases of hydatidiform mole, which were curetted.

Distribution.—Most of the cases were met among primiparous patients, 24 having been among the primipara and only 16 among the multipara. Most of the cases were bilateral, 62.5% having been on both sides, 25% in the right side and 12.5% in the left only.

The kidney function, was impaired, only in the chronic cases except in two subacute, where there was a rather marked hydronephrosis. It was also in these two and in the chronic cases that marked hypertension was noticed even in the early stages of gestation.

Organisms.—The offending organism was found to be *B. coli* in 50%, *B. coli* in combination with some other pyogenic organisms in 20%, staphylococcus albus in 15%, and staphylococcus aureus in 3% of the cases.

Treatment.—The treatment consisted of rest; administration of plenty of fluids per os and parenterally alkalis of potassium and calcium, sulfa drugs; kidney pelvis lavage and drainage (insertion of an indwelling ureteral catheter for 24 hours); and blood transfusion.

Remarks.—No single case of cure was effected with the product of conception remaining intact. Practically all the cases, except one, came to our notice already with signs of threatened or imminent abortion or premature labor. Most patients had sought admission mainly for bleeding labor pains or symptoms of toxemia.

We believe that many of the early and milder cases are missed, because the possibility of pyelonephritis is not kept in mind, especially among those that are first called to see the patients. The similarity in manifestation between chronic pyelonephritis and pregnancy toxemia; and the rather frequent association of the two can very easily lead one to consider only the more common complication and overlook the less frequent but equally serious accident in pregnancy.

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THE INCIDENCE OF ERYTHROBLASTOSIS FETALIS AMONG FILIPINOS¹

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In a previous study of 182 Filipinos picked at random, we found that 177 or 97.3% were Rh positive. The incidence of Rh negative individuals was 2.7%. Since then, we have tested a total of 285 persons and found eight Rh negative bloods or an incidence of 2.5%. This comparative infrequency of Rh negative individuals among Filipinos is the explanation for the few intra-group transfusion reactions and for the relatively few cases of erythroblastosis fetalis in the Islands.

This low incidence of Rh negative individuals seems to be an Oriental characteristic. Erythroblastosis is a rare phenomenon among the Chinese. Although the possibility of danger associated with transfusion is not so formidable in the Islands, however, the presence of Rh negative individuals cannot be neglected or shrugged off completely. Moreover, cases of enthroblastosis are seen in our Obstetrical wards.

The Rh factor, first demonstrated by Landsteiner and Weiner, received its name from the fact that the first serum for testing this blood characteristic was prepared by immunizing an animal with the blood of the Rhesus monkey. Using this serum, it was possible to divide individuals irrespective of their blood groups into two types — those whose red cells possess the Rh factor and are described as being Rh positive, and those who do not have it and are, therefore, Rh negative. The factor is transmitted as a Mendelian dominant. A constant characteristic of the individual, it is fully developed at birth and is present in the red blood cells during fetal life.

Clinically, the factor has become important. For some individuals, it is a good antigen; and it has been found to be responsible for most intra-group transfusion reactions and for most of the cases of erythroblastosis fetalis. Its role in intra-group transfusion reactions is readily understood now that we know its properties.

By the ordinary cross matching tests, the presence or absence of the factor is not demonstrable. An Rh negative individual may be given Rh positive blood. If this individual has not been previously sensitized to the factor, no reaction occurs. Antibodies against the Rh factor are, however, developed; and these produce a reaction at the second transfusion. These transfusion reactions are invariably severe and result in complete or almost complete kidney shut-down and uremia.

¹ Read at the Inaugural Meeting of the Philippine Obstetrical and Gynecological Society, held Aug. 24, 1946 at the North General Hospital.

The infrequency of these intra-group transfusion reactions in the Islands may be explained by the low incidence of Rh negative Filipinos. Moreover, not all Rh negative individuals can be sensitized upon exposure to the antigen. Lastly, blood transfusions are comparatively rarely given in the Islands, although recently the use of blood as a therapeutic agent has become more widely adapted.

The production of erythroblastic infants, like intra-group transfusion reactions, depends on the iso-immunization of an Rh negative individual by the Rh factor. Through some break in the placental barrier, fetal Rh positive red cells enter the maternal circulation. The mother who reacts to this "transfusion" of fetal red cells, produces immune bodies which readily cross the placental barrier and agglutinate and destroy the fetal red cells. The fetus responds to this by increasing its productions of red cells as evidenced by the extra medullary centers of erythropoiesis and an abundance of nucleated red cells in the circulation. The severity of the damage received by the infant finds expression in the clinical picture it presents. The severest type is the hydrops gravis variety; next, is the so-called icterus gravis; and the mildest is the congenital anemia of the newborn.

Our interest in the subject has been renewed by the recent finding of four cases of hemolytic anemia of the fetus and the newborn. Three of these, all representing the hydrops variety, are 0.18% of 1619 deliveries during the period from January 1, 1946 to August 10, 1946. In the Obstetrical Service of the St. Luke's Hospital during the same period, there was a case of hydrops gravis in 511 deliveries or 0.18%. Thus at the North General Hospital, hemolytic anemia of the newborn was found once in every 540 cases. This figure is almost identical to the incidence of one in 511 cases at the St. Luke's Hospital.

These cases of erythroblastosis fetalis found at the North General Hospital and at St. Luke's were all premature deliveries; one on the sixth month and three on the seventh month. All resulted in the delivery of markedly bloated infants with marked edema and ascites, splenomegaly and hepatomegaly. All died a few minutes after delivery. The placenta was characteristically larger than it should be for this corresponding gestational month and was extremely friable. Histopathology revealed nucleated red cells in the fetal vessels, which seemed few. The stroma was markedly edematous, and the syncitium was well preserved. The mother's red cells in all four cases were Rh negative. The presence of anti Rh agglutinins was demonstrated in all but one of these cases by cross matching the mother's serum with known Rh positive bloods of the same type. However, the titre in all was weak.

C O M M E N T

In a previous report we found the incidence of Rh negative Filipinos to be 2.7%. We have continued to test a few more running up the total of tested individuals to 285; and we have found the incidence to be 2.5%.

During this same period of observation, three cases of erythroblastosis, hydrops gravis type, were found. This means an incidence of one in every 540 cases. The figure of one in every 511 cases is given for St. Luke's. These established cases of erythroblastosis should be a warning against the indiscriminate use of blood transfusion, especially in pregnancy.

Since the testing serum is still difficult to obtain, in practice we may follow the advice given by Weiner, who divides the cases into three groups. He believes that blood transfusion may be given safely if the individual has not been exposed to the antigen. This group is made up of males who have never received a transfusion, or females who have not had either a transfusion or a pregnancy. The second group is made up of cases who have been exposed to the Rh antigen, but which show no clinical evidence of sensitization — i.e., individuals who have had repeated blood transfusions without reaction and women who have borne only normal children. To obviate any accident, the biologic test of giving 50 cc of blood first and allowing an hour to elapse before the rest of the blood is given, is recommended. The third group comprise patients who have been exposed to the Rh antigen, and who show signs suggestive of sensitization. These should not be transfused unless first tested for the Rh factor, or unless they can be given Rh negative blood.

The incidence of hemolytic anemia of the fetus and newborn in the Philippines is curiously high compared to the rather low incidence of Rh negative Filipinos. Javert in New York gives a figure of one in 438 cases; Burton and McDuff, one in 516; Wolfe and Neigus¹, one in 568 cases.

