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Editorial

TRANSVERSE ABDOMINAL MUSCLE-CUTTING INCISIONS

Many an Obstetrician and Gynaecologist has gone through his or her entire Surgical career without making use of any other than a vertical abdominal incision. However, today the transverse abdominal incision is being used in the majority of laparotomies in obstetrics and gynaecology. In the very institutions where the transverse incision was a "taboo", it has become one of the commonest.

Although transverse abdominal incision was first described by Bandelocque in 1823, it was Pfenneinsteil in Germany in 1900 who published a systematic report on a Grid-Iron incision for obstetrics and gynaecological surgery. The incision did not gain popularity for reasons other than surgical, and the two World wars against Germany did not help it any better in the Anglo-American World.

The advantages of the transverse Grid-Iron incision are not just cosmetic but it also has rarer occurrence of post-operative hernias and virtually no incidence of "Burst Abdomen". The post-operative pain is also less compared to vertical incisions. Those who complain against it talk of more dissection required of fascial planes, longer time required for the incision and for its closure, lesser exposure available particularly in a repeat transverse incision, and of pararectus Spigelli's hernia, if the rectus sheath is not correctly sutured at the lateral angles. The diffi-

culties with this incision in obstetrics are: when the foetal head is deeply impacted or the foetal size too big, and in gynaecological surgery when the tumours are large, adherent and extending higher up. Most of these difficulties could be successfully overcome with the use of the transverse cutting of rectus muscle.

The same gynaecologists who were enthusiastic to change from vertical to transverse incisions now show a surprising reluctance to cut the rectus muscle whenever required. They fear that the cutting of the muscle would lead to hernias, large haematomas, and weakness of the abdominal wall. This fear is unfounded because the cut muscle heals with firm fibrosis simulating a tendinous intersection naturally existing in the rectus muscle. The nerve supply of the rectus muscle is segmental and comes transversely from the lateral to the medial side. Thus there is no likelihood of resultant muscle-weakness on cutting the muscle.

Transverse muscle-cutting incision at the level of incision of the sheath was described by Maylard in 1907 around the same time that Pfenneinsteil described his muscle-splitting incision. Unfortunately it has not gained any popularity even now. It is time that the needy surgeon in difficulties with a transverse incision recognises its advantages and promptly utilises it. During caesarean section only the

medial two-third of muscle fibres may be cut thus protecting the inferior epigastric-vessels. The exposure is direct onto the lower uterine segment and it is amazing how the surgical exposure improves and "the difficulties in extracting the foetus" vanish. It is not essential to approximate the muscle cut-ends. One may anchor them under the cut rectus sheath by mattress sutures and final approximation of the sheath will produce a very sound scar. It has been my practice to use "planned" Maylard incision for "repeat" sections with previous transverse scars. It has an additional advantage that the cut edges of the rectii do not retract as much because of their fixity to the under-surface of the sheath due to previous surgery. Maylard incision does not leave behind the sequaelae of fused peritoneum and anterior rectus-sheath layers. The cut rectii muscles may bleed but only spurting arteries need to be ligated or coagulated. It is only the rare occurrence of division of deep epigastric artery which requires proper transfixation ligature. One rarely comes across a case of incisional hernia following Maylard incision. Prema Naidu reported over 500 cases with this incision without any incidence of hernia following caesarean section.

Another transverse muscle-cutting incision was described by Cherney from USA in 1941. This incision requires identification, dissection and division of the rectus tendinous insertion. The abdominal wall including the cut muscles is raised up almost like a flap giving excellent exposure to the depth and the sides of the pelvis. It is a pelvic oncologist's

dream-come-true. The exposure to the iliac regions facilitates lymphadenectomy and dissection of blood-vessels. The exposure is adequate enough even for the removal of retroperitoneal lymph nodes at the para-aortic and lumbar regions, as well as palpation of abdominal organs. Many pelvic oncologists have been using this incision alone for the last four decades with complete satisfaction. The rectii tendons are sutured to the undersurface of the sheath with non-absorbable sutures providing a firm scar.

Hernias following epigastric surgery involving rectus-cutting have been reported in the surgical literature. However this fear need not be applicable to surgery in the hypogastrium. If the Gynaecologists lose this fear and make a timely and liberal use of Maylard and Cherney incisions whenever required, the difficulties of a transverse abdominal incision could be forgotten forever.

V. N. Puraandare

References

1. Cherney, L. S.: A modified transverse incision for low abdominal operations Surg. Gynaecol. Obstetrics: 72: 92, 1941.
2. Maylard, A. E.: Directions of Abdominal incisions. British Med. Journal, 2: 895, 1907.
3. Pfenneinsteil, N. J.: Ueber die Vortheile des Suprasymphysaren Fascienguerschnitt fur die gynaekologischen Koetiototomer. Samml. Klin. Vortr. Gynaekol Leipzig) No. 268, 97: 1735, 1900.

