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Editorial Board

Dr. Varghese Philip
Dr. R. R. Tongaonkar
Dr. Samuel RG Finlayson
Dr. Pascience Kibatala

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

ARSI Website:
www.arsi-india.org

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*You will never be forgotten and always remain in
our thoughts, in our heart.*

The call was too sudden to say good bye
but the memories of you will never die
Close in our hearts you will always stay
Loved and remembered every day

Members of ARSI express deep grief in the passing away of

Dr. N. H. Antia

(26th June, 2007 at 5.30 PM),

a stalwart, friend, philosopher and guide of ARSI and
"rural surgery" movement. We share our heartfelt condolence
to all his family members. May the Almighty bless him with
eternal peace in heaven.

The National Board of Examinations Starts the Course of DNB in Rural Surgery

Dr. J. K. Banerjee*

The course has been started from January 2007. Ten students in the first batch. We are expecting more students to join from next year. The entry point is after MBBS and one year's experience. Admission will be by interview only, where the aptitude of the student will be tested by the institution. There is no primary examination and training will be in multiple disciplines. The course will run for three years of which two years will be in a bigger institution where the student will get the opportunity to learn multidisciplinary surgical procedures, and one year in a rural hospital selected by the National Board for the purpose. This is being started by the National Board under the National Rural Health Mission.

We have thus fulfilled a long awaited dream of ours that is a post graduate course in rural surgery. This is not recognised by the Medical council of India as a postgraduate degree. But since it is instituted by the National Board of Examinations, which is under the Central ministry of Health and family Welfare, and is under the National Rural Health Mission it has the government's blessings. And thus, if the doctor's workplace is in a rural or semi urban setting, it will certainly give him some support in case he is faced with a legal problem.

We are planning to have some special sessions in our ARSI's annual conferences for the benefit of these students and also to give them an opportunity to interact with the successful rural surgeons already in practice.

In our country today, 80% of the medical problems are taken care of in the private sector, whether rural or urban. The rural areas have immense scope for the young entrepreneur "rural surgeon" to set up a practice on his own, beginning with a small set up and gradually expanding into a small hospital of say 30 to 50 beds. Once he takes the first step, it has been the experience of several successful rural surgeons that money, and love and respect of the community follow him. Of course, there will have to be an initial period of struggle. But our present experience shows that the world is hungry to learn from us the art of reaching out to poorer people in a cost effective way and with limited resources, providing appropriate care which is both scientific and acceptable to the community.

The course lays stress on providing skills in general surgery, obstetrics and gynaecology, orthopaedics, anaesthesia, team building, and setting up and managing a small hospital on his own. That is the basic principles of "essential surgical care" as understood in the jargon of the WHO. It does not provide training in high tech surgery. But this the surgeon can always pick up after he has established a reasonable practice. There are many such courses across the country to teach these by our professors and the health care industry together, in the form of continuing education. Once the hands are set and the team is built in managing routine surgery, he can bring in these procedures in a graded way to his community.

We welcome the younger generation to join our band by doing this postgraduate course and serve both himself and the nation through the practice of "Rural Surgery". Albeit it will always be a good practice to join an already established rural hospital for a few years, either voluntary or private to get some practical experience before starting his own practice.

Lastly, our grateful thanks to the National Board for taking this bold step. Special thanks to Prof. Rajasekaran, the president, Prof. Shyamprasad, the vice president and Prof. Ajay Sood, the Executive director without whose initiative, this would not have become a reality. We will have to continue supporting this move with all our might. Now the onus is on the older generation like us to create role models for the younger generations and train them up with all our affection and love thus creating the future generation of rural surgeons of India.

* *President, ARSI*

Address for correspondence: 46/10 Canal Road Kishanpur, Dehradun – 248009, Email: dali_f23@yahoo.com

Obituary

ARSI is deeply saddened to hear the news about the tragic and untimely death of Dr. Krishna C. Mahapatra due to an accident on 28th April 2007, during his tour to Malaysia. Born on 9th May 1943, Dr. Mahapatra was graduated from R.G.Kar Medical College, Kolkata and did his post graduation in Surgery from SSKM hospital, Kolkata. He was an active member of ARSI and ardent supporter to the concept of "Rural Surgery". Dr. Mahapatra was a past member of Gov. Council of ARSI. All through his life he had worked in rural areas of Bengal like Ghatal, Bankura and finally retired as consultant surgeon from Midnapur Dist. Hospital. In the capacity of organizing secretary, Dr. Mahapatra organized ASI conference, Bengal chapter in 1993.

