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लोकाः समस्ताः सुखिनो भवन्तु

**Jivak: Buddha's personal physician**

He was a very famous physician in the 6th/7th century BC, the personal physician of Lord Buddha and the king of Magadha - Bimbisara. Born in Rajgriha of Bihar (present Rajgir), he had his 7 years of medical studies at famous ancient *Taxila*. He was intelligent, diligent and meritorious student with excellent memory and keen observation power. Known for his marvelous cures, his fame spreaded all over the country. As he was too busy in treating the monks and palace inmates only, sick people from various part of the country joined the order and became monks to be treated by him. *Amravana* the mango grove at Rajgriha was the pharmacy of Jivak. It is said that it was at Rajgir that Buddha was treated by Jivak after he was injured by his cousin Devdatta. A number of anecdotes are on record of Jivak's wonderful cure. Reference from author Chakrapani says Jivak invented a cure for filariasis.

## In This Issue






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# *The Status of Rural Surgery in Uganda*

*Dr. Mubangizi Vincent*

*[Presented in12th Annual Conference of ARSI and 1st joint conference of ARSI and ASRI (CORSIV2004)]*

## Geography

Uganda is located in East Africa, stretching astride the equator. It has a population of about 25 million people. Approximately 90% of Uganda's population lives in rural areas.

## Health Structure

In Uganda, there is National referral hospital, and regional hospital that constitutes the biggest ones. They are supposed to take care of all kinds of diseases. Further at lower order are the district hospitals (catchments 250,000 people) and the Health Centers of four different grades 1-IV. Health centre I is for one village. It is the smallest and least equipped; Health Centre II serves about 5,000 people; Health centre III is for the sub-county and is the smallest health unit to admit patients; Health centre IV serves a health sub-district (100,000 people). About 57% of people leave within 5 kilometers radius of a health facility.

## Ownership of the health facilities

| | | |
|---|---|---|
| Doctors | - | 1,168 |
| Dentists | - | 72 |
| Pharmacists | - | 134 |
| Registered Nurses | - | 1,339 |
| Beds | - | 25,628 |
| Persons per Doctor | - | 19,959 |

## Trauma

Trauma dominates the surgical wards of most hospitals in Uganda. Major trauma makes up most of those. The causes of trauma vary from falls from trees, traffic and agricultural accidents, burns and scalds to the horrific injuries resulting from intentional injuries

## Non-trauma

The frequent non-trauma conditions are;

- Inguinal hernia
- Intestinal obstruction due to various causes
- Typhoid perforation
- Tropical pyomyositis

| | Government | Non Governmental organization | Total |
|---|---|---|---|
| Hospitals | 55 | 49 | 104 |
| Health centre IV | 143 | 16 | 159 |

No fees are charged in the government owned health facilities.

## Health personnel

The number of general physicians in Uganda is still low. The number of qualified surgeons is also very low! About 100 doctors are trained each year, but unfortunately about 50% of them go away from the country to work outside.

Number of medical personnel and facilities in 2002 were as follows:

- Lipomas
- Chronic osteomyelitis
- Obstetric/gynaecological conditions.

## The problem faced

There are inevitable complications of delay in reaching hospital, poor initial management, and often a poor state of health or nutrition. Open fractures are often seen when already infected. Closed fractures are sometimes

seen when malunion had occurred. Intestinal obstruction patients often present when gut is already gangrenous. Often some 'traditional' remedy has been applied, with consequent skin necrosis, muscle ischaemia or superficial burning.

## Treatment options

The recognition of the potential of surgical services to support the acceptance of all public health activities has led to combination of preventive and curative services within the context of integrated health care. Under health sector strategic plan (HSSP), the government of Uganda has supplied trauma life support equipment to hospitals and health centre IVs. Safe blood is available in hospitals and some of health centre IVs.

## Difficulties:

Surgery in Uganda is characterized by the lack of qualified manpower, financial means (The annual per person health budget is estimated at around US$ 7 only) and equipment. The most affected category is anaesthesia. A 100-bed hospital usually has a specially trained paramedical worker as the sole Anaesthetist. When this officer is unable to perform his/her duties, organizing surgery poses great problems for the hospital doctors.

## Referral system:

The distances to cover to reach regional hospitals where surgeons are available are big. The ambulances are hard to find and hospital transport often breaks down. The road to the regional hospital is often in poor state, that make transfer of the patient unbearably painful (and dangerous), and the incidental costs to the patient - often a subsistence farmer - are so great as to make such a journey impracticable. To all intents and purposes, the rural hospital doctor often has to plan for the management of most of the cases as if there is no referral system for emergencies.

## Performance:

Most surgical patients are handled by general physicians at district hospitals. There is limited technical support and supervision from qualified surgeons from regional hospitals.

## Uganda's new strategies:

(a) The health sub-district: This is built on the health district concept of WHO. This has been developed to improve on accessibility of emergency surgical intervention especially emergency caesarean sections. Under this arrangement, 97 operating theatres were completed and 66 sets of operating theatre equipment we procured and distributed to health Centre IVs in year 2003.

(b) Training of Anaesthetic Assistants: Having realized the shortage of manpower to give safe anesthesia, there has been a programme to train Anaesthetic assistants. They are usually the formerly enrolled nurses or midwives. This has alleviated the problem especially at health centre IVs.

(c) Community Practice: This training is imparted in master's degree course. The training includes all aspects of surgical and medical disciplines. The candidate is intended to work in a district hospital where it cannot be staffed with specialists from all fields. The majority of surgical patients can hence be dealt with locally.

(d) Undergraduate training Curriculum: Anaesthesia is taught in the 4$^{th}$ year of medical course. This means that by the time the candidate comes out of the University, she/he has got training in simple yet safe methods of anaesthesia.

## Way forward:

A 'rural surgeon' in Uganda works under difficult conditions and needs to be appreciated. There is a need for net working with others.

