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Editorial Address

Dr. S. K. Baasu (Editor)
Rural Medicare Centre
P.O. Box 10830,
Vill. Saidulajaib,
Mehrauli,
New Delhi - 110 030
e-mail:
skbaasu2004@yahoo.co.in

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Atreya: The great teacher

(from Shiva Temple, Lalgudi, 11th century)

Atreya is a Sanskrit name that means the 'son of Atri'. Atri is one of the seven immortal Rishis in Vedic literature. Historically Atreya was a great Rishi himself. He was not only an enlightened being but he was a social revolutionary as well. The main subject that he revolutionized was the medical system of Ayurveda. Atreya put Ayurveda into the system that we have today. His is the oldest authority of Hindu medicine. He condensed his own composition Atreya Samhita from 46500 verses to 1500 verses so that one can study them easily. A great teacher that he was, Atreya began a new presentation of Ayurveda and held formal teachings with his students - many of whom were famous or powerful in their own right.

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urdp@vsnl.com

Bulletin Edditor

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President's address

ARSICON-2005, Ujjain
23-9-05

Dr. R.D.Prabhu F.R.C.S.

The Association of Rural Surgeons of India is now 12 years old and come November, it will be 13 years old. I believe that we have done satisfactorily well in these 12 years and am sure that we will do even better in the future.

However and sadly though, every time the authorities take a step meaning to improve health care, that step affects rural surgeons adversely; first it was blood bank rules now it is the proposed Medical Establishment Act. National Council of Applied Economic Research (NCAER) made a survey of India between 1986 and 1994. It found that people belonging to lower middle class and below constitute 83% of the Indian population; a total of 760 million at that time and 830 million now. These are mostly the people, who, we believe are served by Rural Surgeons. But the government elected by these very people is about to bring in the new act, which may affect them adversely.

The Reason, as per Shri. Javed Chowdhury, Union Health Secretary in 2000, is that "in the recent past health care sector has also become commercialised and it is therefore necessary to prescribe standards and evolve modalities for implementing the same." He further said "Union Government is clear in its mind that expansion of private health care through the insurance system be accompanied by a strict scientific determination of standards and enforcement of the standards."

That I do not believe is the whole story. This must be a part of **liberalisation**, which is a cunning way of exploiting developing world and the poor by those who have economic might.

By this act:

- a. The government will gradually withdraw from its health care responsibility.
- b. Health care will be more and more privately managed, and
- c. Insurance companies and health care industries will be major players in that private sector.

Similar changes were brought in by liberalisation, in a South American country and a cardiac surgeon who had brought cardiac surgery within the reach of the poor committed suicide because the liberalisation suddenly made the same treatment unaffordable by the poor. But our politicians do not seem to learn from others' experience.

Aim is Quality improvement and control.

I have seen the draft of the bill for Karnataka State. According to it, the government is stipulating "minimum standards for quality of service". That of course is a noble thought. But unfortunately, these standards are primarily in relation to physical aspects of hospital and to qualification of staff only. If quality were its true aim, then it ought to have included more important indicators of quality, besides physical standards, like:

1. effectiveness,
2. efficacy,
3. equity,
4. efficiency,

5. accessibility,
6. acceptability,
7. adequacy

All of these may be achieved with unqualified but trained personnel, and are certainly achievable without most of the equipment. Many of us are working with unqualified but trained personnel and have found them to be at par and some of them even better than the qualified persons. Our services have not displeased any patients because of lack of qualifications and in fact are appreciated very much. **We believe, physical standards and qualifications alone cannot guarantee quality.** So, the noble thought is not all that noble after all.

There are other and better yardsticks for evaluating the quality of a health care:

1. Low incidence of post operative infection,
2. Avoiding unnecessary investigations, and costly medications,
3. Performing only indicated surgeries and interventions, and
4. The most important, satisfaction **of the patients.**

These have not been accounted for in the act either. Besides, even these are not dependent on equipment or qualification of paramedical staff. Currently, the patient satisfaction appears to be more important than qualifications. In U.K. the G.M.C. has listed the duties of a doctor as follows:

1. Be polite and considerate
2. Respect patient's dignity and privacy
3. Listen to patient's views
4. Give patient information
5. Respect their right
6. Keep your professional knowledge up to date.

Thus professional adequacy, in other words the qualification, comes a poor 6th after the 5 other duties to satisfy a patient.

The impact

To implement this new foreign concept of health care, state governments will have to borrow money from World Bank. The Karnataka Government has already decided to borrow about 570 crores of rupees for it. That is where, in liberalisation, the World Bank plays its cunning role; it first creates borrowers with bait, e.g. idea that managed health care is better. It is said that World Bank always keeps a hook in its bait. The hook is that, the World Bank will dictate the way the programme is implemented. You may read that as "you are free to do what ever you want to do as long as it is what we told you". Its usual condition is that "the state governments play an active role in creating an environment for greater private participation in the health sector". Private participation invariably means involvement of foreign health care industries; like insurance and equipment companies. Once in its grip, World Bank behaves like our moneylenders. Borrowers invariably end up losing their lands and property. **Christian Aid estimates that Africa has lost \$272 Billion in the last 20 years from being forced to promote liberalisation, for receiving World Bank loans.** (Mark Curtis, in The Hindu 24-8-05). **Uganda could get only US\$ 2 million for a property that was worth US\$500 million, to qualify to get World Bank funding** (George Monbiot, in The Hindu 15-6-05). We in India may lose more than our gains, if there are any gains at all.