Dr. Mahapatra is survived by his wife Dr. Anjali Mahapatra- also a member of ARSI, two of his sons, daughter in law and granddaughter.

Members of the Gov. Council of ARSI express its sincerest condolences and extend its deepest sympathies to his bereaved family members.

Management of Spinal Fractures in a Rural Hospital

Dr. Kavery Nambisan

Introduction:

Spinal injuries from accidental fall are a known hazard among workers who climb and work at heights of over 10ft. This is a study of such injuries managed in a rural hospital.

Rural India Health Project Hospital in Kodagu district, Karnataka is a sixty-bed hospital which caters to the needs of plantation labour, small-time tradesmen, and the middle-class in south Kodagu. Labourers from the extensive coffee and pepper plantations for which the district is well known mostly fill the general wards. Work-related injuries (fractures crush injuries, traumatic amputations and head injury) account for 40 to 50% of general ward occupancy. This paper is on the incidence and management of spinal injuries treated at the hospital between August 2002 and December 2005.

Majority of spinal injuries in Kodagu occur when labourers climb trees to pluck pepper off the pepper vines, which are trained on to large trees. Although the Plantation Act stipulates safety measures against this fairly common mishap, so far no definitive preventive methods are in use. The fall is usually from a height of 25 to 50 ft and spinal injury is the most common outcome.

Incidence:

59 spinal injuries were treated in three years, of which 12 were simple injuries with ligament and muscle strain without fractures, 5 were fracture transverse process of lumbar vertebrae. 24 fracture lumbar vertebral body, 11 thoracic and 7 cervical fractures. Age varied from 17 years to 62 years. 5 were women. Common coexisting injuries were rib fractures, head injury, retroperitoneal haemorrhage and fracture forearm and calcaneum. Other serious injuries resulting from a fall included a case of posterior

dislocation of the hip with biliary peritonitis, four cases of rupture urethra and one splenic injury.

Management:

In the emergency ward, all suspected spinal injuries remain on the stretcher until a preliminary examination is done by the surgeon or an assistant. He/she is then shifted to the bed on a flat board and the same position is maintained. In most cases, X-rays are deferred till several hours after admission, unless otherwise indicated. This allows time for initial resuscitation and a better localisation of pain, thus making interpretation more clear before the patient is shifted for x-ray. It also reduces the number of needless x-rays.

All cases of fracture vertebral body (with or without neurological deficit) are treated flat in bed with restricted fluid intake (1500 ml dextrose half-normal saline in 24 hours) and decadron 8mg IV stat and 4mg 6 hourly for three days. Oral fluids are withheld for a day to avoid paralytic ileus from a possible retroperitoneal haematoma and thereafter started with caution. Patients with inability to pass urine are catheterised with an indwelling catheter.

Those with lumbar fractures are kept flat in bed for three weeks, after which they are gradually propped up until comfortable in the sitting position. Antibiotics are not used routinely but given as indicated. Strict attention to nursing care, motivation of the patient and relatives, mobilisation of all joints in bed, prevention of bed sores and bowel management with stool softeners and enemas form part of the management. Ligament injuries and transverse process fractures merit shorter duration of bed rest and early mobilisation. Stable thoracic

fractures are encouraged mobilisation as soon as the pain is less but not allowed forward bending for six weeks. Analgesics are used as required in all cases but most patients stop complaining of pain and the discomfort of being immobilised flat within a few days.

The catheter is removed as soon as there is evidence of bladder sensation. When the patient is confident to stand, he is put in a light pop jacket, mainly to avoid forward flexion too early and also to prevent him from going to work before he is considered fit. He is sent home with the advice to move about as comfortable and seen in the clinic once a month. The pop jacket is removed 3 months from the date of accident and forward flexion is encouraged. He is sent back to work after a final assessment, usually between 3 and 6 months after the injury. This depends on the severity of the injury and the nature of his work. Sedentary workers and those with stable fractures of the thoracic spine return to work much earlier.