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*Dr.Mubangazi presented this paper in the twelftths National Conference of Rural Surgery at Sivakasi, Tamil Nadu, on the 25th September2004. Following his presentation many ARSI members offered to help out with voluntary work in Uganda if that could be organized. The intention was to act as catalysts and train up local health workers in their own areas of activity so that Uganda could look forward to a sustainable form of health and medical care within their own limited resources.*

*Dr.Charles Moch of Seattle, USA who came to our earlier conference and is spearheading the movement of Essential Trauma Care through the WHO has based a good portion of his work from his experience in Uganda and we published his paper on this subject in April and July issues of this news letter last year. And there are so many things to learn from our networking.*

*For instance, shortage of Anesthetists is a major issue in most developing societies. While the Govt. of Uganda has accepted this fact and has accepted the concept of replacement by nurse anesthetists, our country lags behind. Policy making professors sitting in glass houses refuses to accept this reality to meet essential surgical care needs for the rural population of our country.*

*In a meeting in Indira Gandhi National Open University, in which the university suggested to design a short course for MBBS doctors for meeting the anesthetic needs of impoverished rural hospital of our country, it was vehemently opposed by professors of three medical colleges of Delhi. They failed to realise the reality of situation in the rural hospital of our country! How we wish they learn from countries like Uganda to meet the needs of our people400 million of whom have yet no access to life saving emergency surgical care.*

*Dr. J.K.Banerjee, member, Editorial Board*

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# *Cooperstown surgeons throw a pitch for rural surgery*

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*(This article has already been published in Bulletin of the American College of Surgeons Volume 89, Number 9. It has been reproduced here with the permission of Dr. Lori Sawicki, Admin. Director Mithoefer Center for Rural Surgery Cooperstown, NY 13326 USA)*

The growing crisis in rural general surgery in the U.S. is well documented, with articles addressing this problem having appeared sporadically in the surgical literature over the last 20 years. While some of the problems facing rural surgeons have been adequately described, general surgeons have not engaged in a concerted effort to find effective solutions. Surgical programs are of critical importance to the professional and financial viability of the hospitals and to the communities those institutions serve, not only because they provide medical care to the residents, but because they also are usually major local employers. Recently, the surgical community has demonstrated renewed interest in seeking solutions to the problems besetting rural areas. One impediment to developing an appropriate response, however, is the lack of data regarding the state of rural surgery and the unique challenges surrounding rural surgical practice. Of the several hundred projects catalogued in the 2003 database of ongoing federally funded rural health research, only one study addressed general surgery.[1]

Nonetheless, we do know a few facts about rural surgery and the individuals who practice it. For example, we know that rural surgeons perform a larger number and a greater variety of procedures than their urban or academic counterparts.[2] We also know that rural Americans are older, poorer, and often medically underserved. It is estimated that only 15 percent of physicians and less than 10 percent of surgeons practice in these areas, while 25 percent of the U.S. population resides there.[3] The number of general surgeons needed to adequately care for the rural population is projected to be 19 percent of the total.[4]

This gap is increasingly difficult to close because rural surgeons are aging, and younger surgeons are often reluctant to take rural jobs. The average rural hospital medical staff member is 49 years old. Professional isolation and a diverse caseload add to the complexity of rural practice. Hence, this crisis requires a two-tiered response: (1) changes in residency training and education; and (2) improvements in practice environment.

## A dedicated forum

As a rural teaching hospital in Cooperstown, NY, (pop. 2,100) the surgeons at Bassett Healthcare have become increasingly aware of the complex issues facing rural practices. As part of an effort to better tailor our residency program toward rural practice, we have come to recognize the multiple issues related to appropriate training, recruitment, and retention of rural surgeons. We have concluded that a dedicated forum is needed to address the issues facing rural surgeons and have, therefore, established a center for rural surgery. The Robert Keeler Foundation, learning of this proposed program, has provided a generous five year grant to establish the Mithoefer Center for Rural Surgery (MCRS), memorializing JamesMithoefer, MD, FACS. Dr. Mithoefer practiced surgery at Bassett Hospital from 1950 until his untimely death at the age of

47 in 1962. The goals of the MCRS fall into the broad categories of addressing training and educational requirements of rural surgeons, improving outcomes at rural practices, and raising national awareness in both the medical and political communities. Bassett Hospital is a 184-bed acute-care hospital affiliated with Columbia University and located in rural central New York State. With the inclusion of its hospital and multiple outpatient facilities, Bassett spans nine counties and is the largest employer in one of them-Otsego County (population 60,000). In addition to health care, the main regional industries include farming, higher education, and tourism. Bassett Hospital was established in 1922 as a not-for-profit corporation and was planned as a model of academic health care delivered in a rural environment by employed physicians in a closed-staff group practice. The mission statement of Bassett includes patient care, medical research, and education. Bassett currently has residency programs in general surgery, internal medicine, and primary care and a transitional internship. The general surgery residency program has two five-year categorical positions and two additional preliminary positions for two years. Third-year medical students from Dartmouth Medical College, Rochester University, and Columbia University College of Physicians and Surgeons are present throughout the year as well. We have a long tradition of training surgeons who practice in rural communities. Fifty-six residents have graduated from the program in more than 50 years.

## Our research

A recent survey of actively practicing surgeons who graduated from our program analyzed the influence that a rural-based training program had on their choice of practice location and on their preparation for practice. Bassett's graduates practice in rural locations at a significantly higher percentage than national averages.[5] We and others have found that a rural upbringing is a significant predictor of choosing to practice in a rural location. Indeed, 80 percent of our graduates grew up in locations they described as rural. Of the 27 residents who practice general surgery, 18 (67%) currently practice in rural communities, while nationally only 10 percent of general surgeons practice in rural locations.[3] Of 21 residents who completed fellowship training, eight (38%) practice in rural locations. Seventy-three percent of graduates who chose rural practices were satisfied with that choice while 55 percent of urban practitioners were satisfied.[5]

Of the 56 graduated surgeons, 85 percent raised in rural areas and 12 percent reared in urban environments chose to practice in rural communities.[5] Although residents with a rural background may preferentially choose a training program like Bassett's, it is also clear that this type of rural based program produces a higher percentage of surgeons who will practice in more remote locations. Additionally, we examined the common concerns among rural surgeons. They are as follows:

1. *Inadequate training in subspecialties*. The practice of general surgery in a rural community differs significantly from urban practice. Rural surgeons spend 27 percent of their time performing endoscopic, gynecologic, orthopedics, urologic, and otolaryngology procedures, in contrast to the 5 percent of their time that urban or academic surgeons devote to operations outside of the classic realm of general surgery.[4] Current general surgery residency training often provides residents with inadequate grounding in the necessary subspecialty skills, offering only basic exposure to these disciplines. As our volume in general surgery at Bassett has grown and our resident hours have been limited, we have found ourselves reducing exposure to orthopaedics, gynecology, hand surgery, otolaryngology, and urology to the basic minimums required. In essence, we are moving away from one of our strengths:

the ability to provide a structured, graduated experience in those subspecialty areas needed for a rural practice.