These findings should be a strong warning against the thoughtless and indiscriminate administration of blood to any woman or girl, since this would be enough to sensitize the susceptible individual. Levine goes even further and suggests that this immunization may have arisen in many as the result of the common practice of giving blood intramuscularly, especially to the newborn.

CONCLUSION

1. Hemolytic disease of the newborn (Erythroblastosis fetalis) has been found once in 540 cases at the North General Hospital and once in 511 cases at St. Luke's.
2. The incidence of Rh negative individuals among Filipinos is 2.5%.

STUDIES ON HYDATIDIFORM MOLE

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Hydatidiform mole is an aberrant condition of the chorionic cells in the early months of pregnancy, in which the chorionic cells unduly proliferate while the mesodermic chore of the villus undergoes cystic degeneration. It is because hydatidiform mole has been the precursor in 68 per cent of 72 cases of chorioepithelioma previously reported by us, that this study has been undertaken, especially with the view of detecting the early signs of malignancy.

Etiology. The etiology is unknown, but all are agreed that the pathology lies in the ovum and not in the endometrium.

Incidence. In the Philippine General Hospital, there have been 137 cases of hydatidiform mole from 1940 to 1943 inclusive among 17,321 cases of pregnancy, showing an incidence of 1 for every 126 pregnant women. This is rather a high incidence when compared with Mathiew's figure of 1 for every 2,000. According to Mathiew, mole is most common after 40. We have found the age incidence to coincide approximately with the age incidence of pregnancy. It has been found in as young as 15 and in as old as 50, but most frequently between the ages of 20 and 29, and a little less frequently between 30 and 39. However, after 40, though the actual number of cases of mole is less than the other ages, its incidence is relatively higher than that of pregnancy. The following table shows the relative frequency of mole cases according to age.

Age	Consecutive cases of pregnancy admitted in 1943	Cases of mole in 1940 to 1943
15-19	15	22
20-29	74	62
30-39	46	31
40-49	3	20
50-59	—	1

Though mole was found in primigravida, it was most common among multipara.

Clinical History. Uterine bleeding was usually the complaint that brought the patient to the physician; and, though the bleeding began as early as the first month or as late as the sixth month, it appeared most frequently at the end of the third month, and only a little less often in the fourth and in the second month. The bleeding was either of red or of dark chocolate color. The uterus was larger than in the corresponding age of amenorrhea in 63 per cent. In moles that subsequently proved to be malignant, the undue enlargement of the uterus was found in 92 per cent. And, in many of the malignant cases, the uterine enlargement took place in

a relatively shorter time. Many of the cases that exhibited no undue uterine enlargement gave a history of having expelled mole outside. As is to be expected, none of the cases showed signs of a fetus, except in one case of twins where one twin of 4 months with its placenta was normal and the other, a mole.

Diagnosis. The correct diagnosis of mole was made in 72.7 per cent. The wrong diagnosis given in order of frequency was as follows: Threatened abortion or miscarriage, incomplete abortion, premature labor, fibromyoma, and placenta previa. The correct diagnosis was later made when the patient discharged mole cysts. The test for increased gonadotropic serum as shown by Friedman's test or by Delf's method when used in doubtful cases gave a higher value than in normal pregnancy.

Size of mole cysts. The mole cysts were either of the small mongo-sized variety or of grape-sized type. In some cases both sizes may co-exist in the same patient. It was found that the small variety had greater tendency to be malignant, though in 1 case of malignancy the cysts were of the large type. Further observation will be recorded along this line.

Character of mole. In 72 cases, the last curettings were examined microscopically for the detection of malignancy. We labeled this method of detecting malignancy as early microscopy, to differentiate it from diagnostic curettage, which is done sometime after mole expulsion to explain the cause of uterine bleeding. By the early microscopy method, out of 72 cases of mole, 24 or 33.33 per cent were found to be malignant. The examination of the uterus of those that were hysterectomized showed early chorioepithelioma, thus confirming the diagnosis of malignancy by early microscopy. Of the 48 cases that were reported as benign, 4 subsequently developed chorioepithelioma. So the safest method for not missing malignancy in those reported as benign would be their follow-up for at least three or four months. And in those that approximate menopause, they should be followed for at least three years.

Clinical signs of malignancy. As already mentioned, though the uterus is usually larger than what is warranted by the age of amenorrhea, one should be on the lookout for malignancy when there is much over-distention of the uterus or when the distention takes place suddenly. The small cysts also more often give rise to malignant changes. Of course, the microscopical examination of the curettings is the final determinants of malignancy; and, in case the examination fails to show anything, there should be a follow-up, in order to detect any clinical signs of H-B-E-s.

Complications. Anemia was found in 106 cases or in almost 78 per cent; infection in 59 cases or 43 per cent. We classified under infection all those who had fever after the evacuation of the uterus. One of the infected cases, who was admitted with fever and who was curetted outside the hospital, had a ruptured appendiceal abscess besides bilateral ovarian cysts. One case had malaria and liver necrosis.

Signs of toxemia in the form of edema, albuminuria, cylinduria, and hypertension were found in 7.81 per cent of the cases.

Treatment. We advocate a thorough immediate evacuation of the uterus per vaginam on the establishment of the diagnosis. This is to be preceded or accompanied by either hypodermoclysis or blood transfusion, depending on the general con-

dition of the patient. Since 1941 we have followed the routine of sending the last curettings to the pathologist for the determination of the type of chorionic cells, whether they be benign or malignant.

Benign case are instructed to return for follow-up every month or when they have a recurrence of bleeding not due to menstruation. By this procedure, 4 of the reported benign cases who later developed chorioepithelioma were diagnosed. Of the 30 malignant cases, 17 were hysterectomized; 3 were treated by X-ray; and 10 refused any treatment after the D & C. These cases were lost sight of. The uteri of the hysterectomized cases all showed early chorioepithelioma growths which corroborated the diagnosis of malignancy by early microscopy.

Mortality. Of the 136 cases of mole, 4 died. One died of acute anemia 1 hour after D & C. The histopathology of the mole in this cases was malignant. At autopsy, the uterine musculature was found to be infiltrated with syncytial cells. One died of lobar pneumonia two days after D & C. The histopathology of the mole was also malignant. One died from acute hemorrhage due to advanced uterine chorioepithelioma 14 months after the D & C for mole. The histopathology of the mole in this case was reported as benign. One case died from colon bacillemia and pyonephritis due to the colon bacillus.

Conclusion.

1. Excessive uterine enlargement or its sudden occurrence in a mole has the tendency to become malignant.
2. Every case of mole should be examined by early microscopy for malignancy. Benign cases should be followed up in young women for three months, and in women approaching menopause, for three years, for clinical evidence of chorioepithelioma.

NOTE.—Grateful acknowledgment is due to Drs. De Leon and Sta. Cruz who made the microscopic examinations of the last curettings obtained from moles and the biopsy of the hysterectomized uteri.

AXIAL TORSION OF THE UTERUS

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The association of pregnancy to myoma of the uterus has given rise to numerous complications. One of the most bizarre and striking of these is axial torsion of the pregnant myomatous uterus. Torsion, while not a frequent finding, is seen in the non-pregnant uterus comparatively oftener. The diagnosis is generally made at laparotomy; for, in most instances, the torsion is so gradual that the symptoms produced are often masked by others associated with the enlarged myomatous uterus. In contrast, torsion of the pregnant myomatous uterus gives rise to symptoms and signs of an acute abdomen.