Therefore, we in ARSI do not believe in such standardisation, and we believe that if the act has to be enacted at all the rural hospitals and tribal hospitals must be excluded from the act. Because, the act and such standardisation will only make health care costlier to the poor without making any significant difference in quality. **Needs of the majority must have a priority over those of a minority, that is the rich.**

We the Indians have always prayed for happiness of all; our own emblem says, "let every one be happy". We have been praying like that over 5000 years and we continue to pray like that even now because we know that many are still not happy. They say that India is shining. What is the use if India shines, when its majority is not happy? Great industrialist, late Shri J.R.D.Tata after he was honoured with the Bharata Ratna award in 1992 said, and I quote:

"An American economist predicts that India will be an economic superpower in the next (21st) century. I do not want India to be an economic super power; I want India to be a happy country." I strongly support that view. I wish every one to be happy by our own standards of happiness. That, we need not always follow western standards, is nicely shown by Dr. Brahma Reddy who introduced ordinary mosquito net as a good alternative to the imported costly proline mesh, for hernia repairs.

Happy news for all of us is that National Board of Examinations has decided to train MBBS doctors in to Rural Surgery. That has been our wish for a long time. As early as 1996 late Dr. B. Ramamurthy, past president of N.B.E. had written to the, then president of N.B.E. to take up rural surgery as a Board's programme. We are happy that our dreams are finally materialising. Interesting aspect of this training is that candidates will be trained in rural hospitals and not in the High-Tec teaching hospitals. Our members will have to help this programme in this area. I sincerely hope that India will soon have a strong force of rural surgeons to care for rural folk. ARSI thanks Dr. Shyamprasad, Dr. Rajshekharan, Dr. Sood, and others in N.B.E, and our own Dr. Toor for their initiative in this.

Over the years, I have come to realise that even developed countries have a section of people who do not get adequate medical and surgical care. Those countries too have started focussing on the needs of rural surgeons. So now we have decided to bring all or as many as possible, groups of rural surgeons from around the world under one banner, The **International Federation of Rural Surgeons**. This I believe is an idea that was initiated by Dr. Thomas Moch of German Society for Tropical Surgery and Dr. J.K.Banerjee, our current vice president. I congratulate them both and sincerely hope that this federation grows fast and strong so that appropriate health care is available in all corners the world. Then our prayer will have been truly answered.

I like to thank the management of the R.D.Gardi Medical College and in particular Prof. V.K. Mehta for organising and hosting this nice conference here in this fantastic city of Ujjain whose early history is lost in antiquity. This city is named in Buddhist literature of 6th century BC. Wars have been fought here and the city has been looted and vandalised again and again by foreign invaders. Famous and proverbial king Vikramaditya, poet king Bhartrahari and emperor Ashoka had ruled it. Famous Sanskrit poet Kalidasa, one of the nine gems of king's court wrote the monumental classic poem, his masterpiece, Meghadoota in this city. From 4th century B.C Ujjain was the Greenwich of India, long before Greenwich of U.K. was established. We are proud to have our conference in this historic city. I welcome all the delegates and especially all those who have come from far away countries. I sincerely hope that you all will benefit from the deliberations and meetings.

Skin stretching for closure of simple Heel ulcers in Leprosy affected feet

Dr. Govind Narain Malaviya

(Presented in 1st international conference of Rural Surgery held at Ujjain, Sept2005)

Abstract

[Most of heel ulcers in leprosy are secondary to fissures on postero-medial aspect of heel during winter months. During summer, proximal part (vertical part) of these fissures heals and distal part (over heel pad) persists as ulcer probably because of continued trauma in day-to-day activities. In majority of the cases, depth of these ulcers is only up to dermis or to the fat pad in its superficial part. An appropriate skin closure can heal these ulcers since padding is intact.

Stretching of skin was planned to mobilize it for a tension free closure because the skin is adherent to deeper tissues by fibrous septae. Available data suggests that simple ulcers can be made to heal with a good scar by skin stretching and suture. It is worth separating cases in which ulcer is not extending deep into fat pad and calcaneum, by radiography of the foot.]

Posterior tibial nerve involvement is common in leprosy and is second to the ulnar nerve in frequency. The posterior tibial nerve damage can occur in the main trunk of one/more of its branches and patient may have complete anesthesia of sole or only in the forefoot, part of forefoot or heel or in different combinations. This plantar anesthesia if ignored can result in ulcers, which at times refuse to heal because of recurrent trauma in day to day activities. Wide variety of methods for treatment is available to manage plantar ulcers¹⁻⁶, a consequence to anesthesia of plantar skin, the choice of appropriate method dependent on the condition of wound and type of ulcer.