2. *Isolation and heavy caseloads*. Many factors affect the level of satisfaction for general surgeons in rural communities. Rural surgeons have larger, more diverse caseloads than their urban counterparts. Isolation is often an issue, and access to continuing education, consultants, and quality improvement programs is limited. Frequent call, inadequate assistance, and difficulty in obtaining coverage for vacation time are other problems that must be addressed to increase job satisfaction and, thereby, improve retention.

3. *Lack of outcome studies*. Outcome studies are becoming increasingly important nationally, particularly for high-risk, low-volume surgical procedures. Major private sector groups, such as Leapfrog, have suggested regionalization of complex cases to improve outcomes and assure patient safety. Which of these procedures rural surgeons are performing and the associated outcomes are unknown.

4. *Financial viability of hospitals*. Although significant focus has been placed on the availability and importance of primary care in rural communities, less attention has been given to the critical importance of a surgical program on small rural hospitals. It is estimated that surgical programs represent at least 40 percent of hospital admissions and account for more than 50 percent of hospital revenue. Often the fate of rural hospitals depends on a viable surgical program, the mainstay of which is usually general surgery. The loss of the general surgeon(s) will produce significant financial distress, which may well lead to hospital failure. Given the importance of surgery to rural hospitals, it is interesting that no surgical topics were on the agenda of the recent annual meeting of the National Rural Health Association.

## Rural surgery curriculum

We recognize that multiple aspects of our training program allow us to attract and train surgeons for rural locations. Because we have a closed-staff group practice with sub specialists interested in teaching, we are able to develop a rural-track, categorical residency that provides a graduated experience in subspecialty skills needed in rural practice, while still fulfilling the requirements for categorical general surgery. A proposed curriculum has been developed. While controversy exists regarding the wisdom of offering a rural-specific curriculum instead of standard residency rotations, there is no doubt that surgical residents graduating today are only partially equipped for practice in small hospitals in rural communities. Indeed, in his presidential address to the Southern Surgical Association in 1994, Richard J. Field, Jr., MD, FACS, presented a strong case for implementing such a curriculum and reported that both he and his son, who joined his practice in rural Mississippi, completed an additional post residency year of training to obtain more experience in orthopaedics, urology, and ob/gyn.6 Our goal is to develop a program that initiates subspecialty surgical education at the PGY-1 year, then builds on this as a continuing process over the next four years. The rural track residents, at senior levels, will be involved in decisions and procedures in needed subspecialties. During rotations with the subspecialty faculty, the residents will have a direct training experience and increasing responsibility. At the PGY-4 level, the resident will join a general surgery graduate of our program in a small rural community hospital.

This will provide a varied, senior-level experience with limited access to sub specialists. Because rural surgeons often provide the only Endoscopy at rural hospitals, endoscopic experience will be emphasized throughout the five years of residency. A two-month elective to further develop specific needed skills for his or her chosen rural practice will be provided at the PGY-5 level. An additional educational component is the development of the Mithoefer Rural Surgery Fellowship. Trained general surgery graduates who plan to practice in rural areas will have access to individually designed experiences for three to six months in subspecialties that are in demand in their communities.

## Upcoming efforts

We are conducting two nationwide surveys, one of general surgeons and the other of rural hospitals. The study of general surgeons looks at lifestyle issues, professional isolation, educational needs, surgical care provided, and recruitment issues. The resulting data will be used to: (1) create programs that address the specific concerns of rural surgeons; (2) develop a repository of information; (3) guide policymakers in developing programs; and (4) promote opportunities in rural surgery. The hospital survey will determine the financial effects of the surgical program on rural hospitals. Additionally, we will ascertain which issues and difficulties impede recruitment of general surgeons for rural practices. The MCRS is partnering with Dartmouth Medical College and Rochester University to clarify surgical outcomes in rural hospitals and to further assess the financial impact of surgical programs on hospital revenue.

Plans also are under way to host a national conference next spring focusing on the issues of rural surgery. Leaders in this field will be invited to present information on the current status of rural issues with an emphasis on rural surgery. Our goal is to bring to the forefront the issues facing rural surgeons in light of what we believe is an impending crisis in rural health care in the U.S. We have established a Web site, *www.centerforrural surgery.org*, which will be used as a resource for rural surgeons. The results of our surveys will be posted on the site.

## National attention needed

The issue of rural general surgery warrants national attention. To avert further deterioration in the availability of surgical care in rural America, we need to understand and address the complex factors related to appropriate preparation of surgeons who can comfortably practice in rural communities and will choose a rural lifestyle. Only with a full comprehension of these complex factors can we arrive at possible solutions.

The financial importance of surgical programs to rural hospitals must also be fully studied. Outcomes of routine and complex surgical procedures in rural hospitals must be known if appropriate decisions on referral to tertiary care centers can be made. We believe the MCRS can serve as a focal point to address these emerging issues.