Outcome:

5 of the 59 patients were referred to a higher centre after initial resuscitation, because of the indication of urgent surgical intervention. 2 were fracture-dislocation of C5-C6 with quadriplegia, 1 was a comminuted fracture of thoracic spine from an elephant assault and 2 were fracture-dislocation of lumbar vertebrae. Of these, one cervical spine injury and one lumbar spine injury had good results from surgery. The other three developed complications: septicaemia - 1, increased neurological deficit and bedsore - 1, a combination of infection and aggravation of paralysis - 1. They did not recover. All three were discharged from the referral centre without any amelioration of symptoms and with the complications already in place.

All patients with partial Paraparesis recovered fully and went back to work. Three patients with severe Paraparesis made partial recovery

and were up and about with a walker before discharge. Bladder and bowel control returned in all but one elderly patient who could not be weaned off the catheter, and another who had surgical stabilisation done at the referral centre. One patient, a 30 year old female with fracture-dislocation of C5-C6 and quadriplegic, could not be sent to a higher centre because of family reasons. She was treated with simple cervical traction and diligent nursing care. She recovered slight use of her upper limbs, and was able to turn in bed before being sent home in a wheel chair. She was in the same condition one year after the accident.

One obese young man was initially treated at our hospital for a rib fracture (following an auto rickshaw accident) and sent home, only to return a week later when fracture of T7 was discovered. Fortunately it was a stable fracture and he recovered fully. In retrospect, his chest pain is likely to have been partly due to referred pain from the spinal fracture.

Discussion:

Management of spinal injuries in a rural hospital is a challenge that can be undertaken by a rural surgeon who has the basic facilities like good quality x-rays and nursing care. In fact, the cervical spine injuries could have been managed at least initially at the rural hospital, with the aid of crutch field tongs and traction. Most importantly, transporting a patient with spinal injury long distance over pot-holed roads (in our case, a distance of 100 km to Mysore) is hazardous and likely aggravates the condition. The treatment of most spinal fractures is straightforward and simple and inexpensive, provided the medical team follows a definitive plan of immobilisation, prevention of spinal cord oedema and proper management of paraplegia. Although compression fractures are mostly stable, they may present with Paraparesis due to spinal cord oedema. Majority of them will recover with prompt anti-oedema measures. In this

hospital, the regimen of restricted fluid intake and decadron (or methyl prednisolone) was very effective.

Although the planters take on the responsibility of attending to the medical expenses, in most cases other than big companies like Tata Coffee, such aid is limited. Many patients are the sole breadwinners of their families. Treatment must therefore be geared towards full recovery of movement and strength of the spinal muscle.

Prevention:

No ideal solution has been found to prevent fall from a height when doing hazardous jobs. In the plantations, various methods were tried, like the use of safety slings and mattress to buttress a fall. Our own study showed that the falls almost always occurred in newly employed migrant labours who were new to the job. The accident typically occurred in the first week of his starting work, obviously due to a lack of experience and an

eagerness to take on whatever work was offered. New workers should be made aware of the possibility of a fall and its danger. They must also be made to observe the more skilled climbers until they are confident to do it themselves.

The final tussle:

The role of the rural surgeon, however, does not end with discharging the patient from hospital. Plantation workers in Karnataka are eligible for compensation as per the Workmen's Compensation Act. This involves filling of forms and following it up regularly with the government officials at the other end. In our experience, the compensation was received only through persistent efforts, phone calls and sending the patient's attendant to the office concerned at regular intervals along with a representative from the plantation. The surgeon's support and follow-up of every case is of inestimable value. In most cases, it has to be pursued relentlessly until the money reaches the right hands!

Heartiest congratulations!

Dr. Kavery Nambisan, FRCS, a rural Surgeon and the active Governing council member of ARSI, has been awarded the Iowa Writers Fellowship. It is the most prestigious fellowship given to a small number of writers from different parts of the world each year. The writers are nominated based on their previous work. Dr. Kavery is going to be in US for three months from end August to early Dec to pursue writing, interact with others, and to make presentations and readings in different parts of the country. Dr. Kavery is a writer per excellence. She has authored many novels like *The truth (almost) about Bharat*, *The Scent of Pepper*, *Mango-coloured fish*, *On wings of butterflies: A novel*, *The Hills of Angheri* etc. She has also written several children books and contributed many articles related to important health issues in National dailies.