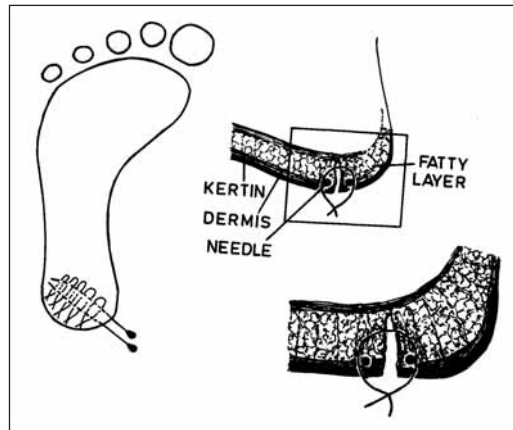


Figure 1

The published post-operative results emphasize more on the time of wound healing rather than the recurrences and ulcer free period. Long-term results of these procedures have not been reported, the maximum follow-up being a year or two. At times these ulcer cases are over treated in the sense that a complicated technique is performed where as simple procedure can make them heal thereby reducing the morbidity and scarring. The resultant scars with the previous technique are often either too wide or wedge shaped and gives way in due course of time.

The options available to treat plantar ulcers can help obtain better results but are far being ideal. This is true for heel ulcers also, more so, because heel has a special padding of adipose tissue enclosed in small compartments made of fibrous septae. An ulcer over heel destroys these tissues and when it heals what is left is a brittle fibrous plug, which breaks down frequently. An ideal method of treatment should provide a full thickness skin cover and a good

padding almost like natural heel pad and sensations.

While examining patients with heel ulcers, it was observed that many of these ulcers begin as fissures on the postero- medial aspect of heel during winter months. With the arrival of summer and sweating, proximal part (vertical part) of these fissures heals, distal part (over heel pad) persisting as ulcers probably because of continued trauma due to walking for day-to-day activities.

Radiographs of several of these patients revealed that depth of these ulcers was only up to dermis or at best up to the fat pad in its superficial part. As the padding was intact it seemed logical that an appropriate skin closure can heal these ulcers. Since the planter skin is adherent to deeper tissues by fibrous septae, stretching of skin was planned so as to mobilize it for a tension free closure. The purpose of this work is to report the long-term outcomes of closure of simple heel ulcers without calcaneal involvement, utilizing viscoelastic properties of the skin by stretching.

Surgical Technique

A thorough debridement of the ulcer and curetting of the sinus track was done. The wound was irrigated well to wash off debris and dressed with Eusol for five to seven days to clear off discharge. Meanwhile the patient was prescribed oral antibiotics and metronidazole in suitable doses. Once the wound was ready for suturing, wound edges were freshened by excising a 2-mm.-strip of skin from wound margins and wound edges were undermined for 5mm on either side. Two 21 SWG needles were inserted through the dermis along wound margins (opposite to each other at distance of 5mm from the wound margin) on either side. Lumber puncture needles can also be used. Commercially available nylon thread was used as suture. The sutures were

passed in such a way that they lie against the inner surface of needles, which were to distribute tension all along the wound margins (Figure-1). These interrupted sutures were dragged and held with hemostats for about 4 to 5 minutes and then 1 minute relaxation was given to allow perfusion. The drag-relaxation cycle was repeated over a period of 30 minutes. Finally sutures were tied, the wound was dressed with moist gauze soaked in 1 % cetrimide solution and an elastic bandage was applied. The foot was kept elevated on Bohler iron stand. First dressing change was done after 24 hours. The needles were removed after 2 weeks. The sutures were removed after 3 weeks and partial weight bearing was allowed. The patients were discharged after about 4 weeks when the wound was completely dry. They were advised about routine foot care, daily hydro-oleo treatment and to use protective footwear.

Observations:

17 feet in 11 patients (10 males: one female) were operated and followed-up. Their age varied from 12 to 54 years (mean 25 years). The sole was completely anesthetic in all of them. Posterior tibial artery pulsations were normal in all. Clinical diabetes mellitus was ruled out while selecting the cases for surgery. The problem started as fissure at 14 sites and as blister leading to sinus formation in other 3. Six cases had ulcer on both heels. The ulcer diameter was 8 to 15mm. (mean 11mm).

Of the 17 feet, 8 could be re-examined after 36 months or more and it was encouraging to note that all were ulcer free. The suture site did not show hyper keratosis and scar merged well into surrounding skin after one year. Of these, two cases had ulcer in both heels.

Most of the minor recurrences were usually seen in the first 6 months after surgery. One

case (both feet) had minor recurrences in the form cracking of scar and informed that the cracking of scar was recent because of the season (during winter month). Major recurrences were seen in 2 feet (one case) who was on steroid therapy and in them ulcer persisted even after 30 months post-operatively. Sensory recovery was seen in two cases - in one after 6 months and another between 18 and 24 months after ulcer surgery.

Discussion:

The applications of the principle of gaining tissue by recruitment using tangentially directed force is in use for years. The skin can be stretched rapidly with little tendency to recoil if the tension is maintained. This phenomenon, called as "Mechanical Creep", is explained by the parallel alignment of the dermal collagen fibers, together with progressive displacement from the dermal network of mucopolysaccharide ground substance during stretch without impairing the long-term viability of skin. The speed with which skin stretches depends upon its quality, fibrotic skin taking longer. This biomechanical property of the skin - mechanical creep and stress relaxation allows skin to stretch intra-operative beyond its inherent extensibility in a short period of time⁷. As a result of skin stretching, wound-closing tension decreases allowing primary closure of larger defects. The technique helps to eliminate donor defects and associated morbidity and enables closure with a good scar.