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*The problems besetting rural surgery are fairly common globally. The challenges might differ in magnitude or in order of importance as per the various socio-economic, demographic and political factors across different countries, but the larger picture remains the same.*

*Compared to US where only 25% of the total population is rural, in India 60% of our population still lives in rural areas. The need for rural surgical care is only more pronounced.*

*As suggested by the author, in order to provide essential surgical care to the rural population, it is imperative that Govt., health care organizations and professors of medical colleges understand and address the complex factors related to rural surgery to arrive at possible solution and attract and encourage young surgeons.*

*Initiatives like rural surgery specific curriculum, training in subspecialty for developing skills, providing a better understanding of rural environment, infrastructural support in rural areas, strong support systems & social security for rural surgeons & their immediate family are some of the steps that the government run bodies, health care organizations and medical institutes can take towards making rural surgical care more successful in our country. "Certificate in rural surgery" (CRS) course initiated by ARSI in collaboration with Indira Gandhi National Open University is one such initiative towards right direction. – Dr. S.K. Baasu, Editor*

Articles, short papers, case reports are invited for publication in "Rural Surgery" bulletin. The manuscript may be sent to Dr. S.K. Baasu, Hony. Editor, Rural Surgery, Rural Medicare Centre, P.O.Box 10830, Vill. Saidulajaib, Mehrauli, New Delhi-110030. It can also be e-mailed at *skbaasu2004@yahoo.co.in*. The best article published in the bulletin for the year 2005 will receive Rural Medicare Society award, a cash award of Rs. 3000/- (Rupees three thousand only)

# *Safe Abortion: Woman's Right to Health*

***Dr. Madhu Meeta M.D, Dip G.O***

***Dr. A. K. Banerjee, M.S***

Rosy (name changed), teacher in a senior secondary school, presented to our hospital with low blood pressure, shock and bleeding. Earlier she went to a local *Dai* for abortion of a 3 months old pregnancy. The *Dai* attempted almost all methods and referred her only after she developed potentially life-threatening complications. In the hospital, she was revived and later operated to remove a dead macerated fetus.

Rosy could have died. In fact 13% of all pregnant mothers worldwide die of such unsafe quackery. Among 210 million pregnancy outcomes, 46 million (21.9%) are terminated as induced abortions, mostly by unsafe crude measures.

Abortion may be spontaneous or induced. Induction of abortion is often the necessity of an individual, family or society. It forms an inalienable part of a women's right to health. The common indications are: - limiting family size; non-use or failure of contraception; unwanted pregnancy (rape etc.); grave illness of mother, potentially dangerous disease of the unborn child etc. Rural surgeons often face such situations.

To prevent the threat to the mother's health by promoting safe and expert abortion measures, Govt. of India has enacted & amended the Medical Termination of Pregnancy Act in 2002. It stipulates certain essential commodities in the center and expertise of the abortionist. Yet only 55% of registered abortionists are gynecologists. Most of these abortions are conducted by quacks and untrained doctors with inadequate facilities at unsafe places under unhygienic conditions.

The following are few suggestions to promote safe abortion:-

1. Proper sex education in high schools. Removal of social taboo associated with abortion. This drives women to nondescript quacks and risky procedures.
2. Cost- effective specialized Govt. abortion centers catering particularly the rural poor. Presently there are only 4 formal abortion centers for every one-lakh population. The health- care delivery process should be fast and confidential.
3. Training of doctors to avoid potentially dangerous techniques like dilatation & curettage. 73% abortions are done under 12 weeks, still using D/C procedure.
4. Stringent enforcement of the requisite infrastructure norms for the center and expected expertise of the abortionist as per provisions of MTP and PNDT acts.
5. Awareness campaign about child spacing methods, terminal sterilization options and distribution of pills and condoms through grass-root NGOs.
6. Family counseling centers in each abortion center for pre and post-abortion sessions. This may actually reduce the number of abortions.
7. Avoiding sex-selective procedures and not propagating abortion as an alternative to contraception.
8. Registration of abortion may be made compulsory like death & live birth.

The MTP act (clause 8)also safeguards the qualified doctor by directing that no suitor other legal proceeding shall lie against him for any damage caused by or likely to be caused by anything which is in good faith done or intended to be done under this act.

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***Editor's note:*** *Given no alternative, women will resort to abortion regardless of socio-economic or cultural background, legal codes, religious sanctions, or risks to physical and mental well-being. A high level of unwanted pregnancies is the major reason for the incidence of abortion. While the informed and effective use of contraceptives has the potential to drastically reduce the number of unwanted pregnancies, and thus the number of women seeking abortion; a multiplicity of reasons, (including - inadequate sexual and contraceptive failure...) mean that unwanted pregnancies will never be eliminated altogether. In recognizing these facts, every health care provider has to acknowledge that some of their clients will face an unwanted pregnancy; and that the issues of abortion therefore need to be addressed. Both government and FPAs need to promote contraception and comprehensive reproductive health care services in order to prevent unwanted pregnancies from occurring. Every woman, man or couple should be offered high quality sexual and contraceptive information, education and counseling; affordable and accessible contraceptive services; and a wide variety of reliable, safe and acceptable methods of contraception. For those cases where failure to prevent unwanted pregnancy does occur, accessible, humane, safe abortion services should be made available to meet individual women's needs and to prevent loss of lives and long term suffering. Following are editor's suggestions to promote safe abortion:*

- Dissemination of information on the medical, social and psychological consequences for individual women of unsafe abortion.
- To actively promote and strongly advocate for ease of access to/provision of abortion care services, including emergency care, on 24 hour basis, for the complications of abortion, whether spontaneous or induced, in every health care system.
- To address the deficiency in post-abortion family planning. (It is essential to co-ordinate public and private sector family planning services with abortion care provision.)
- To provide information, technical expertise and training to assist FPAs in activities related to reducing unsafe abortions and improving access to safe abortion services.
- Produce technical guides and educational materials which provide clear, practical guidance specifically for individuals and institutions offering abortion care. (These materials should be distributed widely and could include information about clinical practices, pain control, infection prevention, counseling, post abortion contraception, quality of care principles and cost containment.)

# *Use of Oral Mifepristone and Misoprostol Combination for Safe Abortion in Rural Area*

*Dr Rajesh Tongaonkar*

## Introduction:

Unsafe, illegal abortion is a major health problem among women in India, especially in rural areas, contributing to maternal mortality and morbidity and tremendous impact on woman's reproductive health.

Though MTP was legalized in 1971, the incidence of illegal and unsafe abortion has not come down. Around 13 millions pregnancies are terminated in India each year of which hardly 0.6 millions are safe abortions. One of the important reasons for this higher incidence of unsafe-illegal abortion is due to poor coverage of MTP services. Around 20,000 abortions related death are reported every year.