Address for correspondence: C/O GokaEngg. Pvt.Ltd. Sector 35, Gold Valley, New Tungarli, Lonavla, Dist Pune- 410403 Email: wallden@sancharnet.in

Thorn Prick and the Rural Surgeon

Dr. Sitanath De

"Does the rural surgeon have any affordable diagnostic tool to locate the thorn in a case of unrecovered thorn prick in the body?" The answer is certainly "No".

This question was put to me by a village doctor (unlicensed), who specializes in thorn pricking cases, a common mishap in rural-based community.

This seemingly simple question left me pondering about the difficulty in treating a small but frequent injury, one with potentially serious consequences for the patient and his family. The loss of even a day's wages due to localized infection may mean the daily wage earner will not be able to feed his family.

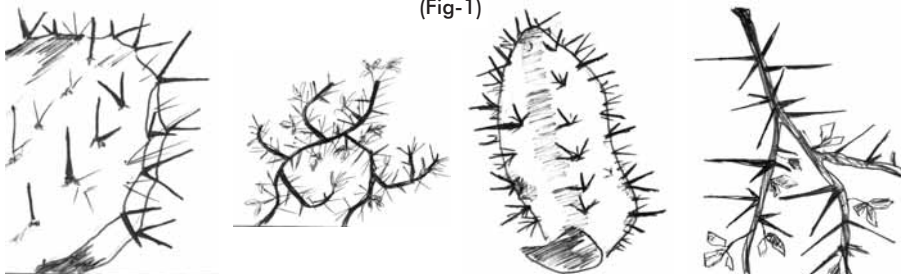
The reason that thorn-prick injuries are so common is that the thorn producing trees are used in almost every aspect of country life. Such trees are used to build stout barriers to protect paddy fields, ponds and even houses.

Some particular trees are used to make tools for ploughing, ladders and other domestic instruments. They are also a source of cheap fuel, regularly collected by the women and used for cooking. Accidents usually occur in slippery muddy fields where the thorn penetrates the body surface especially the soles of the feet and the hands. A prick can occur on any part of the body even in the scalp. There may be single thorn or multiple penetrations. The sharp spikes become soft due to rain and mud and frequently break off after entering the body.

There are varieties of thorn producing trees, the most hazardous being those with straight thorns and those with thorns which are curved like a hook. The most common of the trees known locally are *Amar Kanta*, *Fani Mansa*, *Sid Mansa*, *Mansa with four spikes*, *Baichi Thorn*, *Date*, *Babla*, *Bel*, *Aisa*, *Kul*, *Jilipi*, *Ponga*, *Bamboo*, *Baid-baran*, *Simul*, *Rangini*, *Lemon*, *Lajjabati* and *Khayer*.(Fig1)



(Fig-1)

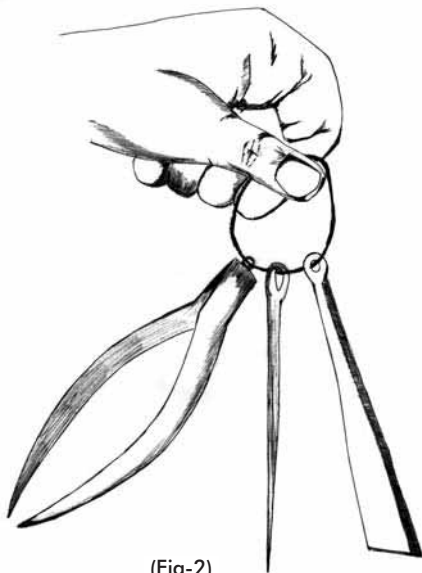


The victim of a thorn-prick injury, when the spike has remained in the wound, suffers from pain, swelling and discharge from the wound and possibly loss of local function at the area of injury. Equally important is the time lost from work and the subsequent financial loss.