Some of the skin stretching techniques attempt to gain this creep intra-operatively where as others allow longer time to stretch and then close the wound. Most of these techniques try to apply a "constant" tension across the skin edges. With craze for tissue expansion, interest in a better

utilization of biomechanical (visco-elastic) properties of skin has increased. Many modifications in cutaneous tension techniques have been able to generate tissue expansion depending largely on the orientation of collagen fibers.⁸⁻⁹ Skin stretching has been used by several workers in different forms using simple needles¹¹⁻¹³ to patented devices like "Sure closure"¹⁴.

It is our understanding that skin in heel is adherent to the deeper subcutaneous tissues by fibrous septae. When skin margins are being brought together, subcutaneous tissue is also brought into apposition so that no dead space is left behind. Skin stretching assists in closing the wound with a full thickness, healthy durable skin and may avoid the need of skin transfer by other methods. Excessive undermining of skin margins is avoided because this can damage skin viability during stretching process. Insertion of intradermal pin is also difficult in undermined skin margins. With needle, the stretching is expected to be uniform all along the length of wound margin. The size of ulcer in heel is important for success of the procedure. The procedure is not intended for big wounds (> 15mm wide).

The suture line did not show hyperkeratosis and scar merged well into the surrounding skin after one year. Ulcer recurrences were of minor nature and most of them were seen within 6 months after surgery. The most appealing part of this method was the ease of closure without specialized equipments. The technique eliminates donor defects, associated morbidity and enables closure with a good scar in heel ulcers which do not have calcaneal involvement. It is therefore worth identifying the cases that do not have calcaneal involvement by radiography so that they can be treated by simpler measures.

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(Till very recently, the most common techniques for treating leprosy affected heel ulcers were complex surgical procedures. Though data available shows effective healing in the initial phases, there is no adequate data to suggest the success of these complex techniques in controlling recurrence of the ulcers.

For a country like India that has almost 60% of the world's leprosy population, path breaking surgical technique such as the one adopted by the author, should not only be encouraged but also implemented extensively due to the ease of the procedure and high success rates. -Editor)

Ascaris Lumbricoides: *A Nidus for urinary bladder stone*

(A case report)

R.K. Garyali, T.R. Gupta, R.K.Nagar

(A case report of urinary bladder stone formed over a dead Ascaris lumbricoides is presented.)

Case report

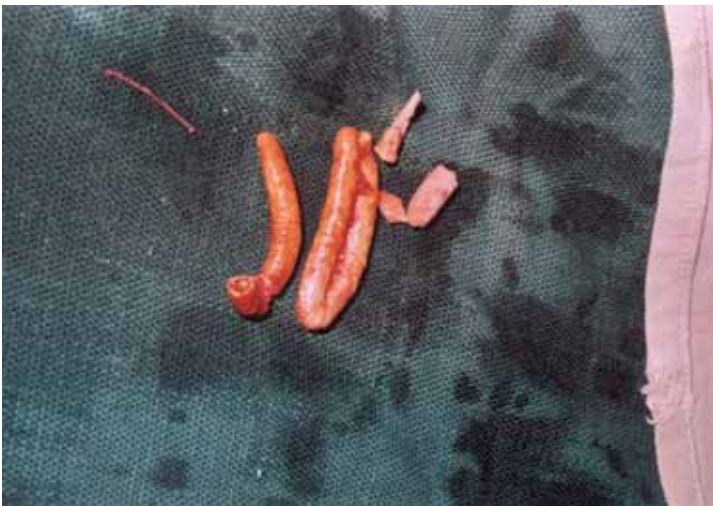
A thirty-five years old female patient presented to the surgical out-patient department with symptoms of burning micturition, frequency and urgency. Her routine urine Examination showed 60-70 pus cells with 8-10 RBC/HPF.

Plain X-ray of KUB region showed an S shaped stone. Ultra sonography of abdomen confirmed the diagnosis. Suprabubic cystostomy was done. An S shaped bladder stone removed. On breaking the stone an elongated thin cord like material was removed which resembled a piece of thread. The cord like material was sent for HP study, which confirmed it as *Ascaris lumbricoides*.

Discussion

Ascaris lumbricoides infestation is seen world wide in about 1.5 billion people especially in Asia, Africa, and Central America. Poor socio-economic status and poor hygiene is associated with its spread. Man is infected by oro-fecal route. Eggs hatch in the intestine and larvae pierce the wall of intestine; it reaches the right side of the heart and lung via mesenteric veins and lymph channels. Worms develop in the alveoli and ascend the tracheo - bronchial tree and lodge in the intestine after going down the esophagus.

Ascaris has been seen in lungs, hepatic and biliary channels and even reported from lachrymal ducts but presence of *Ascaris* in urinary bladder seems very rare.



Bladder stone formed over a dead *Ascaris*

In the present case the adult worm seems to have ascended per urethra into the urinary bladder and died. The dead worm formed the nidus for the bladder stone.

Although many kinds of foreign bodies have been reported in the bladder forming a nidus for stone like wire, needles, catheter tips, catheter balloons, blades, hair pins but a dead worm as a nidus for bladder stone seems very rare.