A review of the literature is interesting. Most of the standard texts in gynecology state that torsion may be found in the myomatous uterus. They disagree, however, as to the incidence. Curtis says that the occurrence is fairly common. Wharton, on the other hand, has found it a rare complication. Crossen makes no mention of it. Kelly states the possibility and describes two cases in his operative gynecology. Masciottra and Baldi found two cases of acute torsion of a fibroid uterus in six years. These cases, though classified as acute, had shown symptoms intermittently for six months and for two years respectively before operation.

Our experience in the Gynecologic Service of the North General Hospital, four cases of axial torsion of the myomatous non-pregnant uterus were found in 244 laparotomies. These torsions were all partial as the cervix was not involved in the process and they were incomplete, as the rotation was less than 360 degrees but at least 180 degrees. Lesser degrees of torsion as for example, a quarter of a turn are often observed. It is obvious that, although axial torsion of the myomatous uterus is not quite a rarity, still a torsion of 180 degrees or more is rare enough to merit special mention.

In contrast to the review of the gynecologic literature, we find that none of the standard texts in obstetrics mention axial torsion of the uterus as a complication of pregnancy in a myomatous uterus. The texts of De Lee-Greenhill, Williams-Stander, and Beck do not mention this occurrence. A review of medical reports is unavailable. Duckering recently reviewed 361 cases of myoma in 22,283 pregnancies during a seven-year period in the Woman's Clinic of the New York Hospital and did not find this complication. A. Duran describes a case in a 38-year old woman who had a nodular myoma of the uterus complicated by a pregnancy of one and a half months. Myomectomy was carried out and the patient went to term uneventfully. Duran makes the statement that a review of the literature has brought to light only two additional cases.

To these three cases, we add two of our own.

The first case is that of a 30-year old, Gravida II, Para I, who was admitted on August 4, 1945, complaining of intense lower abdominal pain of three days duration and giving history of two months amenorrhea. Soon after missing the first period, she noticed a mass about five centimeters in diameter in the right iliac region. The pertinent findings on examination were: pallor; rapid pulse; prostration; marked abdominal tenderness; rigidity; and the presence of a hard, very tender mass in the lower abdomen. On vaginal examination, the cervix was soft, and the uterus was irregularly enlarged. There was a hard, tender mass ten by ten centimeters to the left of the uterus. The mass could not be separated from the uterus. Exploratory laparotomy revealed the uterus to have undergone a 180-degree dextro-torsion, so that a nodular myoma situated on the right cornu was now on the left and towards the front. The uterus was markedly cyanotic. Myomectomy could not be considered, as the tumor was subserous-intramural in type. For this reason hysterectomy was resorted to. The postoperative course was uneventful, and the patient was discharged fourteen days later.

The second case is that of a 32-year old, Gravida III, Para I, who was admitted on May 13, 1946, with a history of amenorrhea since January 20, 1946. Two days before admission, she experienced severe lower abdominal pain and for the first time noticed a mass in the left iliac region. Abdominal examination showed a marked muscular defense and tenderness of the lower abdomen. The cervix was found soft and directed towards the vaginal axis. The uterus was irregular and deviated to the right, enlarged to the size of a four-month pregnancy. On the left was a smaller mass which could not be separated from the uterus. The patient, with all the signs and symptoms of an acute abdomen, was subjected to laparotomy, which showed the uterus to be markedly congested. Occupying the left lower quadrant was a large intramural myoma 15 cm. by 10 cm. On close inspection, the uterus was found to have undergone a 180-degree torsion to the left, so that the myoma which was now on the left lateral, was, on restitution of the uterus, situated on the right postero-lateral cornu of the uterus. This fibroid was the mass that had so suddenly appeared on the left side of the lower abdomen at the onset of the acute abdominal pain. Because of the marked congestion of the uterus which presented a cyanotic and mottled appearance, and because the fibroid was such that a myomectomy could not be done, hysterectomy was carried out. The postoperative course was uneventful.

COMMENT

The factors concerned in torsion of the uterus are its weight, size, location, and the degree of softening of its isthmic portion brought about by pregnancy. An asymmetrically placed myoma of considerable size may, by its weight alone, produce torsion of the corpus on the softened lower segment. Predisposing to this is the laxness of the anterior abdominal wall found in multigravidae and the relative laxity of the round ligaments. Straining, bending down, and other conditions, which increase and suddenly decrease the intraabdominal pressure, aid in bringing about the torsion. Increased intestinal peristalsis, and adhesions of the omentum or intestines to the tumour may help in producing the torsion.

One other condition which may give rise to the accident is pregnancy in one horn of a uterus didelphys.

In the non-pregnant uterus, torsion is invariably a chronic process and rarely presents the picture of an acute abdomen, as seen in the pregnant myomatous uterus. In this non-pregnant state, the location and size of the tumor plays a large factor in producing torsion. Thus, a tumor placed anterolaterally and growing between the bladder and broad ligament, may come to occupy a more central position — pushing the uterus upwards, rotating it posteriorly, and bringing about axial rotation of the uterus of greater or lesser degree, depending on the size of the tumor. The development of acute torsion being gradual, however; its symptoms are rarely seen; and the diagnosis is often missed.

Acute torsion of the uterus presents signs and symptoms of an acute abdomen. Pallor, a rapid pulse, abdominal tenderness and rigidity are present. A tumor is palpable; and, on vaginal examination, the pulsation of an artery felt anteriorly is diagnostic. We were particularly impressed by the exquisite tenderness of the myoma upon palpation, although the rest of the uterus is not quite so tender.

The treatment is hysterectomy, when myomectomy may not be safely carried out. We feel that a mere reduction of the torsion carries with it the possibility of recurrence.

CONCLUSION

1. Axial torsion of the pregnant myomatous uterus is a rare occurrence and usually presents all the signs and symptoms of an acute abdomen.
2. Two cases are briefly described.
3. Axial torsion of the non-pregnant myomatous uterus is more often seen than that of the pregnant uterus. And the development of the torsion is so gradual, that its symptoms may easily escape notice.

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STUDIES ON THE EARLY DIAGNOSIS OF CHORIOEPITHELIOMA

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All concede the importance of early diagnosis of uterine chorioepithelioma, for on it largely depends the success of the treatment. But the criteria for diagnosis offered by the obstetrical literature extant are inadequate. These criteria are the much-hailed biologic test (Aschneim-Zondek or its modification, Friedman test) and the findings in what is called diagnostic curettage.

Mathieu, who has compiled all the literature concerning chorioepithelioma for the years 1935 to 1937 inclusive, quotes Teacher's opinion that "during the early stages, chorioepithelioma presents nothing characteristic either in symptoms or in physical signs. In order to establish diagnosis, exploratory measures must be made." That seems to be the consensus of obstetricians abroad, who also believe that early diagnosis is fraught with great difficulty.

Mathieu gives much importance to the verdict of the biologic test on either the uterine or the spinal fluid; Novak, to the biopsy of what is called the diagnostic curettage. Neither of them gives much weight to the clinical method, which is to us early enough for diagnosis, if done conscientiously.