The usual first response to such an injury is an on the spot attempt to remove the thorn manually or possibly by using a second thorn as a probe. But if the sharp point breaks up inside the wound, as is frequently the case, the patient is compelled to seek the help of a "specialist", some one in the village who is an expert thorn remover.

The method used by the "specialist" is interesting. His instruments consist of a key ring holding three small tools, (Fig2) i.e.:-

- 1) A "Narun", (Nail cutter) with 1/2 inch wide sharp blade to nick the skin
- 2) A needle to make small hole along the direction of thorn penetration
- 3) A pair of fine-tipped dissecting forceps to pull out the retained fragment.



(Fig-2)

If the procedure fails the "specialist" applies drop of a milky substance extracted from *Akanda* or *Baid-baran* plant to the wound. The wound becomes soft and the thorn may be extracted easily. After extracting the thorn a particular 'post operative' procedure is carried out, using a green date leaf, a small piece of clean cotton cloth, rolled into a wick and a tea spoonful of mustard oil. The wick is laid along the centre of the leaf and the

Mustard oil is carefully dropped to one end of the leaf. The wick is lit and the heated oil is applied drop by drop on the wound, using the pointed end of the leaf as a minute funnel. One to three drops of oil is sufficient to relieve pain and prevent infection. The patient may be administered antibiotics and advised a Tetanus Toxoid injection.

The majority of such cases have a satisfactory outcome and it is only the uncommon failed cases which are referred to the nearest rural surgeon. But what more can the surgeon do? He faces exactly the same difficulty when it comes to diagnosing the location of the thorn. As he is unable to locate the foreign body, he can only resort to conservative treatment, using hot boric compress and hoping the body will reject it in due course. He may attempt exploration of the wound under local or general anaesthetic, but he has no certainty of success and a failed exploratory operation will only cause more hardship for the patient as well as distress to the surgeon.

So the rural surgeon is left to puzzle over the question. We rightly pride ourselves on today's amazing advances in highly skilled surgery, but we have not been able to solve a simple problem of daily life in the rural area. Could we not find an affordable diagnostic method to detect the presence or absence of a thorn in the body, and to confirm its exact location to assist removal? The rural surgeon still has much to discover!

Minimally Invasive Appendectomy Using the Cystoscope

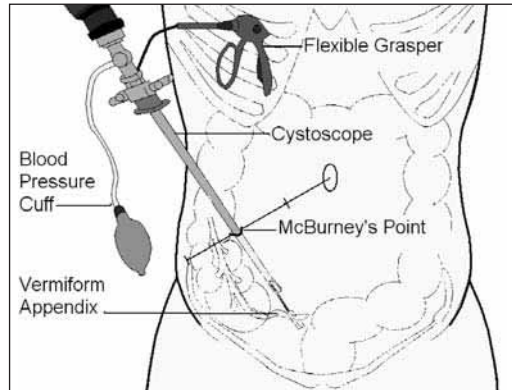
Cherk-yun Liu, Dr J Gnanaraj

Introduction

With acute appendicitis being the most common abdominal surgical emergency¹, Appendectomy is a frequent surgical procedure in mission hospitals. Despite technological advances, the diagnosis of acute appendicitis remains essentially clinical. Complications can be fatal with increasing risk when there is increasing delay of diagnoses and treatment, especially in the young and elderly. However, with the long differential diagnosis, removal of a normal appendix is not uncommon. For over the last century open Appendectomy has been the accepted treatment. Since the 1980s laparoscopic surgery has become a major part of general surgery with the first laparoscopic Appendectomy being described in 1983 by the German surgeon Kurt Semm. Minimally invasive surgery has been on the rise with rapid developments and a growing demand², even in rural India people are aware of and look forward to such benefits. The value of improved diagnostic tools aiding Appendectomy has been well recognized. At Burrows Memorial Christian Hospital in Assam, North East India, a diagnostic and even less invasive method than customary laparoscopic Appendectomy has been developed using the cystoscope.

Method

The patient is placed in a head down position with the abdomen tilted to the left to let the intestines fall away from the right iliac fossa. General anesthesia is preferable. A small 3-centimeter incision is made over a transverse skin crease at the McBurney's point. The abdomen is opened as in gridiron incision. A pair of small retractors is placed and the abdominal wall is lifted up. A cystoscope is introduced through the incision and used to identify the appendix. The tip of the appendix



is grasped with alligator forceps and brought out of the wound. The abdominal wall is depressed and the dissection is carried out as in an open surgical procedure.