RELEVANCE OF CYTOLOGY SERVICES IN INDIA TODAY

by

USHA SARAIYA*

SUMMARY

Cytology services in India are available since the last 10 years but are grossly inadequate for the size of the population. The incidence of Cancer Cervix continues to be high. Mortality rates are very high as most cases are seen in late stages. Epidemiological data indicates that incidence will continue to be high due to poor sanitation, early marriages and multiparity. To control the disease Cytology screening needs to be intensive. Pick up rate for abnormal smears was found to be 31.9 per thousand in Bombay. However, majority of the cases were still seen in late stages even after 15 years of screening. A special "Dysplasia Clinic" improves the management by offering comprehensive Health Care.

For the success of this programme a good follow-up is necessary. Teaching and training of personnel is a challenge. Public Education with posters and talks in local languages will motivate the women to participate. Services must extend to remote rural areas. Rescreening every 3 years should be the ultimate goal.

This technology is very simple and inexpensive and suitable for our country. It is envisaged that in the 7th Plan, Cytology services will be provided for the women of India. For this, active participation of all Gynaecologists is sincerely sought.

Cytology services in India today are still a luxury indulged in by a few scientifically trained individuals and available to only a select few of the urban female population. Though in existence for over a decade these services are not even touching the fringe of the problem that they are meant to solve, namely the problem of cancer cervix.

This problem of cancer cervix has been with us for many years and we are just

about understanding the magnitude of it. The incidence in India as reported from Bombay is about 60 per 1,00,000 women which falls about half way in world statistics. It is the highest in Cali Colombia in South America 180 per 1,00,000 women and the lowest in Israel 10 per 1,00,000 women. The tragedy lies not so much in the high incidence but in the high mortality rates. Patients seek medical aid when the disease has become too advanced for treatment. Most doctors are helpless as they have nothing to offer to their patients by way of early diagno-

* President, Indian Academy of Cytologists, 1984-1895.

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sis. Preventable but not prevented that is the reality today.

Other countries where mass screening has been implemented have shown a startling fall in mortality rates, though not particular fall in incidence rates. This is possible because of the shift in diagnosis from late to early cases. When diagnosed in pre-cancerous or cancer-in-situ stage the disease can be adequately treated.

Over a 16 year period from 1950 to 1966 USA showed a decline in mortality rate from 35 per 1,00,000 to 23 per 1,00,000 for black population. For the white population in USA and in Canada the results are similar, showing a fall from 15 to 10. In Japan where the incidence is high and where mass screening is intensive, the fall has been 23 to 12. No comparable figures are available for India but mortality is unbelievably high.

These figures one must consider along with the epoch making statement of WHO that cancer cervix is a totally preventable disease.

Through epidemiology one has gained an insight into the causes underlying the development of cancer cervix. It is well documented that it is a disease affecting the lower socio-economic strata, people with unhygienic living standards and women who are married early and have several children.

Therefore our problem is compounded. When millions of our population live below the poverty line, when female literacy is still unbelievably low, where child marriages are still practised, how can one control the incidence of cancer cervix when it just about thrives on all these insurmountable existing problems?

Therefore, cytology services are not the only solution but a multipronged attack is needed to control the disease at all

levels, the causation, the incidence, the mortality and above all prevention in the next generation. The ultimate goal goes beyond just cytology to reach the community and control cancer cervix in that particular community.

Clinical Appraisal:

This is necessary to understand the disease process in a given community. It also helps to assess the effect of various modalities of treatment and to compare with others in the field. Therefore anyone starting cytology services must keep careful records, prepare annual reports and study them regularly.

In our 15 year study from Bombay we have found the prevalence rate and average age as follows:

	Prevalence per thousand	Average age in years
Mid and moderate dysplasia	17.8	32.5
Severe dysplasia	2.12	37
Carcinoma in Situ	1.75	38.5
Invasive cancers	13.6	44.2
Total	31.9	38

This figure for total of 31.9 per thousand seems high but it is related to the type of population we serve in a teaching hospital. A pick up rate for dysplasia and cancer would, therefore, be between 25 to 35 in different parts of India from general hospitals.

As most workers have shown that there is a slight but steady increase in age as the lesion reaches higher grades. Since all cases arise between 30 to 45 screening must be intensive for this age groups. In our studies, the pre and early cancerous lesions are few and invasive lesions 3 times more. This shows that our efforts

are still ineffective. Screening can be said to be successful when these figures are reversed i.e. more cases are discovered in dysplasia or in situ phase and very few invasive cancers are seen. This has already been seen in Delhi where screening is intensive.