We have found that the Friedman test would not give a positive result even when 12 cc. of urine is used, unless the tumor is fairly well advanced. On the basis of the clinical method, we have operated on two cases of uterine chorioepithelioma (E. de la C. and P. Diz.), one of which was of the size of a corn grain; and the other, the size of a fifty-centavo piece, which gave a negative Friedman test with 10 cc. of urine. The Friedman test on the spinal fluid, a test which is supposed to be of diagnostic value, was employed twice in an advanced inoperable case where the tumor had involved the pelvic organs and had metastasized into the lungs. Ten cc. of spinal fluid was used. On both occasions the result was negative. Our experience shows that the test is more sensitive when urine is used.

By diagnostic curettage, we mean the curettage done for the purpose of determining the cause of uterine bleeding in a patient, with or without the history of an abortion or mole expulsion having occurred some weeks or months previously. In other words, it is not the curettage done for the purpose of completing a recent abortion or mole evacuation. The diagnostic curettage is of diagnostic value if the tumor is in the uterine cavity. But if it is in the uterine musculature beyond the endometrium, the negative finding would give a misleading report.

It may be pertinent to mention here what one of us wrote in another paper on chorioepithelioma, stating why we object to the so-called diagnostic curettage when positive diagnosis has already been made by the clinical method.

1. If the result is positive, it merely confirms the diagnosis already made by

the data HBEs (the clinical method to be explained later) and nothing new is gained.

2. If the result is negative, it would alter neither the positive diagnosis arrived at through the data HBEs nor the decision for radical treatment. In many of our cases, the tumor was found to be in the muscular wall far beyond the reach of the curette, so that uterine scrapings invariably gave a negative finding.

3. The use of the curette may give rise to infection in a uterus that, because of its softness, would be susceptible to germ growth.

4. The curette may perforate the uterus in cases where the growth has extended throughout the thickness of the uterine wall and thus increase the danger of a radical operation.

5. It may incite the rapid flaring up of metastasis.

6. At best, it is an unnecessary, if not dangerous, waste of time and energy, simply delaying the performance of a radical operation which should be done as early as possible.

However, though we condemn the diagnostic curettage when positive diagnosis has already been made by HBEs, we do resort to it in cases when the group data HBEs are so vague that we cannot, to our satisfaction, make a positive diagnosis by the clinical method. But, in the few cases that we have employed it, the result has always been negative.

The clinical method of diagnosis of uterine chorioepithelioma is described by Acosta-Sison as consisting of a group of data which are found to be so frequently associated that, when present, are of diagnostic significance even in the face of a negative Friedman or a negative microscopic finding of the so-called diagnostic curettage.

These data are labelled as HBEs. H stands for the history of having aborted or having passed hydatidiform mole from a few weeks to as long as three or four years; B for uterine bleeding coming on from a few days to within 4 weeks after the termination of the last pregnancy; and Es for the enlargement and softening of the uterus. Nonregression or rapid development of ovarian cysts after curettage for mole may also be indicative of uterine chorioepithelioma.

The first three conditions represented by the letters HBEs are the most constant, the most frequently found, and the ones described in our second series of cases. The fourth condition which is the rapid development of ovarian cysts after mole expulsion is an additional clinical finding which we noted in 2 of our present or third series of 30 cases. One of these cases had no uterine bleeding; but the ovaries, which at first were cystic, grew so large that the abdomen which had become small after the mole curettage attained the size of a 7-month pregnant uterus at the end of 3 weeks. In the second case, the ovarian cysts, which were only as large as half of a pomelo at the end of two weeks after the curettage for mole, were accompanied by uterine bleeding. In other words, this patient had HBEs in addition to the growth of the ovarian cysts. The other case had no uterine bleeding, but the ovarian cysts were as large as an adult head. This case was negative for Friedman test with 10 cc. urine.

No diagnostic curettage was made and the diagnosis of uterine chorioepithelioma was based simply on the history of having been curetted for mole within 3 weeks; the enlargement and softening of the uterus; uterine bleeding in one case; and, in the

other, the presence of large ovarian cysts which were not evident when the patient was discharged from the hospital. Both were immediately subjected to double salpingectomy, double oophorectomy, and subtotal hysterectomy. On section, the hysterectomized uterus of both patients showed chorioepithelioma on the posterior wall; one had the size of a corn grain below the entrance of the left fallopian tube; and the other, two excavated tumor growths each of which was of the size of a fifty-centavo piece below the entrance of both fallopian tubes.

As a matter of routine and for the sake of record, we used the Friedman test in our cases. Because we disregarded its negative verdict after having made a positive diagnosis by the clinical method, it does not mean that we consider the Friedman test unimportant. As a matter of fact, we believe it to be a valuable indicator of a developing metastasis or recrudescence of the disease in our follow-up cases. We also resort to it in cases of doubt when the clinical method is not clear.

In the few cases where we resorted to both the Friedman test and diagnostic curettage because we could not establish a positive diagnosis by HBEs, the result were always negative.

However, although HBEs, with or without the development of the ovarian cyst, is able to diagnose uterine chorioepithelioma within two to three weeks (much ahead of the Friedman test), we believe there is still another method by which we can diagnose uterine chorioepithelioma much earlier; and this is the microscopic examination of the uterine curettings obtained immediately after mole expulsion or after an incomplete abortion. We have called this the early microscopy method; and its efficiency depends on the ability of the pathologist to detect malignancy in the chorionic cells and to make an early report.

According to Novak, the criteria for malignancy are:

1. Large masses of trophoblasts growing in bulk with few or no villi and destroying the uterine muscle.
2. Anaplastic activity.

According to Hertig, the pathologist of the Boston, Lying in Hospital, the criteria are:

1. Invasion of the villous stroma by relatively undifferentiated chorioepithelial elements.
2. Moderate or marked anaplasia of the epithelium either with or without mitotic activity.
3. Tissue culture-like growth of detached chorioepithelial elements, usually in fairly large masses and growing upon the surface of a blood clot.

In the 2nd series of 34 cases, 26 (or 76.47 per cent) were of uterine chorioepithelioma, and all of these manifested the diagnostic group data of HBEs. Six were cases of metastatic brain chorioepithelioma the symptoms of which were referable to brain rather than pelvic pathology. Two cases, because of acute internal hemorrhage caused by uterine perforation, were preoperatively diagnosed as cases of ruptured tubal pregnancy.

In our 3rd series, of 30 cases admitted from November 1, 1940, to October 31, 1941, 26 were of uterine chorioepithelioma. Six of these were diagnosed by the group data of HBEs. The diagnosis of these cases was confirmed by biopsy. Of the remaining 4 cases, 1 was of brain metastasis without uterine involvement; 1 was of

vaginal metastatic chorioepithelioma, resulting from a rupture tubal pregnancy; 1 was of ovarian chorioepithelioma resulting from an ovarian pregnancy, and of lung metastasis without uterine involvement. It is in the metastatic chorioepithelioma without uterine involvement that the Friedman test is of great value.

Because of the early microscopy method used for the first time in 1941, we were able to treat 6 cases at the earliest stage of the disease. Four of these were treated by x-ray and 2 by hysterectomy as soon as we had received the report within nine days after the mole curettage. One case which was hysterectomized 3 days after the mole curettage showed darkish punctate growths on the endometrium.

The second case was one of twins terminating in a miscarriage of 4 months. One twin was a normal fetus and a normal placenta, the other twin degenerated into a hydatidiform mole and coincident uterine chorioepithelioma. The uterus, which was removed 9 days after the miscarriage, showed through the uterine wall many foci of wine-colored chorioepithelioma growths varying in size from a corn grain to a *calamansi*.