Evaluation

Between April 2003 and March 2006, ten Appendectomy using the cystoscope was performed, of which 2 were acutely inflamed and 1 required extension of the incision. None required conversion to open. The procedure takes no longer than the customary method of laparoscopic Appendectomy, is easy to perform and is significantly cheaper. The method is well accepted by patients and contributes to increasing the popularity of the hospital.

Discussion

Such a method allows exploration and clear diagnosis before Appendectomy. Only a single incision is required, therefore trauma and scarring to the body is greatly reduced and cosmetic is improved. Post operative complications associated to trauma and wound infection are reduced.³ Minimally invasive techniques have been shown to increase clinical comfort with less pain and shorter recovery time, reducing the length of hospital stay.⁴ This is of particular value to the patients

seen here in rural India, where the pressing need to return to work often takes precedence over rest and full recovery and the burden of increased hospital charges are difficult to meet.

Conclusion

The technical advancement of minimally invasive techniques continues with expensive equipment offering greater motion, increased force feedback and tactile discrimination.⁵ However, minimally invasive Appendicectomy using the commonly available cystoscope does not require any other special instruments and has proven to be a safe, practical and low cost method with the same advantages to the patient.

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Address for correspondence: Burrows memorial Chriotan Hospital, Alipur, P. O. Banskandi, Dist. Cachar, ASSAM – 788101, Email: jgrararaj@gmail.com

Information for the Members

ARSI's National Conference will be held in Nov. 2007 at Pune. All members will receive information Brochure by post, latest by July end. In case one does not get it, he/she may Contact Dr. Swaran Arora, organising Sec. of the Conference for further information. (Address and Phone No. at Back Cover page)

Innovative Sitz Bath - Bhavana's Procto Tub

Dr. Prasad N. Vaidya

Abstract

One of the important parts of treatment in pre and post operative period of anorectal disease is sitz bath. This procedure has its own short comings and need to be standardised. Bhavana's Procto Tub has obliterated most of its draw backs and is providing comfortable sitz bath.

Introduction:

The age old practice of sitz bath as described in Mosby's Dictionary is still routinely carried out during pre & post operative period of ano rectal disease. Sitz bath/ Hip bath has following indications.

- Ano rectal disease - In Pre & Post operative cases of fissure in ano, fistula in ano, post operative perianal abscess, hemorrhoids.
- Urinary disease - Chronic UTI and Prostatitis.
- Gynecological diseases - Chronic UTI, cervicitis, pelvic inflammatory disease.

Existing pattern of conventional to sitz bath.

Here the patient is asked to sit in tub of 5 to 10 lit capacity (No Standardization) containing luke warm water for about 10-15 minutes and thereby he receives cleaning and fomentation to ano-rectum. The draw backs of this system are.

- Patient has difficulty in sitting in a squatting position and gets cramps in his legs.
- There is soiling of patients' cloths.
- Spillage of water outside the tub.
- Uncomfortable position.

With this procedure the desired effect of sitz bath is not properly achieved and therefore the entire

procedure is to some extent is aimless. With this view we started working over this procedure and finally designed Bhavana's Procto Tub which has obliterated almost all the draw back and tried to standardize this procedure.

Principal and Method:

The gadget is an assembled one. It consists of-

- A plastic tub of 20 liters capacity with a specially designed submersible pump fitted to its bottom. Also there is an outlet tap to evacuate the water.
- A cover with central hole, which is placed on the tub. The central whole is so designed that while patient is sitting on the tub comfortably, his hip dips inside the water column of the plastic tub, more over buttocks get separated.
- An iron stands on which whole assembly is mounted.
- Cable with hand operated switch.

To use it, one has to add 15 lit. of luke warm water (37° to 38° c) in the tub. The patient is allowed to sit over the tub and then switch on the submersible pump. It pumps the water waves through the water column in parabolic fashion to reach the perineum in a smooth way and there by cleaning and fomenting the ano rectum.