Dysplasia Clinic:

In view of the large number of cases who require close clinical and cytological supervision, it is advisable to conduct a special Dysplasia Clinic. This concept is not new. Anaplasia clinics are being conducted in different parts of the world and all workers agree that it is very rewarding.

In our experience, the value of comprehensive health care is more important than specific treatment of dysplasia at least for the earlier grades.

This clinic has to be staffed by a gynaecologist, cyto-tech and a field worker. So whenever about 100 cases of dysplasia are detected, it is advisable to start a special clinic. Colposcopy is another useful tool for early diagnosis of cancer and all agree that the two methods are complementary. However, there are serious limitations for free use of this instrument and in most centres of the world it is used only in selected cases to judge the extent of the lesion for follow-up and to take directed biopsies. Conservative treatment of precancerous lesions is safe only when regular colposcopic evaluation is available.

Our knowledge of epidemiology tells us that the life style of an individual determines what risk that person runs of developing cancer cervix, and life styles do vary from community to community, from one geographic area to another and also in time from generation to generations.

These variations in life styles are im-

portant to us because they determine our cultural heritage and our ethnic identity. Besides, there are certain constants and certain variables in human behaviour which form our life styles.

In our comparative analysis of single and multiple variables in three groups of women, cancer, dysplasia and controls, we have found four factors most significant. These are age at marriage number of years of married life, gravidity and presence of infection.

Rotkin has stated that sexual initiation before the age of 17 years was the most significant in all the studies reviewed by him.

46.5% of controls and 47.6% of dysplasias were married after the age of 17 years as opposed to only 26.2% of cancer cases. Whereas 35% of controls and 31% of dysplasia were married between the ages of 14 and 16, as many as 60% of cancers were married in that age group.

So far all the cases were analysed taking one variable into consideration. To predict the type of person who is at greater risk to develop cancer, multivariable analysis quantifying each variable was necessary. This was done by giving each case a score. This scoring system was devised by us in 1976.

We believe that the more the risk factors present which individually encourage the development of cancer, greater the risk of that woman developing the lesion.

II Towards a successful programme

A stage comes when it is not enough to be satisfied by academic perfection but to move out into the community. Positive efforts have to be made for the successful implementation of this programme. When the first phase of setting up cytology services is done, one must assess the difficulties encountered and find means of

overcoming them. One must plan on how to make the programme effective. The following factors are important for the success:

- (a) Follow-up
- (b) Personnel involved
- (c) Public education
- (d) Extension to rural areas
- (e) Re-screening

It is evident that the success of this programme depends substantially on a good follow-up. For the benefit of this programme to reach the individual, she must come frequently for check up and this is usually not so at all.

So it is important to evaluate the methods of follow-up available and to improve upon them. The addition of a field worker to the team does make a difference.

Once the patient leaves our clinic, it is very difficult to find her again in his vast floating urban population. Therefore, the significance of the Pap test and the need to return must be impressed upon her so that the onus to return is on her. This is difficult because most of them are illiterate and have no concept of modern medicine. However, this task can be undertaken successfully by a field worker who has to communicate in the regional language and explain with simple diagrams and in very short time the significance of Pap test.

Postal services are a standard and cheap method to reach the patient. But it fails totally when the patients have no address and are footpath dwellers.

In our experience 35% follow-up rate is all one can expect with this method. The rest of the post cards were returned as addressee was not traceable.

Home visits are of immense value as

they establish a personal relationship. However, they cannot be used freely and are reserved for difficult and important cases.

Our results show a marked improvement 60% with this method. Many patients appreciated the visit of the field workers. Occasionally a patient was hostile and resented an intrusion. However, about 20% form the hard core of women who are unable to benefit from any welfare programme. They do not wish to participate or are not able to take treatment.

On studying this problem we came to the sad conclusion that because of their devotion to children, obligations to the home and lack of finance for transport, many women choose to suffer in silence and neglect their health even if they know that they are harbouring a deadly disease like cancer.

Personnel involved is very important. Trained personnel are simply not available in India and one has to train one's own people. Secondly good teamwork is equally important. There have to be paramedical people for screening the slides, field workers to communicate with patients, Pathologists and Gynaecologists to carry out the treatment. Good co-operation and understanding amongst these is essential to relate to the patient and her family.

Public Education:

For this we have devised a Cancer Exhibition. It consists of a series of posters in very simple language. This exhibition is mobile, it can be carried anywhere and set up within an hour. One attendant has to be available to answer questions. It has been very successful so far and we have taken it to remote areas of Maharashtra and local people have shown great

interest. The aim is to enlighten and not frighten. Public education is a massive effort and it is a job of mass media people and educationists. However, we Doctors have to contribute our effort. This experiment of conducting Cancer Detection Camps in rural areas has met with great success.