Address for correspondence: Department of Surgery, Government Hospital, Udhampur J&K

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(Renal and bladder A. lumbricoides^{1, 2}. and presence of adult A lumbricoides worms outside the gastrointestinal tract³ has been reported in the literature. The development of larvae into mature adult worms within the genitourinary system is not considered possible, neither in the present case there was any evidence of a fistula between the intestine and the urinary system. Therefore, the author's explanation of probable entrance of the mature worm into the bladder through the urethra is justified. -Editor)

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*Prof. DR. George Mathew, HOD, Upper GI surgery
CMC, Vellore,*

Contact Person: *Dr. Gnanaraj, MS, Mch, Burrows Memorial Christian Hospital,
Alipur, PO- Banskandi, Dt. Cachar 788101*

E mail: jgnanaraj@gmail.com, jgnaraj@cha-health.org

Ph. 09435171477

Rupture of Gravid Uterus in secondary care hospital

Dr. Uttam Mahapatra

(Presented in 1st international conference of Rural Surgery held at Ujjain, Sept2005)

Key words: Uterus, Rupture, Obstructed labour

Introduction

Rupture of uterus is giving way of gravid uterus. This commonly occurs during labour, less frequently in late pregnancy and rarely in first half of pregnancy. Rupture of the uterus is still a very common obstetrics emergency in developing countries and severe injury to urinary bladder is seen sporadically. All need surgical intervention. Most cases are managed by repair of the uterus and few need hysterectomy.

Material and Methods

Thirty patients operated by the author at Jiwan Jyoti Christian hospital, Robertsganj, during a three-year period from April 2002 to March 2005, were analyzed in this retrospective study. Each case record was analyzed in detail with emphasis on age, parity, antenatal check up, per vaginum examination by Dai, no. of oxytocin injections, h/o previous LSCS, Hb level, blood transfusions fetus status, type of rupture, complications, duration of hospital stay and mortality.

Results

The majority of the patients in the review were in the age group of 26 to 30 years (table 1). The mean patients' age was 30 years.

Table 1: Age Distribution

Age (in years)	No. of cases
21-25	7
26-30	14
31-35	7
36-40	1
> 40	1

Table2: Parity Distribution

Parity	No. of cases
1-2	6
3-5	15
6-9	9

There were 15 cases with parity of 3-5 children. All except one were unbooked cases. All of them had trial of labour at home. 21 cases were exposed to vaginal examination by the local Dai, out of which 12 had 3-6 repeated examinations. 17 (56.7%) cases had injection of oxytocin for induction/augmentation at home. One case had 8 oxytocin injections. Out of 30 cases 8 cases had previous LSCS and one had repeat LSCS. Hemoglobin was less than 10gm% in 18 patients, lowest being 4.9gm%. Blood transfusion (1-2 bottles) was needed in 15 patients and one patient required 7 bottles of blood transfusion. Perinatal losses were seen in all except in one case.

Table 3: Type of uterine rupture

Lateral wall		19
Transverse	Anterior wall	13
	Post wall	2
	Ant. & Post. Wall	3
	Extended to portio vaginalis of cx.	3

Table 4: Maternal Complications

Wound infection	2
Peritonitis and septicemia	1
VVF	1
Post partum psychosis	1

The commonest type of uterine rupture was a rent in the lateral wall (19 cases). One case had additional urinary bladder rupture due to instrumental manipulation by a village doctor. The uterine rents in all cases were repaired in two layers and one needed additional bladder repair. Maternal complications were wound sepsis (6.7%), peritonitis and septicemia (3.3%), post partum Psychosis (3.3%) vesicovaginal fistula (3.3%). 10% of cases required prolonged hospital stay of 16-31 days. There was no maternal mortality. However fetal mortality was 96.7%.

Discussion

Rupture of uterus remained a challenge to the obstetricians. It is a grave life risk both to the mother and fetus in most situations. Most of the cases being unbooked were mismanaged before they reached to the hospital. Injudicious administration of oxytocin, late

referral and delay in reaching the hospital contributed to their moribund condition. In all cases the uterus could be salvaged by repairing the rent. There was no need to do hysterectomy. Few cases can be operated without blood transfusion. As the present study shows 43% cases didn't need blood transfusion. All high-risk pregnant women should be referred to secondary care hospital. Operative vaginal deliveries (internal podalic version, forceps delivery etc) are to be performed by skilled person in hospital.

Conclusion

Early detection of threatened rupture uterus, early referral and quick transport to secondary care hospital is essential, to decrease the morbidity and mortality, therefore it is suggested that good, affordable antenatal and delivery care will decrease the incidence of uterine and its complications.

Address for correspondence: Jiwan Jyoti Christian Hospital, PO Roberts Ganj, Sonbhadra UP-231216

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(In recent time improved results have been noted with conservative repair of the uterus in case of rupture. However that may not be possible for all types of rupture. It is interesting to note that even with such complex situations the author was able to repair all types of rupture and conserve the uterus without resorting to hysterectomy. An incredible feat indeed! The present series once again proves the need and importance of antenatal registration, pre-natal supervision and proper selection of cases for vaginal delivery, early hospital admission and close supervision in labour. A detail analysis of the mode of presentation and cause of rupture like CPD, mal presentation etc. would have made this article more useful- Editor)

Health Hazards from Banned & bannable Pesticides: Concerns of a rural doctor

*Dr. A. K. Banerjee, **

*Dr. Mahdu Meeta, ***

Bhopal, December 3, 1984 early morning. A violent explosion in Union Carbide pesticide plant released about 40,000 tones of methyl isocyanate. 2500 people were killed. 10000 seriously injured and 20000 partially disabled. 150000 are still suffering. WHO estimates that about 3 million people are affected annually by pesticide poisoning of which 20000 die every year. Massive aerial spray of the herbicide "Agent Orange", done during Vietnam War 30 years ago, still results in an increased incidence of primary liver cancer. A recent CSE report of high pesticide residues in bottled water is yet another indicator of this menace.