More over it relaxes the anal sphincter due to stop gap pulsations and relives pain of ano rectum instantaneously. All these happen while the patient is comfortably sitting over the gadget.

The added advantages with Bhavana's Procto Tub are:

- 1) There is no soiling of cloths.
- 2) No spillage of water around.
- 3) The gadget is of light weight and can be placed near the bed of patient.
- 4) Whole assembly is shock proof.

Result:

This gadget was devised in 2003, and since then efforts have been made to improvise the model to its present form. The results have been compared with the existing concept of sitz bath such as

1. Routine sitz bath
2. Water jets and sprinkler which come as an attachment to western type of commodes.
3. Sitz bath accessories, which is again an attachment for commodes.

In Indian scenario commodes are not routinely used. More over its attachments are not freely available. The water Jets/Sprinklers, which works on water pressure gradient, when used, produced discomfort and pain in postoperative patients of ano-rectal disease. Our experience with the use of this gadget for the last 4 years, find it working very effectively and with satisfactory results.

Discussion:

The concepts and model was devised jointly in 2003 by Dr. Prasad Vaidya, Mrs. Bhavana Vaidya Mr. Krishna Kulkarni. The Association of Rural Surgeons of India conferred Antia Finseth Innovation Award to the author in 2003 for this innovation. The paper on Bhavana's Procto Tub was adjudged as the

best presentation at the National conference of the Association of colorectal surgeons of India, held in Pune in 2006.

This devise has recently been awarded bronze medal in the National Innovation Foundation's contest named "Anveshen V". The foundation also has and has adopted this project for its future development.

Conclusion:

This unique gadget has been invented with a view to solve the problems faced by our patients of ano rectal disease and has been proved to be very useful. More than 500 patients in last 3 years have successfully used it.

We concluded that:

1. The need of supervised dressings of ano rectum has obliterated, because of its use.
2. It has accelerated the rate of wound healing in perianal area.
3. It has brought down dramatically the recurrence rate of fistula in ano following surgery.

The author intends to promote this concept to fellow colleagues working in the field of colorectal surgery. This product is patented. The cost of the gadgets is Rs.1500/-

(For trials of the gadget one may contact Mrs. Bhavana P Vaidya, Co-ordinator, Soham Research Development and Marketing Agency. 33/-, Sudarshan Apartment, Swapnagari, Garkheda Parisar, Aurangabad, Phone-99221270750, 0240-2443829)

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3. Mosby's Medical Nursing & Allied Health Dictionary 4th edition page No. 1441.

Address for correspondence: Dr. Prasad N. Vaidya, M.S. (Gen. Surgery) Consultant Dr. Hedgewar Rugnalya, Post Garkheda, Aurangabad, Maharashtra – 431005

Pneumatosis Cystoides Intestinalis (PCI)

(A Case report)

Dr Sukumar Maiti

Abstract

A case of Pneumatosis Cystoides Intestinalis of ileum associated with duodenal perforation is reported herewith. The lesion also caused features of subacute intestinal obstruction. The specimen of Pneumatosis Cystoides Intestinalis following resection was studied macroscopically, radiologically and histopathologically.

Key words: Pneumatosis Cystoides Intestinalis (P.C.I.), subacute intestinal obstruction, duodenal perforation.

Introduction

Pneumatosis Cystoides Intestinalis (P.C.I) is a rare disorder characterised by several intramural pockets of gas involving any portion of the alimentary tract, sometimes called as emphysema or cystic pneumatosis of the intestine. Though rare in human it is commonly found in dogs¹. Jejunum is most frequently involved followed by the ileo-caecal region and colon. The lesion may be fairly uniformly distributed or confined to a number of isolated segments. It is common in 4th & 5th decades of age and sometimes in infancy. Its etiology and pathogenesis are not definitely known. However its frequent association with respiratory ailments like asthma and peptic ulcer disease particularly pyloric stenosis has been described².

