THE "OLD" AND THE "NEW" IN OBSTETRICS AND GYNAECOLOGY

by

K. M. MASANI, M.D. (Lond.), F.R.C.S. (Eng.), F.I.C.S.

I consider it a great privilege and honour to deliver the Dr. Dossibai Dadabhoy Memorial Oration under the auspices of the Bombay Obstetric and Gynaecological Society for several reasons. My first reason is that it was in August 1959, the three of us, Dr. Dadabhoy, Dr. Gool Vazifdar and myself, were having our customary Sunday morning friendly meeting in her hospital that the suggestion originally mooted by Dr. Chamanlal Mehta was considered and Dr. Dossibai graciously agreed to give a donation of Rs. 25,000/- to the Bombay Society for the purpose. Dr. Chamanlal Mehta announced the founding of this Oration at a clinical meeting of the Bombay Society held in November 1959. Unfortunately, Dr. Dadabhoy died on 16th January 1960 before finalising the agreement but the trustees of her estate completed the formalities and gave the donation of Rs. 25,000/- to the Bombay Society. The first oration was given by the late Dr. Yagi of Japan.

My second reason is that Dr. Dadabhoy commenced practice just about the time when the "Old" and the "New" in Obstetrics and Gynaecology were beginning to merge. My third reason is that in vogue with the universal talk now-a-days of "generation gap", there was a generation gap between Dr. Dadabhoy and myself as between me and you, the young generation of Obstetricians and Gynaecologists.

*Dr. Dossibai J. R. Dadabhoy Oration delivered on 17th February 1974.

The "Old" and the "New" are in fact relative terms. Scientific progress is a continuous process and what is considered new at the present has evolved from the old. The diagnostic and therapeutic procedures of the past are considered now as old and in some instances obsolete but it should be realised that procedures practised at any particular period are necessarily innovated by the then prevailing conditions. What is considered as new at the present time will inevitably become out of date by the turn of the century or even earlier. A good example is that of the changing trends in the treatment of carcinoma of cervix.

Around 1898, Vienese School was foremost in surgery and the radical operation for carcinoma of the cervix, devised by the Austrian surgeon Wertheim, was a pioneer advance. The very high operative mortality of the operation made Schauta to introduce his vaginal operation. From 1910, radium was the treatment of choice for early and late cases of cancer of the cervix and radical surgery slipped so much into the background that a standard text book of operative gynaecology by Crossen actually omitted a detailed description of radical hysterectomy for cancer of the cervix in the fifth edition published in 1938, because the operation was obsolete. Since 1944, surgery has again been revived. This is an outstanding example of what new in 1898 lost ground giving place to radium and again recovered its popularity.

The many notable advances made in

obstetrics during the last thirty years make those of us who form a link between the past and the present happy and a little envious as well. Envious, because the anxieties, frustration and despair in the management of some of the obstetric conditions suffered by us and the ease and safety with which they are conducted now is difficult for the present generation to comprehend. The most important factor for this change is noticed in institutions having proper antenatal care. A few prominent conditions are briefly given to bring home the advantages experienced by the present generation.

Cephalopelvic disproportion: The introduction of the trial of labour has made management of cases of cephalopelvic disproportion logical. In the past, admission of neglected patients with rupture of uterus was the rule. Later on, premature induction of labour or resorting to caesarean section early in labour were introduced which did not allow assessment of the degree of disproportion. Many babies were lost due to prematurity or unnecessary caesarean sections were performed. With a proper trial of labour the obstetrician is able to assess whether a safe vaginal delivery is possible or a caesarean section is justified. Purandare's method of assessing cephalopelvic disproportion and judging the descent and rotation of the head by palpation of the anterior shoulder have proved of invaluable help. Unfortunately, the obstetrician in haste or anxiety frequently does not allow a proper trial and, to state in lay parlance, "makes a mockery of it".

Antepartum Haemorrhage: The advances in the management of antepartum haemorrhage are truly remarkable. In the past, attempts to deliver cases of placenta praevia were made per vaginum on exsanguinated women by podalic version, Willett's forceps, vaginal plugging which often proved disastrous, both to the mother and the baby. The foetal mortality was as much as 70 to 80 per cent and maternal mortality was considerable. In those days, pregnancy was terminated soon after the first bout of bleeding, irrespective of the term of pregnancy. Prematurity, anoxia and difficult vaginal manipulations contributed towards the high foetal mortality. The introduction of expectant line of treatment by Mc Caffee has helped to overcome the problem of prematurity. Today, 60 to 70 per cent or even more of the cases of placenta praevia are delivered by caesarean section with safety to both.