Pesticide is a toxic agrochemical used for preventing or destroying any pest, weed or ectoparasite. India is the 2nd largest producer of basic pesticide in Asia. 75% of these pesticides are insecticides like organochlorine, organophosphorus, pyrethrine or carbamate. 10% are fungicides and 7% herbicides. Others are rodenticides and growth promoters.

The per hectare pesticide consumption in India (570 gm/ha) is lower than Taiwan (17000 gm/ha), Japan (12000 gm/ha) or USA (2500 gm/ha). Still, the adverse effects are higher. This is because of indiscriminate, injudicious use without adequate safety measures resulting in body contact, food contamination, higher residual connection, drift from target site and biological amplification in the food chain. Pesticides do not know when to stop killing. Thus, today it becomes an ecological, social, economical and health hazard.

Many pesticides (like aldrin, chlordane, DDT, diazinon, dieldrin, heptachlor, lindane, simazine and phosphamidone) which are banned/ severely restricted in USA, Europe or developed nations are still allowed to be liberally used in India. Some pesticides like DDT are non-biodegradable and ubiquitous. They are released in blood during stress starvation or pregnancy. Dairy products are mostly contaminated due to their high fat content. Organophosphorus and carbamate disturb the peripheral nervous system, pyrethroids are irritant to eyes, skin and respiratory tract and paraquat may cause lung or kidney failure.

Pesticides get into our bodies through skin (biggest route), breathing, swallowing or accidental exposure to eyes. If the skin is wet, cut or inflamed, pesticide entry is faster and larger. The genital area absorbs it most followed by face, neck, back of hand, armpits and lower forearm. Even the natural underground water is contaminated at some places.

Children are more exposed to pesticide poisoning due to contaminated breast milk, higher skin surface, mere delicate skin and higher respiratory rate. Their immature liver, kidneys and lungs cannot excrete these poisons. In Delhi, the average DDT concentration in breast milk is 12 times of the acceptable limit. In Ludhiana and Faridkot, the mean levels of DDT in breast milk is 17.18 and 26.66 parts per million respectively. A comparative study between high areas of Bhatinda (17 liters/capita/annum) and low use areas of Ropar (0.5 liters/ capita/ annum) depicted significant difference in

mental and physical abilities amongst children (28.2% and 52.2%).

Pesticide exposure in women may cause early abortion, stillbirth, infertility, premature delivery and fetal neural tube defects. In males, it cause sterility, cancer of prostate or testis, undescended testis, hypospadias etc. It may also cause allergy, asthma, psychosis, neuropathy or cerebral dysfunctions, e.g., sweating, blurred vision, nausea, salivation, insomnia, dizziness and headache. Endosulphan may cause mental retardation too. A CSE study in Kasargarh district of North Kerala where massive aerial spray of Endosulphan is done on cashew trees confirmed this observation.

The high pesticide residue in food is an economic threat too. The WTO agreement warrants that agriculture produce should conform to certain specified standards wherein pesticide residue is a critical determinant of global acceptability.

The green revolution in India was centered on high-yield seeds, fertilizers, farm mechanization, irrigation and pesticides. However, the time has come to disseminate the knowledge about safe and rational use of pesticides, promote biological alternatives and formulate a farmer-ecological approach of Integrated Pest Management. Avoid banned and bannable pesticides. Save the health of mankind.

Address for correspondence: Bengal Institute of Health Sciences, Talwandi Rd., Raikot-141109, Punjab
**Director & Surgeon, **Director and Gynaecologist*

(While pesticides can serve a purpose in protecting human health by preventing the spread of diseases, we must use them judiciously and in a way that does not harm future generations. Being a rural surgeon, authors' concern about pesticide exposure among agricultural workers and children are justified. Exposures among agricultural workers lead to hundred and thousand of physician-diagnosed pesticide poisonings nationwide each year among such workers. Especially at risk are migrant farm workers, who often receive little or no pesticide safety training.

Children can have greater exposures to environmental toxins than adults because pound for pound of body weight, children drink more water, eat more food and breathe more air than adults. The study found that students and school employees in rural areas become acutely ill because of pesticide exposure in schools. While most cases were associated with pesticides applied within school grounds and environmental toxin out of injudicious use of pesticide in rural India, some were caused by drift from nearby farms.