This case shows strikingly the necessity of early diagnosis and treatment. And, if by the operation we succeeded in freeing this case from the occurrence of metastasis, we owe our success to the pathologist who gave us the correct diagnosis.

A negative report for malignancy, however, should not be taken as final. The patient should be followed up every three to four weeks for the presence of HBEs and for the Friedman test for at least three months, if not for four years.

The following cases are representative of the different methods of diagnosis employed. The first 7 cases were diagnosed by HBEs. Case 8 was diagnosed by the early microscopy method. Case 9 was diagnosed by the rapid growth of the ovarian cysts (which normally should have regressed) within 25 days after the mole curettage.

Case One: E. C., 49 years old, Para XI, Gravidia XVI, was admitted to Dra. Acosta-Sison's service, Obstetrics Department, Philippine General Hospital, on June 29, 1937, with the complaint of intermittent vaginal bleeding and hypogastric pain, which had started three weeks after she was curetted for mole on May 14, 1937. She had 11 full term labors, 4 abortions, and 1 hydatidiform mole, which was her last pregnancy.

On admission, the uterus was soft and had the size of 1 month pregnancy. RBC, 4,450,000; WBC, 9,800. Polymorphonuclears, 69 per cent. Blood pressure, 99/48. On the basis of HBEs, the diagnosis of chorioepithelioma in the uterus was made.

Accordingly, on July 7, 1937, under local anesthesia, one of us (HAS) performed supravaginal hysterectomy, double salpingectomy, and left oophorectomy. Longitudinal section on the anterior wall of the hysterectomized uterus revealed a calamansi-sized growth on the endometrium, which also had extended amply into the myometrium. Histologic section of the growth was positive for chorioepithelioma.

The patient made an uneventful recovery, was negative for Friedman's test, and was discharged in good condition one month after the operation.

Comment: This case shows the efficiency of HBEs as a method of diagnosis. Fortunately, this case was operated on before metastasis or extension of the tumor beyond the confines of the myometrium had developed. Hence, the favorable result.

Case Two: J. Y., 31 years, Para IV, Gravidia V, was admitted on January 1,

1939, to Dra. Acosta-Sison's service, Obstetrics Department, Philippine General Hospital, with the complaint of vaginal bleeding since her last abortion about a year before. She had had four full-term labors. Her fifth and last pregnancy had terminated in abortion in the third month. Since her abortion about 1 year ago, she had been having intermittent bleeding which varied in amount from slight to profuse.

On admission she was pale. RBC, 2,300,000. Hb. 50 per cent. WBC, 8,500. Polymorphonuclears, 64 per cent; blood pressure, 138/80. X-ray of lungs showed no evidence of metastasis. The uterus was soft and had the size of a two-month pregnancy. On the basis of HBEs, we diagnosed her as a case of uterine chorioepithelioma.

On January 4, 1939, we made a supravaginal hysterectomy, left salpingectomy, left oophorectomy, and right salpingo-oophorectomy. The abdominal wound was closed with rubber drainage. She was febrile for the first 6 days after the operation, but she finally recovered. She was negative for Friedman's test and was discharged in good condition from the hospital.

Section of the hysterectomized uterus revealed a chorioepithelioma growth filling the whole endometrium. The right ovary was cystic.

Comment: This case also shows the efficiency of HBEs as a clinical method of diagnosis.

Case Three: F. N., 40 years, Para XII, Gravida XIV, was admitted to the Philippine General Hospital on August 29, 1940, with the complaint of intermittent bleeding, which had been growing more profuse since she aborted on July 1, 1940. Her first 12 pregnancies had terminated in full-term deliveries. Her last two pregnancies, however, had terminated in 3-month abortions, having occurred respectively in November, 1939, and July 1, 1940. Five days after her last abortion, the bleeding had stopped; but had returned on July 20, 1940. For this she had been curetted on August 2, 1940. The bleeding had stopped 4 days after the curettage, and she had been discharged in good condition. Since August 15, however, she had been having intermittent bleeding, varying in amount from slight to profuse, and since 9 days before admission, she had been having continuous bleeding.

On admission, the uterus was soft and enlarged to the size of a 2-month pregnancy. The bleeding was so marked that the resident who first saw her had to introduce 5 vaginal packings. RBC, 3,900,000; WBC, 11,700; polymorphonuclears, 68 per cent. Blood pressure, 100/60. On the basis of HBEs, she was diagnosed as a case of uterine chorioepithelioma. Under local anaesthesia, one of us (HAS) made a subtotal hysterectomy and double salpingectomy. The abdomen was closed with a cigarette drain. The patient had slight fever for the first three days, accompanied by marked ileus. She, however, subsequently recovered and was discharged in good condition on the 20th day after operation.

Friedman's test one month after the operation was negative.

Section of the removed uterus showed a walnut-sized growth on the upper part of the posterior wall beneath the endometrium. Histologic section of the growth was positive for chorioepithelioma.

Comment: Had we made a diagnostic curettage of the case, the result would have been negative; for the growth was beyond the endometrium. The diagnosis was based solely on the HBEs.

Case Four: G. F., Para VIII, Gravida IX, was admitted to the private service

of Dra. Acosta-Sison, Philippine General Hospital, on September 7, 1940, for intermittent slight uterine bleeding since she expelled a hydatidiform mole on August 10, 1940. She had had 8 full-term deliveries, each occurring every two years. Her last menstruation had been on May 5, 1940. On July 17, 1940, she had begun to have intermittent uterine bleeding, which had increased in amount culminating in the expulsion of a hydatidiform mole of the small cyst variety on August 10, 1940. The bleeding had completely ceased 5 days after the mole expulsion, only to recur after the lapse of 11 days.

She consulted one of us (HAS) on Sept. 6, 1940, because of the intermittent attacks of bleeding. At this time, she showed a walnut sized violet-colored cystic tumor in the right lower portion of the vaginal wall. The uterus was soft and was enlarged as if she were one month pregnant. On the basis of HBEs, she was diagnosed as a case of uterine chorioepithelioma with vaginal metastasis.

On the same day of admission in the private ward, she was operated on under local anesthesia. First, the vaginal tumor, which consisted of a dark blood friable tissue, was enucleated; and the cavity where it had been embedded was curetted off and closed by layers of sutures. Laparotomy under local anesthesia showed the uterus to be enlarged, congested, and soft. The blood vessels in the broad ligaments were much congested and dilated. Small metastatic areas having the size of a corn grain were found in the broad ligaments, especially on the right side. The ovaries were enlarged, cystic, and much congested. A supra-vaginal hysterectomy, double salpingectomy, and double oophorectomy were made, taking care to remove those portions of the broad ligaments that contained metastatic growths. The abdominal wound was closed without drain. She was given 150 cc. of blood transfusion after the operation.

A longitudinal section of the uterus on its anterior wall revealed a dark bloody tumor at the posterior wall near the right lateral margin and below the insertion of the fallopian tube. It was much smaller than the tumor removed from the vagina. The blood vessels of the cut surface of the uterus were atheromatous.

The patient had an uninterrupted recovery and left the hospital 18 days after the operation. She was followed up every month for 1 year for any symptom of metastasis or return of the growth, but apparently her recovery had been complete. Friedman's test was negative 12 days after the operation.

Comment: This is a case of a rapidly malignant mole, which, after barely 6 weeks after its expulsion, had undergone chorioepitheliomatous growth with metastasis in the vagina and broad ligaments. The metastasis in the broad ligaments were, however, early. Fortunately, there was no metastasis in the lungs or brain or other organs.