Our team goes over a weekend. First day the Cancer Exhibition is set up and a few talks are given in local languages and next day smears are taken from all those who volunteer to come for check up. Smears are brought back and processed and reports sent back.

An important aim in our health-care programme is to choose scientific methodology which is most suited to our needs. Today medical science is advancing very fast. Many new techniques and innovations are being introduced; not all are suitable for adoption in developing countries. Rather than high technology expensive techniques which benefit but a few, we should concentrate on low technology and inexpensive techniques which will benefit a larger section of our population.

That I think is the main advantage of Cyto-diagnosis. It can and must be taken to the grass roots and to the rural population.

Re-screening Programme:

They form an integral part of all cancer control programmes. A negative Pap smear gives protection at best for 3 years. Hence every woman needs re-screening every 3-4 years. If this is to be done systematically it is a very vast and challenging programme. Re-screening programmes have been undertaken very successfully by some of the affluent countries of the world.

There is some reduction in the inci-

dence rates at 2nd screening but what is noteworthy is the marked reduction in mortality rates of cancer cervix. All cases are diagnosed early and the results of treatment are very satisfactory. However, the fact remains that no one has been able to completely eliminate cancer cervix from a given community.

National Scene:

In country like ours where health problems are enormous and our resources are limited we have to think in terms of priorities.

It is easy to accept that tuberculosis, anaemia, malnutrition, family planning will get priority over cancer control. However, I would like to quote the famous words of Nehru, "We cannot allow tomorrow to slip out of our hands because of petty problems of today". If we want cancer control tomorrow then you have to work for it from today.

In each of the 5-Year Plans our Health Care infrastructure has consistently grown and developed naturally. This year the Government has ambitiously launched The National Cancer Control Programme. In this the role cytology and the emphasis on early detection receive due attention.

Human Resource Development to man the Cancer Detection Services is of prime importance. The need to involve medical colleges in teaching and training of personnel is recognised by all.

Fortunately we are a people who believe in higher education. We produce perhaps more science graduates than any other country, thereby creating a problem of the "educated unemployed." There is also the need to have attractive jobs which will reverse the brain drain. All this can be linked to our need for Cyto-technologists. A science graduate is most

eminently suited to undertake further training in cytology and can be suitably employed in all the primary health centres for starting screening programmes in his own community under the supervision of local doctors. Therefore, the medical teachers need to take a lead in this direction and to volunteer their services for training such a cadre.

Maternal and child health, control of cancer, and the upgrading of rural health care are three of our important goals and priorities in achievement. They are all linked with the development of cytology.

Cytology has been in existence in India for the last 30-35 years. However, it received a great impetus in 1970 with the formation of The Indian Academy of Cytologists. This Academy has contributed significantly to the development of this discipline which today stands on solid foundation.

From a handful of cytologists who started 15 years ago, there are today a few hundred. From 2-3 departments of cytology in existence then, they are now in every major city or town. Today there are more than 100 recognised medical colleges all over India, most of them with a departments of cytology. Rural cytology, which was a more idealistic hope introduced a few years ago, is today a reality.

The International Scene:

The oldest and the largest Cytology Society today is the American Society with a membership of over 4000. It was started in 1953, thirty years ago with the late Dr. Joe Meigs a famous Gynaecologist as Chairman, and none other than Dr. George Papanicolaou as Vice-Chairman.

Five years later, the International Academy of Cytology was founded, and

this has grown steadily, till today it has 35 National Societies as members and we are one of them.

From the Afro-Asian group, there are only 3 namely, Japan, India and Kenya. So it can be proudly said that this science is more developed in India than in any other Asian country.

Today when the National Cancer Control Programme is being launched much is expected of the Gynaecologists of India.

When the infrastructure of cytology services is available, the onus is now upon the Gynaecologists to protect all the women under his or her care from invasive cancer. It is expected that all Gynaecologists will cooperate with other specialists to achieve the ultimate goal of Cancer Control. The Federation of Obstetric and Gynaecological Societies of India, too has an important role to play. It has to channelise the activities of its members, offer teaching and training facilities and promote the sub-specialities of cytology and colposcopy. They have already been doing this but the momentum is gathering and a new thrust is required.

Finally, one can state quite confidently that Cytology Services have an important role to play in the health care needs of Indian women. Health in India is not merely a problem, it is a challenge. A challenge that has so far been well met and is progressively nearing fulfilment. Health, after all, is a basic human right and by itself a world wide social goal. With good health an individual and a nation can hope to overcome other developmental problems.

With just 15 years left for the achievement of "Health for All" it is indeed a matter on which all members of medical profession should reflect up and believe in.