The severe concealed type of accidental haemorrhage was then a nightmare of the obstetrician and such heroic measures as caesarean followed by hysterectomy or hysterectomy of an unopened uterus were performed to arrest bleeding from hypofibrinogenaemia. But, to day management by immediate rupture of membranes, oxytocin drip and fibrinogen infusion have completely changed the prognosis.

Uterine Action: Caldeyro Barcia and his associates, Jeffcoate and others by their microballoon techniques have contributed largely towards the understanding of physiopathology of uterine action and today the management of cases of abnormal uterine action has become more practical and logical.

The introduction of intravenous oxytocin drip by Theobald is certainly a notable advance. A number of cases which then ended in caesarean section can now be successfully delivered vaginally.

Time and space make it expedient to just mention hypotensive drugs in toxae-

mia, Malmtrom's vaccum extraction, prostaglandins, intrauterine injection of 20 per cent saline and vaccum aspiration of products of conception during the early weeks of pregnancy as other notable advances. Sophisticated electronic aparatuses have given a new angle in diagnosis.

Caesarean Section: Until about the midtwenties of this century classical caesarean section was preferred. Since then, for nearly half a century, the lower segment operation has not only held its ground but has expanded its scope and it is unlikely that any major change in the technique will take place in the foreseeable future. However, what is surprising is that although formation of lower segment during the third trimester was known to the obstetricians of the nineteenth century, section through it was not practised. It is likely that the obstetricians felt shy to incise the lower segment because of likely injury to the bladder or the uterine blood vessels and preferred to play safe by doing classical vertical incision until two complications, frequently occurring following classical operation, intestinal obstruction as a result of adhesion of intestines to the vertical scar and dehiscence of the scar during subsequent labour compelled them to change over to lower segment operation. The old dictum: "Once a caesarean, always a caesarean" coined during the era of classical operation is no longer true and in more than half the cases normal vaginal delivery can be expected following previous lower segment operation. However, the older school of obstetricians do feel that lower segment operation has become an easy way out and the fine art of obstetrics so painstakingly evolved by generations of past obstetricians is regretably losing its rightful place in obstetrics.

In the well equipped maternity hospitals in cities and towns of India, destructive obstetric operations, as in the West, have become obsolete, but one must realise that in rural India where most of the babies are born, obstetric facilities are grossly inadequate and destructive operations on neglected cases are frequently necessary. A plea is therefore made that in teaching institutions where future generations of obstetricians are trained, destructive operations should be allowed to be practised on suitable cases under the supervision of senior colleagues. The instruments for craniotomy, decapitation, etc. rust in the instrument cupboards only to be laid out on practical examination tables where the candidates are hackled on operations they had never a chance to perform.

Gynaecological Diagnosis: Though peitoneoscope and peritoneoscopy has been known for more than forty years, the recent revival of this method in the form of laparoscope and laparoscopy has aroused considerable interest in the present generation of gynaecologists. There is no denial about the usefulness of laparoscopy in making not only positive preoperative diagnosis, but also in deciding whether a surgical approach is or is not necessary. When surgery is decided upon, the nature of operative procedure can be planned with deliberation and by knowing the risks involved in the surgical procedure, preparations can be made to avoid the risks or reduce their gravity as much as possible. In some cases unnecessary laparotomies can be avoided by this procedure and the patient reassured that the vague abdominal pain she is suffering from has no relationship to pelvic genital organs. However, this diagnostic procedure is available in a few centres only and most of present day

gynaecologists have to depend on clinical features for diagnosis and differential diagnosis. The old school of gynaecologists suffered from lack of these advantages but out of necessity developed a keen clinical sense and differentiated clinical conditions by laying proper emphasis on symptoms and physical signs. A few examples are given below as a tribute to the clinical acumen developed by the previous generations of gynaecologists.

Haematometra in Malformed Uterus: Intense dysmenorrhoea from menarch in an adolescent girl is diagnostic, even before examination, of haematometra in one horn of a bicornuate uterus. In spite of this clear cut clinical picture, a uterus enlarged by haematometra is, not infrequently misdiagnosed as a fibromyoma or an ovarian cyst.