The diagnosis of this case was simply based on HBEs. The presence of vaginal metastasis, of course, made the diagnosis easier.

Case Five: M. B., 24 years old, Para II, Gravidia III, was admitted to the service of Dra. Acosta-Sison, Obstetrics Department, Philippine General Hospital, on September 5, 1941, for profuse vaginal bleeding. She was curetted for mole of the small cysts variety in the Philippine General Hospital on August 20, 1941, and was discharged 10 days afterwards. On her 5th day at home or 15th day after

the curettage (Sept. 4), she had begun to have vaginal bleeding, which had been slight at first, but which had become profuse on the day of admission.

Abdominopelvic examination showed an enlarged soft uterus, as if the patient were two months pregnant, and bilateral ovarian cysts. On the basis of HBEs, she was diagnosed as a case of uterine chorioepithelioma. X-ray of the lungs was negative for metastatic shadows.

Microscopy of the expelled mole was positive for chorioepithelioma; but the report was not received until after positive diagnosis had been made by the clinical method of HBEs upon the second admission of the patient.

On September 29, 1941, she was laparotomized under local anesthesia. Both ovaries were cystic, having the size of half a large pomelo. Double salpingectomy, double oophorectomy, and supra-vaginal hysterectomy were performed, leaving an iodoform gauze drain through the cervical canal into the vagina.

Longitudinal section on the anterior wall of the uterus showed soft thick walls; and, in both horns at the entrance of the tubes, there were calamansi-sized, ulcerative, ragged, wine-colored growths that had penetrated the thickness of the muscular walls.

Microscopy of the growth showed chorioepithelioma with predominance of the syncytial cells.

Friedman test on 10 cc. of the urine taken just before the operation gave a moderately positive result.

The patient made an eventful recovery from the operation and was discharged on October 16, 1941 (18 days after operation) apparently in good condition.

On October 23, or after 1 week's stay at home, she returned because of profuse bleeding. Examination showed a black cherry-sized bleeding growth in the right upper wall of the vagina. Under local anesthesia, the growth as well as many small blackish metastatic growths in the right parametrium was extirpated. Only the infravaginal cervix was cut off because of much bleeding in the parametrium. The bleeding was controlled by packing the vagina.

Biopsy by Dr. Sta. Cruz of the vaginal growth consisted of syncytial cells surrounded by fibrin and blood clot.

(Friedman test with 10 cc. urine on October 31 gave a positive result). She survived the operation well, and the bleeding per vaginam was completely controlled. Treatment of the pelvis by deep X-ray was begun on November 3, 1941. After the X-ray treatment, she was checked monthly for at least 2 years with Friedman test or for any sign of developing metastasis.

Comment: This very malignant case showed the importance of microscopic diagnosis of the tissue removed on curettage for hydatidiform mole. The diagnosis of uterine chorioepithelioma was based simply on HBEs manifesting itself 15 days after she was curetted for mole. The HBEs method of diagnosis was substantiated by the biopsy of the tumor in the hysterectomized uterus.

The belated pathologic report of the biopsy of the uterine curettings obtained from mole, although it delayed the radical treatment which would perhaps have obviated the occurrence of metastasis, showed at least one encouraging fact — that the pathologist is able to detect malignancy in the tissue obtained from cases of mole or incomplete abortion. The clinician can rely on his verdict and not hesitate to make a radical operation on the basis of early microscopy. The only other condi-

tion necessary is that we obtain the report within 5 days after request, in order to save the patient from possible metastasis.

Case Six: P. M., 32 years old, Para I, Gravida III, was admitted to the service of Dra. Acosta-Sison, Obstetrics Department, Philippine General Hospital, for the second time, on October 4, 1941, because of profuse vaginal bleeding. Her first pregnancy had ended in a full-term spontaneous delivery, the second in a 4-month miscarriage, and the third, in the curettage for hydatidiform mole on September 6, 1941, after a 3-month amenorrhea.

Microscopy of the hydatidiform mole, a great deal of which was a placentalike tissue, was reported by Dr. Sta. Cruz as "mole with some activity of the trophoblasts." The report was not definitely chorioepithelioma, so the patient was allowed to go home on the 11th day. But at home, on the 16th day after the curettage, she began to bleed. The bleeding became so profuse on the 23rd day after the curettage that she again sought admission to the Hospital. The uterus was enlarged and soft as if 1-1/2 months pregnant.

Friedman test on October 6, 1941, on the day of the operation, with 10 cc. urine was negative.

On the basis of HBEs, we performed subtotal hysterectomy, double salpingectomy, and right oophorectomy on October 6, 1941. No drainage was introduced. The right ovary was removed because it was cystic. Section of the removed uterus showed a calamansi-sized, wine-colored growth at the entrance of the right tube and involving the fundus, and the anterior and posterior walls of the uterus.

The patient had an uneventful recovery and was discharged with the instruction to return at the end of 1 month for follow-up.

Biopsy report of the uterine growth was positive for chorioepithelioma.

Comment: This is another example showing that the clinical method of diagnosis in the form of HBEs is more sensitive than the Friedman test.

Case Seven: P. D., aged 31, Para VI, Gravida VII, was admitted to the service of Dra. Acosta-Sison, Obstetrics Department, Philippine General Hospital, on October 10, 1941, for much bleeding and fever. She had been curetted for mole in the Philippine General Hospital on September 18, 1941, after a 2-month amenorrhea. Histopathology of the mole was positive for malignant changes, but the report was not received until after the third week when the patient had entered the hospital for the second time on her own accord because of vaginal bleeding.

On the second admission, her temperature was 37.8°C.; and the uterus was enlarged, especially on the posterior wall, as if 1 month pregnant. Positive diagnosis of uterine chorioepithelioma was made on the basis of HBEs before the histopathology report was known, so that the patient was immediately subjected to laparotomy. On operation, it was found that the slightly enlarged uterus had punctate hemorrhagic spots in the region of the fundus and tubes. Both ovaries were not much enlarged but had hemorrhagic cysts. Subtotal hysterectomy, double salpingectomy, and double oophorectomy were performed.

Section of the anterior uterine wall revealed an ulcerative chorioepithelioma 3 cm. wide at the fundus and posterior wall near the entrance of the left tube.

Biopsy report of the growth was positive for chorioepithelioma. Friedman test on October 15, the day of admission, was negative with 10 cc. of urine.

The patient made an uneventful recovery from the operation. Because, however, of profuse hemorrhage before laparotomy, she was subjected to X-ray treatment of the lower abdomen for possible presence of chorioepithelioma in the broad ligaments.

Comment: This patient would have been immediately laparotomized had the biopsy report of the mole curettage been received during the first stay of the patient in the hospital. However, the belated report was not altogether to be deplored; for the fact that the patient showed signs of chorioepithelioma 3 weeks after the curettage shows the ability of the pathologist to detect malignancy at the first curettage. And, if we could only receive the biopsy within five days, we would be able to treat our patients much earlier.

This case shows again that the Friedman test cannot give an early diagnosis of chorioepithelioma.