Until recently, in India abortions were mainly carried out by surgical methods. But given a choice, women would prefer a medical method of abortion rather than surgical one. Now by the use of oral Mifepristone and Misoprostol pregnancies up to 7 weeks (49 days) can be successfully terminated in 94-99% patients.

Our experience using the oral Mifepristone and Misoprostol in 60 patients is discussed. 57 patients were successfully terminated, 2 Patients needed dilatation and evacuation for excessive bleeding and 1 patient continued the pregnancy after 15 days of administration of the drug. The pregnancy was terminated by surgical method.

## Methods of Abortion:

Surgical Abortions are mainly done by suction evacuation or by manual evacuation using ovum holding forceps and curettage while medical abortion is carried out by using various nonspecific drugs such as high doses of estrogen and progesterone combination, high doses of quinine or chloroquine, some herbal drugs (amorex), papaya seeds etc. Also cytotoxic drugs like Methotrexate are used with good success rate. But the combination of Mifepristone and Misoprostol is most effective and successful in 94-99% patients. In the year 2000 the Drug controller of India has approved this combination of drug for medical abortion up to 49 days from last menstrual period. The drug had been marketed in India since 2002.

## Patients Selection:

Women with amenorrhoea of less than 49 days (7 wk) from last menstrual period were selected for medical abortion. The gestational age was confirmed by clinical examination. Sonography was performed in cases with unknown LMP, for those who conceived in lactational amenorrhoea, cases with large size uterus, or in patients of suspected fibroid or suspected ectopic pregnancy.

## Exclusion Criteria:

a. Patients with more than 7 wk gestation,
b. Patients not willing to come for follow up.
c. Patients staying away from our hospital with no transport facility.
d. Patients with severe anemia.

## Patients Counseling:

Proper counseling is the key factor for the medical abortion. Patient must be counseled with proper information regarding the regime, follow up, complications and need for surgical intervention in case of failure. Following information was provided to the patients:

- She will need minimum there visits Day 1,3, and 15
- She may bleed for 10-14 days, which may be heavy and prolonged with passing of clots and some time embryo. If bleeding is excessive she will require curettage.
- She may get pain in abdomen with cramping.
- If pregnancy continues after 15 days she will need surgical abortion by curettage.
- Her next menses may be prolonged.
- She should avoid intercourse till next menses or use condom.

## Clinical protocol used:

Day 1 - After conformation of gestational age and thorough clinical examination, proper counseling of patient was done. A written consent was taken. A routine investigation of hemoglobin, blood grouping, Rh typing and urine examination was done. Patient was given tab. Mifepristone 200 mg orally. (In standard régime 3 tablets of Mifepristone are given)

Day 3 (48 hrs) - Tab. Misoprostol 400mcg (i.e. 2 tab of 200 mcg) given orally. Patient was asked to wait in the clinic for 4 hours and before leaving the clinic a clinical examination was performed for cervical dilatation and in case cervix was opened the products were removed manually.

Day 15 - Patient was called back to confirm that the abortion was complete. This was done by clinical examination and if required by Sonography.

## Our experience:

Total number of abortions carried out in the last 1year at our center was 190 out of which 130 were surgical abortions and 60 were medical abortions (Table1) using the combination of oral Mifepristone and Misoprostol.

Table 1
*Our experience*

| | |
|---|---|
| Total No. Abortions | 190 |
| Surgical Abortions | 130 |
| Medical Abortions | 60 |

**Medical Abortions:** Out of the 60 patients, 57 patients were successfully terminated (95%), 2 were incomplete abortions causing severe bleeding (3.3%) PV and needed curettage. 1 patient continued the pregnancy after 15 days of administration of the drug (1.7%) and the pregnancy was terminated by surgical method.

The combination was also useful in primi gravida (6) and patients with previous LSCS (8). All of them aborted completely. (Table 2)

Table 2
*Medical Abortion :*

| | |
|---|---|
| No. of Patients | 60 |
| Complete Abortion | 57 (95%) |
| Incomplete Abortion (Severe Bleeding) | 2 (3.3%) |
| Pregnancy Continuation | 1 (1.7%) |
| Primigravida | 6 (all completely Aborted) |
| Previous LSCS | 8 (all completely Aborted) |

**Gestational age:** The success of medical abortion depended on the gestational age. Patients with less than 6 wk gestation had success rate of almost 100%. Table 3 shows the success rate based on gestational age.

Table 3
*Gestational age:*

| Period of Amenorrhea | No. of Patients | Complete Abortion |
|---|---|---|
| 4-5 wk | 4 | 4 (100%) |
| 5-6 wk | 31 | 31 (100%) |
| 6-7 wk | 23 | 21 (91.3%) |
| > 7 wk | 2 | 1 |

All patients with early gestation aborted completely.

**Side effects:** The side effects were mainly related to the abortion process and the effects of the drug. They were bleeding, abdominal pain, nausea and vomiting, diarrhea, headache, fever, giddiness and Fatigue.

**Bleeding:** Heavy and prolonged bleeding with passage of clots was the most common problem. It started after 4 hours of Misoprostol dose or some times even after Mifepristone only. Thus the onset was variable and unpredictable. In some patients it lasted even for 9-10 days.

**Duration of bleeding:** was variable. It was 3-4 days in 24 patients, 5-9 days in 31 patients and more than 10 days in 5 patients.