Ectopic Pregnancy: A ruptured ectopic pregnancy with massive intraperitoneal bleeding is seldom misdiagnosed and the late Dr. H. DeSa well stated that he could "smell" an ectopic over the telephone" as the Resident Officer described the clinical picture. More than fifty years ago Munro Kerr described the very dependable triad of symptoms, acute abdominal pain, vaginal bleeding and transient fainting attacks for diagnosing an ectopic pregnancy with pelvic haematocele. The following case demonstrates the delay in correct diagnosis by not giving proper importance to this triad of symptoms. The pelvic haematocele was first diagnosed as dysentery because the tenesmus from pressure on the rectum, and then, on two successive occasions, the fainting attacks were diagnosed as hysteria. Almost six weeks passed before a correct diagnosis was made.

Bilateral Adherent Pelvic Masses: Bilateral adherent pelvic masses due to pelvic endometriosis were differentiated from bilateral tubo-ovarian masses of pelvic inflammatory origin from the knowledge that the endometrial masses tended to burrow deep into the pouch of Douglas and uterosacral ligaments and, therefore, felt against the vault of the vagina, while tubo-ovarian masses are felt relatively higher up from the vault. Personally, I have made correct differentiation between these two like conditions on this single clinical feature.

Gynaecological Surgery: Gynaecological surgery has made notable advances during the last three decades. Upto about the late thirties of this century Manchester operation was widely practised for all degrees of uterovaginal prolapse in the young as well as in the old women. No doubt the experienced gynaecologists of that time got satisfactory results even in young women, but with many others the problem of amputation of correct length of elongated cervix remained and the appearance of the reconstructed cervix left much to be desired. The present day surgical treatment of uterovaginal prolapse has completely changed. Mayo-Ward operations in women of forty and over has become the rule. In the young, Shirodkar's sling operation and Purandare's cervicopexy have replaced Manchester operation. I have practised in the Manchester operation era and the present era and, in my opinion, present day treatment is much more varied and selective.

Cancer surgery is more radical than previously and large series of cases without postoperative mortality are reported.

In the surgical repair of genital fistulae there are several innovations. Ureteric fistulae in which a good length of the ureter in its pelvic course has been destroyed was a matter of despair to the

past generation of gynaecologists, but now ingenious operations have been devised to bridge the gap between the proximal portion of the ureter and the bladder by a loop of intestine. Though the time honoured flap-splitting operation is still the mainstay of surgical repair of vesicovaginal fistulae, perineal muscle grafts for covering the destroyed vagina have definitely improved the results.

In Bombay and in many centres of India and abroad, vaginal hysterectomy for non-malignant indications is extensively practised and has replaced abdominal hysterectomy, except when the uterus is enlarged to more than eight weeks' pregnant size.

Late Dr. Shirodkar's contributions to gynaecological surgery are truly noteworthy. His operation for tightening the internal os in cases of repeated abortions has received worldwide recognition. His efforts in devising operations for creating an artificial vagina is another field in which he proved his originality. He was a staunch advocate of tuboplasty and as a result of his untiring efforts he improved on the results which until then always recorded a note of despair.

However, senior gynaecologists of today who have been in practice for forty or more years do feel that the present generation does not exercise the same restraint in evaluating the indications for operation, particularly hysterectomy and ventral suspension.

Endocrinology: Before the middle of the nineteenth century the ovary was believed to be identical in structure to the testis, and like the testis was supposed to secrete a "fertilising fluid" with which the uterus was made fertile for the seminal fluid. From the middle of the nineteenth century the role of the ovaries in the causation of menstruation and ovulation began to be understood, but its importance in the general well being of women was not known. The British gynaecologist, Lawson Tait in 1882 staunchly defended bilateral oophorectomy as the most effective treatment for arresting the growth of fibromyomata and this example well illustrates the ignorance of the gynaecologists of that era regarding the endocrine function of the ovaries. From 1908, rapid advances in the understanding of hormonal functions of the ovaries began following Hitchmann and Adler's studies of the cyclic changes of the endometrium. In 1917, Stockard and Papanicolaou demonstrated the cyclic changes in the vagina.

Of the several notable advances perhaps the most notable is induction of ovulation in anovulatory cycles. In 1958, Gamzel *et al* extracted a human pituitary gonadotropin preparation capable of producing follicular growth and ovulation. In 1961, Greenblatt discovered clomiphene citrate (Clomid) as a compound for producing ovulation. Why multiple ovulation follow after administration of these wonder drugs instead of the one which normally occurs in women is still a closely guarded secret of nature. However, a despairing note has to be sounded that there is a tendency to prescribe these potent preparations without proper selection of cases. The lay public have become aware of clomid through popular magazines and it is the solemn duty of the gynaecologist to guide his patients and impress on them that clomid has its usefulness in selected cases only.