The following is a case diagnosed by the Early Microscopy Method:

Case Eight: M. B., aged 28, Para V, Gravida VI, was admitted to the service of Dra. Acosta-Sison, Obstetrics Department, Philippine General Hospital, on July 14, 1941, for profuse vaginal bleeding. She had missed her menstruation for 2 months, and the size of her uterus was that of a 7-month pregnancy. She was curetted for hydatidiform mole on July 18, 1941, and histopathologic examination of the curettings was positive for chorioepithelioma. On July 21, 1941, a subtotal hysterectomy, double salpingectomy, and double oophorectomy were performed. Both ovaries were cystic, having the size of an American orange. Section of the removed uterus showed in various places dark pin-head dots. The cut vessels of the uterus were cirrhotic. Microscopy of the endometrium, as reported by the pathologist (Dr. Sta. Cruz), showed: Active proliferation of syncytium which had infiltrated the muscular wall. Surrounding the syncytial cells were degenerated cells. The syncytial cells were irregular and darkly pigmented with a formation of giant cells. There were neither chorionic villi nor mole. Histopathologic diagnosis was chorioadenoma destruens.

No Friedman test was requested for it was thought it would be positive because of her recent curettage for hydatidiform mole.

Comment: The positive microscopic finding of the first curettage is the ideal method of diagnosis, for the treatment can be instituted early. However, a negative finding is not an insurance that chorioepithelioma may not develop later. Hence the importance of the follow-up. An example of this is the case (No. 6) whose mole curettings were negative for chorioepithelioma, but who had uterine bleeding 16 days after the mole curettage, because of uterine chorioepithelioma.

The diagnosis of the following case was based on the rapid growth of ovarian cyst after mole curettage.

Case Nine: E. de la C., 26 years old, Para III, Gravida IV, was admitted to the service of Dra. Acosta-Sison, Obstetrics Department, Philippine General Hospital, for the third time on July 18, 1941, because of rapid enlargement of her abdomen. From June 2 until June 10, 1941, she had been treated in the hospital for hyperemesis gravidarum. On June 16, 1941, she had been readmitted for bleeding which ended in the curettage of a hydatidiform mole of the small cyst variety after an amenorrhea of 4 months. The uterus before the curettage had been of the size

of an 8-month pregnancy. On July 10, 1941, she had been discharged in good condition with a normally involuted uterus and an abdomen that was small. On the 5th day after her discharge she had noticed her abdomen to be growing in size.

When she was readmitted to the hospital on July 18, 1941, or the 25th day after her curettage, her abdomen was bulging as though she were 7-month pregnant, and both her lower extremities were edematous. The enlargement was due to bilateral ovarian cysts. Urinalysis was normal. Upon admission, she was immediately operated on for double salpingoophorectomy and supravaginal hysterectomy. Each of the ovarian cysts was as large as an adult head, and the uterus had the size of 1-1/2 month pregnancy.

There was no symptom of uterine bleeding in this case, but the uterus was extirpated nevertheless. We reasoned that there must have been chorioepithelioma in it to cause such rapid enlargement of the ovarian cysts, which we failed to notice on discharge. The longitudinal section of the uterus showed a small dark tumor the size of a mango with a much dilated but intact blood vessel just below the entrance of the left fallopian tube. The urine, which was taken on the day of the last admission before the operation, was negative for Friedman's test.

The patient made an uneventful recovery and was discharged in good condition on August 5, 1941, with instruction to return monthly for follow-up or if, at any time, she had any bloody vaginal discharge. Microscopic examination of the small dark tumor was positive for chorioepithelioma.

Comment: This was the first case to come to our attention which showed rapid growth of the ovarian cysts after mole curettage. Ordinarily, the ovarian cysts regress after the expulsion of the mole. The diagnosis of chorioepithelioma in the uterus was based on their growth and on the enlarged uterus which should normally be completely involuted 25 days after curettage. It is interesting to note that, in spite of the presence of the large ovarian cysts, the Friedman test with 10 cc. of urine was negative. Of course, the chorioepithelioma had only the size of a mango seed. This case clearly shows that the clinical method of diagnosis is much more sensitive than the Friedman test.

OUR PROGRESS IN THE METHOD OF DIAGNOSIS OF UTERINE CHORIOEPITHELIOMA

Prior to 1937, diagnosis was made: (1) At the operating room or at autopsy with the help of the pathologist. (2) By diagnostic curettage. This is unreliable when negative. (3) By Friedman test. This is positive only when the tumor is fairly well advanced.

From 1937 to 1940, diagnosis was made: (1) By the clinical method HBEs. This makes earlier diagnosis than Friedman test. (2) By diagnostic curettage and Friedman test, in cases not positively diagnosed by HBEs.

In 1941, diagnosis was made: (1) By the clinical method of HBEs with or without the rapid development of ovarian cysts in cases sometime after mole expulsion or abortion. (2) By the microscopic examination of the uterine curettings obtained from cases of mole or abortion. This is the earliest method. But its value depends on the ability of the pathologist to recognize the early signs of malignancy, and to give

an immediate report. (3) When the early microscopic examination is negative for malignancy, the patient is made to return at the end of 3 or 4 weeks or earlier in case there is uterine bleeding. She is examined for uterine enlargement and softening and for Friedman test.

CONCLUSION

1. The earliest method of diagnosis of uterine chorioepithelioma is by the early microscopy method; i.e., the microscopic examination of the tissue obtained from the curettage done to complete an abortion or mole expulsion.

2. The next best method of diagnosis of uterine chorioepithelioma is by the HBEs method. It may be employed as early as 3 or 4 weeks after abortion or mole expulsion.

3. The rapid development of ovarian cysts within 3 weeks after mole expulsion or their non-regression, especially when they are accompanied by an enlarged uterus, is another clinical sign of chorioepithelioma.

4. Friedman test is of value in the follow-up cases or in determining the presence of metastasis after the primary site of the tumor has been radically removed. It should be employed as a routine in all follow-up cases.

5. Diagnostic curettage is employed in cases where diagnosis cannot be made by HBEs.

6. Negative diagnostic curettage in the presence of HBEs is not significant, because the chorioepithelioma may be in the myometrium beyond the reach of the curette.

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Editorial

THE PHILIPPINE OBSTETRICAL AND GYNECOLOGICAL SOCIETY

The Philippine Obstetrical and Gynecological Society was founded as a national organization as well as a section of the Philippine Medical Association on July 6, 1946. The minutes of the organization meeting and of the first scientific meeting appear elsewhere in this issue. The officers chosen are all distinguished members of their specialties, particularly the Pres-

ident, whose brilliant record of achievements, whose substantial and notable contributions to medical literature, and whose very high standing in the community and in the profession are known, not only throughout the length and breadth of our country, but also abroad. With such an array of able officers and prominent specialists in its membership, the future of the Society is indeed bright.

We should like to take this opportunity to extend to the organizers, to the officers, and to the members of this new Society our sincerest congratulations. For the establishment of the Philippine Obstetrical and Gynecological Society is an important milestone in the history of Philippine medicine.

The Council of the Philippine Medical Association, aware of its great responsibility to develop the medical science and to stimulate the progress of medical practice, has decided, upon recommendation of the Editor, to publish this special number. It is hoped that this number will give an impetus to the progress of Obstetrics and Gynecology in our country. This is the first time that a special number of this kind has been conceived, and it is hoped that it will be received favorably by our readers. The Journal will put out similar special numbers from time to time, as sections of other specialists are duly organized.

The Editor would like to acknowledge his gratitude for the valuable assistance given to him by Dr. Jose Villanueva and by Dr. Jovita Coronado in putting out this number.—A. S. F.