**Severity of bleeding:** Patients experience of bleeding was compared with their menstrual bleeding. It was Heavy (that is more then Menses) in 19 Patients (2 Patient required D&C, others were managed conservatively) Bleeding was similar to Normal Menses in 25 patients and less or like spotting in 16 patients. (Table 4)

**Pain in abdomen:** The second most common side effect was pain in abdomen. It was severe in 5 patients, moderate in 15 and mild in 22 patients. Simple paracetamol with antispasmodic dicyclomine was useful for controlling pain in all patients. (Table5)

**Other side effects:** These include Nausea and vomiting in 12, Diarrhea in 3, Headache in 4, Fever in 6 and Fatigue in 2 patients. (Table 6)

Table 4
*Bleeding:*

| *Duration of bleeding:* | |
|---|---|
| Duration | No. of Patients |
| 3-4 days | 24 |
| 5-9 days | 31 |
| > 10 days | 5 |
| *Severity of bleeding:* | |
| Severity | No. of Patients |
| Heavy (> Menses) | 19 (2 require D&E) |
| Normal (= Menses) | 25 |
| Light (< Menses) | 16 |

Table 5
*Pain in abdomen:*

| Severity | No. of Patients |
|---|---|
| Mild | 22 |
| Moderate | 15 |
| Severe | 5 |

Table 6
*Other side effects:*

| | |
|---|---|
| Nausea and vomiting | 12 |
| Diarrhea | 3 |
| Headache | 4 |
| Fever | 6 |
| Fatigue | 2 |

**Cost of therapy:** Though the cost of medicines for medical abortion is little expensive, considering the overall cost, medical abortion is cost effective, if performed in private set up. But it may not be in the Government set up or in some MTP

centre. A comparison of both medical and surgical abortion cost at our centre is presented in Table 7.

**Advantages:** Thus the medical abortion by using Mifepristone and Misoprostol combination has following advantages:

1) It can be offered at an earlier stage
2) It needs less trained manpower
3) Less invasive procedure, no risk of anesthesia
4) Complications associated with surgery such as perforation, infection can be avoided
5) No effect on future fertility
6) Gives more privacy to the patient as it simulates the natural menses. It is relatively less expensive.

Table 7
*Cost of Therapy:*

| Medical Abortion: | Rupees |
|---|---|
| Tab. Mifepristone 200 mg (1 tab) | 350 |
| Tab. Misoprostol 200 mg (2 tab) | 30 |
| Antibiotics, Antispasmodic and iron | 100 |
| Total | 480 |

| Surgical Abortion: | Rupees |
|---|---|
| Surgery charges | 800 |
| Nursing home charges | 100 |
| Anesthetics charges | 100 |
| Medicines used at time of surgery | 180 |
| Anaesthesia drugs | 50 |
| Antibiotics, Antispasmodic and iron | 100 |
| Total | 1330 |

**Disadvantages:** Medical abortion requires minimum 3 visits and the timing of abortion is unpredictable. There is heavy and prolonged bleeding for 8-10 days and about 3-5% patients may require curettage for incomplete abortion. 1-2% of the patients may continue pregnancy and need surgical method for termination. Some patients have severe pain in abdomen. It is not useful in patients with more than 7 wk gestation and contraindicated in patients with uncontrolled hypertension, heart disease, severe anemia, coagulopathy, chronic liver and renal disease and in those who smoke.

**Conclusion:** Use of oral Mifepristone and Misoprostol combination for early termination is an effective alternative to surgical methods in the rural areas.

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***Editor's note:*** *Use of Mifepristone is probably much safer than taking a pregnancy to full term. However, problem with this drug have been reported in western literature. Till date (Nov2004) the F.D.A. has received 676 reports of problems with the drug, including 17 ectopic pregnancies, 72 cases of blood loss so severe that they required transfusions and 7 cases of serious infections, the agency reported. The first woman in the United States whose death was tied to Mifepristone suffered a ruptured ectopic pregnancy in September 2001. Therefore while counseling a patient; it is also important to instruct her to call or see a health care provider right away if she has a fever, abdominal pain or heavy bleeding.*

*While no causal relationship between Mifepristone and bacterial infections or ectopic pregnancies has been established, physicians should be aware of the risks.*

# *Tuberculosis of Uterine Cervix - A case report*

*Dr. S. K. Baasu*

## Introduction:

Tuberculosis of cervix is usually a late manifestation of the uterine and tubal infection but rarely may it be seen as apparently isolated lesion. It usually occurs in women of childbearing age. Though the disease is uncommon in developed countries, the condition may be encountered more frequently in India. Patients may present with varied types of symptoms like infertility, non-specific menstrual disturbance ranging from complete amenorrhea to excessive or irregular bleeding, pain, simple vaginal discharge, abdominal distention etc. Unless the condition is kept in mind these very symptoms may confuse the diagnosis of the clinician. In suspicious cases, a simple per speculum examination followed by a biopsy can clinch the diagnosis. Presented herewith is a case of cervical tuberculosis, treated initially as DUB and investigated later on with series of endrocrinological tests for complete amenorrhea. She was finally diagnosed and referred as a case of cervical cancer because of an ulcerated growth seen on anterior and posterior lip of the cervix which bled on touch.

## Case history:

A married woman of 24years age was referred with a provisional diagnosis of carcinoma cervix by a GP based on the history of post coital bleeding and clinical findings of an ulcerated growth on both the lips of cervix. She was unable to conceive and had H/O complete amenorrhea. There was H/O vaginal discharge not associated with pain. Incidentally the patient was treated earlier for irregular bleeding with all sorts of hormones. Later on when she had amenorrhea, she was investigated with a series of endrocrinological tests to pin point the cause. Serum prolactin, FSH, LH, Thyroid function test, fasting insulin and serum testosterone was estimated. Her hormone profile was normal. Although U/S of pelvis was carried out, surprisingly, none of the prior prescriptions of attending Gynaecologists (except the GP) had any note of her PV findings or per speculum examination findings. On examination she had an abnormal cervix, with ulceration, bleeding, and a friable papillary growth covering almost the entire ectocervix. (Fig.1)

Besides positive Montoux test and raised ESR, rest of her investigation reports including X-Ray chest reports were normal

A cervical punch biopsy was taken for HP examination.

## HP Report

Cervix- Features of Chr. Cervicitis, many giant cells, granuloma seen, suggestive of Granulomatous lesion

Endometrium- Glands of variable size and shapes. HP picture 14-17 days of cycle, inflammatory cells plasma cells, lymphocytes, monocytes, Giant cell granuloma suggestive of granulomatous lesion.