The overall harm to human health caused annually by contact with pesticides is unknown. However, exposure at high levels has been linked to breathing problems, gastrointestinal illness, nervous system damage and death. -Editor)

Visit ARSI website www.arsi-india.org

Abdominal cocoon

Dr. O.P. Narayan,
Dr. (Mrs.) Meena Narayan
Dr. S. Prakash

*(Presented in 1st international conference of
Rural Surgery held at Ujjain, Sept2005)*

Abstract

A female patient of 18 years old presented with colicky abdominal pain off and on for 8 months, scanty menses for 8 months, vomiting and distension abdomen for 4 months and lump abdomen for 2 months. Initial work up clinical examination U/S and hormonal assay were normal. Repeat U/S after some time showed a left sided TO mass. Exploration findings revealed ileum was encased in thick membrane forming mobile lump of 10x10cm size. The lump was separated from uterus and appendages, mesocolon and sigmoid colon. Adherent Intestinal loops (ileum) with flimsy adhesion among each other encased in fibrous sac were dissected. A diagnosis of abdominal cocoon was made. Postoperative recovery was uneventful. H.P. of fibrous wall did not show any evidence of TB. Because of high level of ESR and positive Mx. test the patient was put on ATT.

Introduction

Intra-abdominal adhesion is very common finding following inflammation of peritoneal cavity or after abdominal surgery. In this case report a peculiar form of intra-abdominal fibrosis and adhesion in which ileum was encased in thick fibrous membrane forming rounded lump called abdominal cocoon is presented. Histologically this membrane was composed of fibrous tissue with few non-specific inflammatory cells.

Case Report

An 18 yrs old female presented to us in September 04 with H/O

1. Colicky pain abdomen off & on, relieved by medication, for 8 months.
2. Irregular menstruation for 8 months.

3. Vomiting associated with pain for 4 months.
4. Gradually increasing distention of abdomen, distension increasing during pain for 4 months.
5. Lump abdomen for 2 months.

She had normal appetite and bowel habit. There was no H/O of fever. Her menarche was at 13 years of age. No h/o Practolol.

Earlier she also reported to us with pain abdomen and amenorrhea in March 2004. Her U/s and clinical examination at that time and in April 2004 did not reveal anything. Hormonal assay was within normal limit. She had relief with symptomatic treatment.

On clinical examination a non-tender suprapubic mobile lump 4x6 cm size was detected. P/V examination revealed a small lump, felt through left fornix. Routine investigations were within normal range. U/S examination also gave the impression of left sided TO mass. Provisional diagnosis of Left TO Mass was made.

Management

Abdomen opened by lower mid line incision. Small bowel was surrounded by thick membrane forming rounded mass of 10cmX10cm size (larger than cricket ball). Uterus, ovary, adnexa, Sigmoid colon & mesocolon were normal & separate from the mass. Dissection started with separating the distal most adherent loop of intestine. It came out easily leaving a covering sac (roof) of thick fibrous tissue. Rest of the intestinal loops inside were adherent to each other by flimsy adhesion and to fibrous sac on anti-mesenteric border. By blunt and sharp dissection all loops were

separated without injuring serosal layer. Fibrous covering was peeled off in piece meal & sent for histopathology examination. The report showed fibrous tissue with few inflammatory cells. Appendicectomy was also done.

Because of persistently high ESR and positive Mx test even after immediate post-operative period the patient was put on ATT through RNTC programme (Category III, R450x2, P750x2, H300x2), even though her chest X ray was normal. The patient became symptom free after the usual course of treatment. Her menses became regular but scanty.

Discussion

Abdominal cocoon is a rare cause of intestinal obstruction in adolescent girls of tropical and subtropical areas. It usually presents with acute/chronic intestinal obstruction or abdominal mass and is caused by encasement of small intestine in fibrous sac. Similar condition was first reported by Owtschinnikow way back in 1907 and called it peritonitis chronica fibrosa encapsulata. The term "abdominal cocoon" was first coined in 1978 by Foo et al. in Singapore

Till 2004, a total of 50 such cases were reported in the literature. In 15 of them the causes were attributed to beta-blocker use (practolol), peritoneal dialysis, liver transplant or tuberculosis.

35 cases were of primary abdominal cocoon of which 10 cases were reported from India alone and 2 cases from Pakistan.

Aetiology of primary abdominal cocoon is unknown. However, possible main factors for cocoon formation are:

1. Peritonitis.
2. Blood in peritoneal cavity - from retrograde menstruation or hemorrhagic peritonitis.
3. Nature of triggering agent for initial peritonitis or timing of two superimposed peritonitis reactions.

We believe that the present case is a case of idiopathic abdominal cocoon as reported by Foo et al in 1978. Retrograde menstruation associated with ascending infection of mycobacterium tuberculosis might have caused cocoon formation.

Conclusion

Abdominal cocoon is a rare form of intra-abdominal fibrosis & adhesion in which loop of small bowel is encased by thick fibrous membrane. It is usually seen in teenaged girls and presents with pain and lump in the abdomen. Pre.op diagnosis is difficult but not impossible with CT and U/S. The condition is diagnosed at laparotomy & treatment is surgical release of entrapped bowel. Post op. result is good.

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Report of 1st International conference of Rural Surgery held at Ujjain

The 1st international conference of Rural Surgery was held from 22nd-25th of September, 2005 at the RD Gardi Medical College in Ujjain. The event was clubbed with the 13th National conference of ARSI and the 8th mid term conference of ASRI. Key participants in this forum included the German Society of Tropical Surgery (DTC), Association of surgeons of East Africa (ASEA), The Dutch working group of Tropical Surgery and The Mithoefer center for Rural Surgery.