Miscellaneous

ABSTRACTS FROM CURRENT LITERATURE

ABSTRACTORS

Isabelo Concepcion, M. D.

Walfrido de Leon, M. D.

Felisa Nicolas-Fernando, M. D.

Carmelo Reyes, M. D.

Vitamin K and Infant Mortality, by Edith L. Potter, American J. Obstetrics and Gynecology, St. Louis, 50:235-352, (Sept.) 1945.

The author studied two groups of infants: one of 6,500 infants weighing over 1,000 Gm. born in the two year period when vitamin K was given to the women before delivery and a group of 6,630 infants born during the next twenty-two months when vitamin K was not administered. The total fetal and infant mortality rate per thousand births of 29.8 for the first two years is higher than that of 25.8 for the last two years in spite of the fact that no change of significance occurred in the incidence of primiparity, premature delivery, mode of delivery or other known factor. The mortality rate for liveborn infants is identical in the two series as is the number of infants who showed evidence of hemorrhage on postmortem examination. The author concludes that no decrease in infant or fetal mortality can be expected to result from the routine administration of vitamin K.—F. N. F.

Sulfathiazole in Epidemic Diarrhea of the Newborn, by M. Leff, American J. Obstetrics and Gynecology, St. Louis, 51:1-50 (Jan.) 1946.

The author describes the procedure used at the Central Maternity Hospital in New York for the treatment of epidemic diarrhea of the newborn. Nurses are instructed to be constantly on the alert for frequent or watery stools in the newborn. Treatment is instituted early and consist of 1 grain (0.06 Gm.) of sulfathiazole every three hours administered with a medicine dropper or teaspoon directly into the baby's mouth (a stock solution of 0.06 Gm. per 4 cc. is used). After a few doses the diarrhea is usually controlled. If the diarrhea does not subside, all food is withheld for twelve hours, and saline solution is given by clysis and the medication is continued. Every baby in the nursery who has been exposed is given 1 grain of sulfathiazole as a prophylactic measure. Sulfathiazole administered promptly at the onset of epidemic diarrhea in the newborn infant cures the disease in less than twenty-four hours and prevents its spread in the newborn nursery.—F. N. F.

High Dosage Progesterone Therapy of Amenorrhea, by A. E. Rakoff, American J. Obst. & Gynec., St. Louis, 51:447-594, (April) 1946, p. 480.

The author administered large doses of progesterone with or without additional estrogen to 51 patients with primary and secondary amenorrhea. In 25 patients with amenorrhea of more than two years' duration, only five responded with bleeding to progesterone alone, whereas 24 of 26 patients with amenorrhea of lesser duration bled. None of the patients with primary amenorrhea menstruated after 60 mg. of progesterone, while 5 of the 6 who were given progesterone after estrogen priming had induced bleeding. Only one spontaneous bleeding occurred after withdrawal therapy. The patient who failed to respond at all had an endometrial defect. Of the 44 patients with secondary amenorrhea, 29 responded to progesterone alone. Many of these had subsequent spontaneous

bleedings and 5 became pregnant. The remaining 15 patients had induced bleeding with progesterone after estrogen priming. The patients with a gonadotrophic deficiency and a primary ovarian deficiency responded about equally well as far as induction of bleeding was concerned. In both of these groups there was a tendency for the hormonal status to improve immediately after treatment, as indicated by increased gonadotropic production in the first group and better ovarian response (increased estrogens and improved endometrium) in the second group eight of the thirty married women become pregnant following therapy. An additional group of 18 patients with delayed menstruation or recent amenorrhea who were suspected of pregnancy were treated on two or three successive days. As checked by the Friedman test, bleeding failed to occur if pregnancy was present whereas in all but 1 instance bleeding was induced in the non-pregnant patients.—F. N. F.

Effect of Postoperative Exercises and Massage on Pulmonary Embolism, by J. P. Erskine, and I. C. Shires, *J. Obst. & Gynec. of Brit. Empire, Manchester* 52:417-544 (Oct.) 1945 p. 480.

The authors stated that at Chelsea Hospital there was a massage team whose members were to instruct and supervise postoperative exercises and to carry out massage in all cases after abdominal operations and operations for the repair of genital prolapse. The incidence of fatal embolism decreased by more than 50 per cent during the seven year period subsequent to the introduction of the massage and exercise procedure. The massage department was established at the Chelsea Hospital at the beginning of 1937.—F. N. F.

Intractable Epistaxis of Pregnancy, by W. F. Goff, *Western J. Surg., Obst. & Gynecology, Portland, Ore.*, 54:177-216 (May) p. 198.

The author reports two cases of severe epistaxis. In both cases the usual conservative measures of control were not successful. The decision to terminate pregnancy was based on the few cases in the literature which responded favorably. In the first of the two cases general anesthesia was employed for the interruption of pregnancy, and death followed. In the second patient local anesthesia was employed and the outcome was favorable. Because of the dangers inherent in maintaining an open and free airway, local anesthesia is preferable to general anesthesia when termination of pregnancy is contemplated. Clinical proof is accumulating which indicates that a close relationship exists between the nose and the genital organs and that therefore treatment of severe epistaxis must be considered on an endocrine basis.—F. N. F.

SOCIETY ACTIVITIES

PHILIPPINE OBSTETRICAL AND GYNECOLOGICAL SOCIETY

Minutes of the first meeting of the Philippine Obstetrical and Gynecological Society held on July 6, 1946 in the Philippine General Hospital.

Dr. Constantino Manahan, acting as temporary chairman, called the meeting to order at 3:30 p.m.

The first business taken up was the approval of the proposed Constitution and By-Laws of the organization. This was approved after a few amendments had been made.

The officers were then elected. The result of the election was as follows:

President: Dr. Honoria Acosta-Sison
Vice-Pres: Dr. Rafael Enrile
Sec-Treas: Dr. Jose Villanueva
Directors: Dr. Carmelo Reyes
Dr. Guillermo Rustia
Dr. Enrique Lopez
Dr. Jose Delgado

The newly-elected officers assumed their respective offices. The following committees were created:

1. Committee on Scientific Meetings:
Dr. Constantino P. Manahan, *Chairman*.
Dr. Jose R. Reyes, *member*
Dr. Jose Villanueva, *member*
2. Committee on Publications and Library:
Dr. Jose Delgado, *Chairman*
Dr. Carmelo Reyes, *member*
Dr. Jose Genato, *member*

The meeting was adjourned at 5:15 p.m.

SCIENTIFIC MEETING

The first Scientific Meeting of the Philippine Obstetrical and Gynecological Society was held August 24, 1946 at 2:00 p.m. under the aegis of the Department of Obstetrics and Gynecology of the North General Hospital.

Inaugural Address Honoria Acosta-Sison, M.D.

Geriatrics and Gynecology:

The Role of Surgery in the Aged Constantino P. Manahan, M.D.

Axial Torsion of the Uterus Jovita Coronado, M.D.

The Incidence of Erythroblastosis Foetalis Mamerta Andaya, M.D.

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Any number of reprints will be furnished at cost price provided that written request be made by the author at the time the article is submitted for publication.

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Pio de Roda, Alfredo: Typhus Fever in the Philippines: Weil-Felix Reaction of 500 Cases, *Journal Philippine Islands Medical Association*, 17:147-156 (March) 1936.

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Peters, J. P., and Van Slyke, D. D.: *Quantitative Clinical Chemistry*, Baltimore, Williams & Wilkins Company, 1932, vol. 2, 892-893.

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