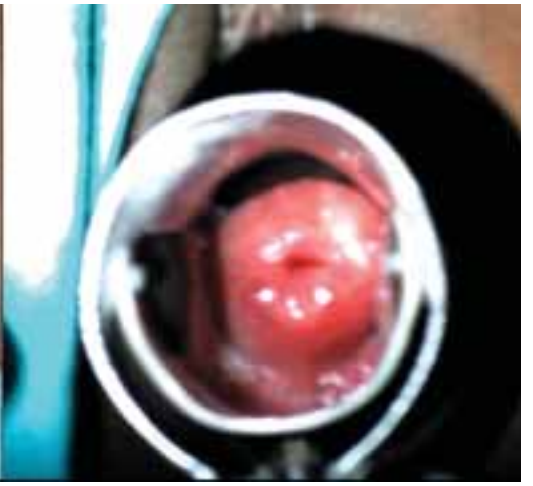
Once the diagnosis was confirmed, husband was examined for any local evidence of tubercular epididymitis or orchitis. His semen test was also negative for AFB.

## Treatment

The treatment started with four drug regimen including INH, Rifampicin, Pyrazinamide, and Ethambutol for three months. It was then followed up with Rifampicin and INH for another 6 months. After 3 months of therapy patient was relieved of her vaginal discharge and on per speculum examination cervix looked normal with no growth over it. (Fig2)

(Fig.1)

Abnormal cervix, with ulceration, bleeding and friable papillary growth covering almost the entire ectocervix



(Fig2)

Normal looking cervix after 3 months of ATT

## Discussion

Tuberculosis of the cervix accounts for 0.1-0.65% of all cases of tuberculosis (TB) and 5-24% of genital tract TB.[1-6] The genital tract is usually infected from a primary focus, usually the chest, by haematogenous spread.[2, 4, 5, 10,] The cervix is infected, as part of this process, by lymphatic spread or by direct extension. The primary lesion is often healed at presentation.[5, 13] In rare cases, cervical TB may be a primary infection, [2, 4, 5, 10,] introduced by a partner with tuberculous epididymitis or other genitourinary disease. Symptomatic genital tract TB usually presents with abnormal vaginal bleeding, menstrual irregularities, abdominal pain, and constitutional symptoms.[5, 6, 9]

The diagnosis of cervical TB is usually made by histological examination of a cervical biopsy specimen.[3, 9, 12] Although excisional biopsy has traditionally been required to diagnose cervical tuberculosis (TB), fine needle aspiration biopsy (FNAB) has also been found to be useful.[14] By this method TB could be suspected in 83% of cases and definitively established in 62%. Cervix, when involved by tuberculosis can look normal or inflamed or may present as hypertrophy or ulcerative lesion which may be clinically undiagnosible from invasive cancer except by biopsy. Isolation of the mycobacterium is the gold standard for diagnosis. However a third of cases are culture negative. Therefore, the presence of typical granulomata is sufficient for diagnosis. Identification of primary focus is further helpful.

Once the diagnosis is confirmed medical management is the mainstay of treatment. Usually the lesion should respond to 6 months of standard therapy. Fertility is generally poor even after treatment, owing to endometrial and tubal involvement at presentation and subsequent healing by fibrosis.[10-12]

In non responsive cases other causes of granulomatous cervicitis are to be excluded There may be rare cases of amoebiasis, schistosomiasis, brucellosis, tularemia, sarcoidosis, and foreign body reaction of cervix giving rise to granulomatous lesion.[3]

However they need sophisticated antibody tests and enzyme estimation.

The incidence of TB has increased recently. With the pandemic of HIV, more and more cases can be expected. There should be a high index of suspicion of tuberculosis in women, with an abnormal cervical appearance, especially from countries where HIV and TB are common. This particular presentation emphasizes routine speculum examination of all gynecological cases for at least once.

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## *OP-Ed Piece*

# NSV across LOC

***Dr. Subhash Abrol***

## Introduction

Under the Project NSV (No scalpel vasectomy) of the Ministry of Health and Family Welfare, Government of India, various NSV training cum service camps were organized in the different parts of the state of Jammu and Kashmir in sub distt. and distt. hospitals. The surgeons of the state of J&K were demonstrated the new technique of NSV and were given hands on training so that every surgeon of the state was well versed with this method of male sterilization. I was also trained in these camps by the project director and master trainer of NSV - Dr. R. C. M. Kaza and was certified by him as state trainer NSV for Jammu and Kashmir. Director Family welfare J&K decided the venue for these camps. It was this time in Tangdhar in Kupwara district form 9th to 11th September 2002. Tangdhar comes under Keran sector in army terms and falls in the area of LOC. It is the northern most towns in Kupwara district in Kashmir division. Kupwara has been the hot bed of terrorists and this part of LOC has been known to be the hottest spot and the skirmishes between the forces of both sides are not infrequent.

### *Should I refuse to go?*

The message received from Director, Family Welfare J&K was loud and clear. Being the NSV trainer I held the orders in my hands with many queries and questions in mind in view of risk to life. After a long thought, only one thing which struck my mind was that if Dr. Kaza, who in spite being form Hyderabad has been coming to our trouble torn state of Jammu & Kashmir without fail and without any fear then why can't I go to Tangdhar, an area of my own state. With that thought in mind, I got the answer to all my queries. I decided finally that as state NSV trainer I must go to Tangdhar with a mission to conduct the service cum training camp of NSV and also if I get a chance I would touch the extreme north of my motherland on behalf of myself and the team of NSV surgeons of India led by the great maestro Dr. Kaza.

Baggages were packed, air tickets to Srinagar booked and the mission started. On way to Kupwara I met one of my friends in Kashmir who encouraged me to go ahead and assured me that though the area was heavily infested with terrorists it was under the control of arm- forces. When I was traveling in the government owned vehicle towards Kupwara, all the way I was preparing myself mentally to deal with any eventuality during my to and fro journey and also during my stay at Tangdhar. Long columns of military forces and police "nakas" could be seen all along the way. Their number increased and so was the movement of the security vehicles as we moved towards our destination. At one strategic point our vehicle was stopped by army for giving details of the vehicle, whereabouts of the occupants, their destination and aim of their visit. Five copies were prepared of the information given to the army. Each was to be sent to the respective section so that by the time we reached Tangdhar it was already known to the concerned quarter that such persons have reached. Such was the sensitivity of that area. The road from this point onwards was through thick forest of *chirr* and *deodar* trees. Every turn was guarded by the army, which was giving me sigh of relief but once I saw a man in army uniform with AK47 in his hand and particularly keeping a small beard, the heart throbbed as if he could have been a terrorist.