Cytology: Cytology and cytopathology have made detection and diagnosis of disease at stages earlier than ever before possible. Papanicolaou introduced clinical cytology in medical practice. The greatest development of cytopathology

has been in the early detection of cancer. The proper place of cytologic diagnosis has been well stated by Novak in his Gynaecologic and Obstetric Pathology: "As with clinical diagnosis, one must approach cellular pathology with all information at hand, and not be tied by "blind" studies. This is a proven, reliable method for diagnosis and assistance in therapy, and should not be approached as a "game" between clinician and pathologist."

Exfoliated cells are an accurate mirror of the morphologic features of the parent epithelium and, in gynaecology, exfoliative vaginal cytology has opened many fields in diagnosis.

Greatest achievement of exfoliative cytology has been in the detection of early cancer of the cervix and the body of the uterus.

Understanding of endocrine status in anovulated, primary and secondary amenorrhoea by means of exfoliative vaginal cytology has opened a new vista in endocrinology.

Problems of sex determination, intersexuality and hermaphroditism which were complex previously have been made easy by vaginal cytology.

Immunology. Extensive research in recent years on the role of immunological factors in reproductive biology has brought out interesting and far reaching developments. Primarily, this research is aimed at checking fertility and population explosion, but it has also helped the problem of infertility of unexplained origin. Both male and female reproductive systems are involved in immunological problems. However, much more research has been carried out on male reproductive system than on the female reproductive system.

It has been experimentally known that spermatozoa can be antigenic and develop autoantibodies to spermatozoa. Two types of antibodies have been identified, sperm agglutinating and cytotoxic. In recent years several reports have been published on the presence of sperm agglutinating activity in the sperm of some men and women. Agglutination of sperms may be head to head, tail to tail, or mixed. The possibility of local antibody production by the vagina is being studied but no conclusive evidence has come forth so far.

It is not clear that any really effective measures can be carried out for a man with antibodies to his spermatozoa. One approach has been to administer testosterone over a period of time to suppress the production of spermatozoa for a sufficiently long time to interrupt the antigenic resorption of them and thus decrease sperm antibody titre. In women, prolonged "condom therapy" has been suggested. The principle is that if the semen is not allowed to touch the tissues of the woman for an extended period of time, her antibody level will subside. In the past it was vaguely known that infertility could be due to some incompatibility between a man and a particular woman and that if the divorced man were to remarry, he could make his second wife pregnant. There are Biblical accounts of testing the man for infertility by making him copulate with another woman.

Immunological tests for detecting early pregnancy have to a great extent replaced the biological tests in which expense and care of animals were necessary.

Immunological aspects of cancer are being extensively studied and it will not be surprising if by the turn of the century serology may produce a serum as a prophylactic against cancer. That will be an universal blessing to mankind.

Chemotherapy: The old had nothing to offer for treatment of choriocarcinoma. Hysterectomy was performed with full knowledge that fatal result would inevitably occur. Breakthrough came with the introduction of chemotherapy. Methotrexate has produced unbelievable results, both in prophylaxis and management of choriocarcinoma. A number of cases of pregnancy following complete remission have now been reported. These results can undoubtedly be regarded as entirely a product of the new. Chemotherapy in other cancers of the female genital tract are not so effective but there is every reason to hope that in the near future further research in this field will produce encouraging results.

Research: The older school of gynaecologists and obstetricians did not have opportunities or facilities to carry out fundamental or clinical research because the medical profession at high level in all institutions was manned entirely by British officers of the Indian Medical Service. Since independence a number of Research Centres and Upgraded Postgraduate Institutions have been established but it is a matter of regret that in none of these fundamental research is carried out. Most of the work in these institutions is repetition of work carried out in advanced countries. In the field of Family Planning there is ample scope to carry out fundamental research and intrauterine devices and other original methods of Family Planning suitable to conditions prevailing in India should form an interesting field for research. There are several drugs in Ayurveda known to have antifertility properties and experiment on animal research followed by clinical trials on human beings may bring forth some revolutionary results.

This oration appears to be a self appointed "one man commission," as scores of such commissions appointed by the Government, but I do hope, it will not gather dust on the shelf as the Government Commissions usually do. I do not expect you to go with me in all that I have stated, but if you will consider to ponder over some of the "disagreeable" statements I have made, we older generation of Obstetricians and Gynaecologists will be happy.

Once again, I pay respects to the distinguished Obstetrician and Gynaecologist of her time, the late Dr. Dossibai R. Dadabhoy. I thank the Bombay Society for the honour done to me and thank you, dear colleagues, for coming in such large numbers.