A pre-conference workshop convened by Dr. J K Banerjee was organized on the 21st on "Standardization of Rural Hospitals' and "Training program for future Rural Surgeons".

During the main event, varied topics relevant to rural surgery were discussed from different disciplines of surgery including general surgery, onco-surgery, orthopedics, ophthalmology, otolaryngology, obs&gynae, cardiovascular, thoracic surgery and Urology in the form of short paper presentations, guest lectures, video demonstration and seminar. Subjects of surgical interest from medicine and anesthesia were also discussed. International delegates

from USA, Germany, Holland, Kenya, Tanzania and Uganda took active part in this conference and presented their papers.

Dr. Brahmma Reddy from Andhra Pradesh was honored with the prestigious "Antia Finseth award" for his innovative work in using ordinary nylon mosquito net for hernia repair.

Dr. J.K.Banerjee was unanimously elected as the new president of Association of Rural Surgeons of India (ARSI) and took charge from the outgoing president Dr. R.D.Prabhu.

International federation of Rural Surgery was launched in this conference with Dr. R.D. Prabhu from India as the president and Dr. Thomas Moch from Germany as the Hon. Secretary of the federation.

Prof. V.K.Mehta, HOD, Dept of surgery, R.D.Gardi Medical College was the organizing secretary of this unique event.

(For detail of president's address by DR. R.D.Prabhu, see page no. 2)

Greetings from Dr.Fred Finseth for Ujjain Conference

"Dear Prabhu

We wish you, and all the surgeons, a successful and collegial ARSI Congress in Ujjain. We wish all success for the launch of the International Rural Surgeons. I will be there in spirit and energy. I hope the Antia-Finseth award inspires a contribution and ideas to the meeting.

Let me know how it goes. Give my best regards to everyone.

Next year, yes.

Yours, Fred and Christine Finseth"

From the Pages of a Rural Surgeon's diary....

Incision of an abscess

Dr. R. D. Prabhu

It was the fifth decade of last century; I was small then. Our neighbour had 3-4 year old boy who was ill; he had an abscess over his knee. Now I know it was a prepatellar bursa abscess. Doctor who was a licentiate from College of Physicians and Surgeons (LCPS) was also the neighbour of the boy. Obviously the abscess needed a surgeon's help. But the whole district had only one surgeon and that too located in the far district head quarters hospital. Besides, the boy's family could not afford the trip and the treatment anyway. So the local doctor had to do whatever that was needed to be done.

It was before the days of antibiotics; probably some sulphonamide might have been used but abscess became tense and boy very ill. One day, the doctor boiled one of his old fashioned knives, a bistuary. The blade, which was the sharpened end of the handle, was curved on edge towards the cutting side and had a very sharp tip. There was no anaesthetist at all, nor Ethyl Chloride spray. The only other accessories were a spirit bottle, tincture of Benzoin, iodoform, cotton swabs wet with boiling water, dry cotton and bandage.

In the drawing room of the boy's home, one of his two sisters who had a strong

heart, sat cross legged on a mat holding the boy sitting on her legs facing forwards so that his knees were flexed in front of her (like sitting in a chair) and his hands and body were held firmly against her chest. I and many other neighbours crowded around this scene, awed and wide-eyed; some others were peeping through the windows. The doctor sat cross-legged on the floor in front of her. There was hushed silence all around. He cleaned the skin over the abscess with spirit and then in a flash made a bold incision over the abscess. That was it. The boy screamed, the pus poured out and filled the plate placed under the feet. The other sister of the boy fainted and collapsed to the floor. All others 'oohed' and 'aahed'. Soon the abscess was empty. Doctor placed some dressing over the wound and bandaged the knee. The surgery was over.

Soon the wound healed; I do not think the doctor got paid for the service. It was one more neighbourly service of a general practitioner. The boy is now an elderly man and has nothing to show of that episode except for a scar perhaps.

That was the first 'surgery' that I saw in my life.



(An Ideal Gift for Doctor and Friends)



The Hills of Angheri *by Kavery Nambisan*

The hills stand guarding the village of Angheri where twelve-year-old Nalli has a dream. She dreams that when she grows up she will be a doctor and work among her people. Her old-fashioned family has other plans. But Nalli follows her destiny - and the path blazed by her childhood hero, Jai. She goes to Madras to study medicine and then to England to become a surgeon. On the way, she learns to keep her voice down and sit with her knees together; she forgets to wash her hands after cutting up cadavers at dissection; she watches as the panorama of human woes unrolls daily before her eyes. She encounters people who test her faith in the values her father taught her to live by, and in her own skills as a surgeon. But all the time she is haunted by a dream....

Sensitive and humorous, graceful and invariably engaging, *The Hills of Angheri* is a captivating story of a young woman coming to terms with the untidiness of life and her profession. *The story deals with the pain, thrills and frustrations of a doctor's life. All medical and surgical scenes in the book are from real life.*

About the author

Kavery Nambisan is a practising surgeon. She has written several award-winning books for children, and four novels:

The Truth (almost) about Bharat, The Scent of Pepper, Mango-Coloured Fish and On Wings of Butterflies.

Praise for Kavery Nambisan

'Nambisan has a gift that cannot come with practice - the art of empathising with her characters... they stay with you long after you've finished the book.' - *Business Standard*

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