One of the occupants of my vehicle was local doctor who was explaining to me all the local topography including the infiltration routes of terrorists. Side by side he was also explaining the plight of local people during these days of terrorism. We reached the highest point of our accent journey, the "*Sadhana Top*", which was about 10000ft above sea level. In the mean time we met an army officer who showed us some strategic points around, on disclosure of our identity. He also showed us the surrounding hills, which had been occupied by the Pakistani forces, and as a result the booming of 'Bofor guns' was a routine here. After traveling about fifty kilometers we reached *Tangdhar*.

*Tangdhar* is a very small valley with a ring of mountains all around with an exit towards Pakistan (Mujaffarabad). This exit is used by forces of both sides to exchange heavy fire. In Tangdhar, I was more or less a relaxed man in company with my trainee surgeons but truly speaking I had some apprehension that at any moment a nightmarish experience may follow. All the telephone communications here were snapped due to security reasons of ensuing assembly election. We were totally cut off from the rest of the world and there was no way that our family members know about our where about.

The Block Medical Officer in Tangdhar was also a surgeon trainee. He requested all of us to visit his native place - Tetwal. I wanted to avail this opportunity because of the reason already mentioned and secondly I wanted to see the effect of terrorism on the day to day life of the people there and thirdly how they survived the hostile neighbor. So we went ahead to Tetwal sector around sixteen kilometers from Tangdhar towards LOC. At one point the road ended. We were asked to deposit our identity cards with a BSF man at this last security picket. After getting clearance from his officer that BSF man allowed us to proceed further ahead but with a caution to be aware of unprovoked firing from Pakistani side. We were walking in a straight line on the narrow path of high altitude paddy fields. I could see the men folk busy in the paddy fields. Some of them were playing volleyball at the school ground. The children could be seen gathering their livestock. The ladies were busy in collecting the fodder for the cattle herd. Suddenly I noticed a lot of movement on a hill in front and on my left. This hill had many perforations in it. These were army bunkers. I suddenly became suspicious and asked the BMO about the hill in front. He replied with his head down without making much movement that it was Pakistan. I remembered the words of the BSF man, said just few moments before. I requested all my colleagues to be careful and not to shoot any photograph or do any thing provoking. I could see the forces on both sides to be alert and watching our movements.

Tetwal sector once used to be the hub of business activity in pre 1947 days. Indeed it is a small beautiful valley whose calm and serene atmosphere was interrupted by a narrow spanned fast flowing "*Kishan Ganga*" river. A foot suspension bridge used to connect the areas across the river before 1947. The remnants of this bridge can be seen on this side of the river. The forces on both sides of LOC are usually in eyeball-to-eyeball position. Forces across were aware of the residents on both sides of the border. They seem to have activated because of the new faces they found in this sensitive area.

While we were walking along the bank of river "*Kishan Ganga*" we were so close to the Pakistan side that we could see the STAR PLUS TV programme on the other side of the LOC as it was a load shedding time this side. As we were walking along the LOC we were caught unaware when the Pakistani army personnel suddenly came out of a big bunker in front of us and stopped us with a cocked up gun in his hand. The other accompanying soldier whistled and asked all

of us to go back. Probably we were very close to the Pakistani forces and had been mistaken as Indian security personnel in plain clothes. So we were dangerous to them due to security reasons. Every one of us was frightened with mouth dry and heart thumping, colour pale and hands cold. One of us suddenly put his hands up in reaction to not to fire. All of us retreated back immediately in a frightened condition with a fear that any time the bullets would strike. However they did not fire on us. This would have been disastrous because of very close range. But before we retreated back I touched the last limit of my country as head of the NSV team to complete the mission from Kashmir to Kanya Kumari.

We stayed at Tangdhar for the NSV camp. The people of this area were aware of this new technique of male sterilization. They wanted to know more and more of this technique and especially the local medical staffs were very curious to see this procedure in particular. Unfortunately the time chosen for the camp was not proper so the turn out was very poor. The surgeon BMO was given the requisite hand on training to conduct NSV in his place.

*Conclusions:*

Visiting LOC with the NSV team in Tetwal sector was a lifetime experience. The people in these far flung border areas, especially near LOC, were surviving the hostile conditions because of their bravery and were not concerned about their hostile neighbour. They were busy in their daily pursuits of life amidst the rain of bullets from other side of the border. As if that was the part of their daily routine. They were patriotic '*Pahari*' people and our borders are safe because of them. My hats off to these gallant people especially the staff of Health and Family Welfare who were continuing their programme of information, education and communication braving the bullets from the hostile neighbour at the risk of their lives. There seemed a large gap between the programme makers and the actual ground realities especially in these difficult and trouble hit areas. I realized this when I was there in person.

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For full text of presidential address delivered at CORSIV2004 (Sivakasi), please log on to www.arsi-india.org

*Dignitaries on the Dias (From left to right), Dr. R.Ashokan(Chairman organizing commitee, CORSIV2004), Dr. S.Sivasubramaniyan (Hon. secretary, ARSI), Dr. Kamaluddin (Chief guest and secretary-ASI), Dr. B.D.Patel (Hon. Secretary, ARSI), Dr. R.D.Prabhu (President, ARSI) Dr. G.S.Gnanagurusamy (Organizing secretary)*

*A section of attentive audience in CORSIV2004*

*Dr. R. D. Prabhu addressing the delegates in the inaugural function. Dr. jitendranath Gohain, president of ARSI on the Dias (2nd from the left)*

*Dr. Fred Finseth, renounced Hand Surgeon from United States, receiving Fellowship certificate (FARSI) from the chief guest Dr. Kamaluddin*

*Cultural program organized on the accassion*

*Dr. Gnanagurusamy receiving fellowship certificate from Dr. R. D. Prabhu and Dr. Kamaluddin*

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