Case Report

A 37 year old male patient was admitted with features of peptic perforation with history of acute upper abdominal pain for 2 hours duration. There was diffuse muscle guard and tenderness all over abdomen. Liver dullness was obliterated. Plain X-ray abdomen showed free gas under diaphragm. This acute illness was preceded with symptoms of acidity, heartburn and dyspepsia for more than ten years. The patient also gave a history or recurrent appearance of lower abdominal lump and colicky pain with moderate abdominal distension for last 2-3 years. Laparotomy was performed after proper



Figure 1. Peroperative photograph showing the segment of ileum affected by pneumatosis cystoides intestinalis. Position of vermiform appendix marked with a Babcock's forceps.

resuscitation. Perforation of the anterior wall of the first part of duodenum was confirmed and repaired. While exploration of peritoneal cavity was being performed, a segment of terminal ileum about 13 cm in length and 15 cm proximal to the ileo-caecal region was found thickened, spongy and studded with hundreds of air spaces giving a honeycomb appearance (fig.1). Rest of the gastrointestinal tract was found unaffected. As the patient made an early presentation following duodenal perforation and as peritoneal contamination was less, the affected segment of intestine was resected and continuity was established by end-to-end intestinal anastomosis. The resected specimen (fig.2) was studied macroscopically, radiologically and histopathologically. There were multiple, innumerable cysts of varying sizes involving the whole circumference of the gut. Largest of cysts was about 2 cm in diameter. Some of the

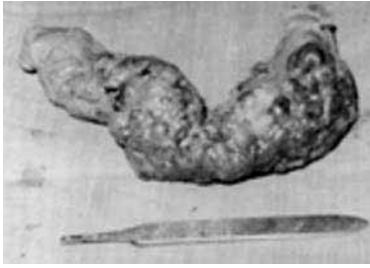


Figure 2. The resected specimen, studded with numerous air cysts of varying sizes.

cysts were intercommunicating but most of them were unilocular and tense. On pressure they ruptured with sounds. The specimen was cut open, the inner surface of mucous membrane looked normal but the lumen of the involved segment was narrower. The air cysts were found to be mainly subserosal which were also larger than the cysts situated at the submucosal region. Soft tissue X-ray of the specimen showed clusters of translucent areas of gas shadows in the wall of the gut



Figure 3. X-ray of the resected specimen showing innumerable black areas of gas spaces

(fig. 3). Histopathological examination further confirmed the location of the cysts in the submucous, subserous and intramuscular regions. Infiltration of lymphocytes, multinucleated giant cells and histiocytes were present in the wall of the cysts. The patient had an uneventful recovery and discharged on 8th postoperative day (Fig.4). Chest X-ray of the patient taken later revealed no abnormality.



Figure 4. The patient on 8th postoperative day before discharge from hospital

Discussion

In most of the cases, Pneumatosis Intestinalis itself does not produce any symptom and is found as chance finding at laparotomy or on radiological examination or at necropsy. The cysts are filled with gases of which 80% is nitrogen and rests are oxygen, carbon dioxide, methane and hydrogen³. Rarely can it produce complications like pneumoperitoneum due to rupture of cysts, intestinal obstruction⁴, hemorrhage and irritable bowel syndrome. The cysts may disappear spontaneously or may persist for a prolonged period. It has been suggested that the gases are replenished within the cysts at a rate equal to or greater than that of their reabsorption⁵. The origin of the gas has been debated for many years. *Pulmonary, mechanical, bacterial and biochemical* theories of pathogenesis have been proposed. Pulmonary theory suggests that pneumomediastinum occurs after rupture of pulmonary alveoli particularly in emphysematous patients. Air then dissects retroperitoneally and reaches the intestine along the path of mesenteric blood vessels. According to the mechanical theory the air in the lumen of the gut is forced during peristalsis into the lymphatics through the breaches in the intestinal mucosa in association with raised intraluminal pressure due to obstruction of the alimentary tract. Pneumatosis has been reported as a complication of sigmoidoscopy and biopsy. Gas producing organisms (bacterial theory) are also responsible for PCI where there is bowel necrosis such as mesenteric infarction, strangulation and severe enterocolitis of infancy. Biochemical theory suggests that the cysts are dilated chyle canals and the gas they originally contain is carbon dioxide which is formed by the interaction of the products absorbed from the lumen. The carbon dioxide is later replaced by nitrogen from the blood⁵. Pneumatosis Cystoides Intestinalis occurrence is more in dyspeptics taking prolonged milk diet⁶. Pneumatosis Cystoides are typically seen in late middle age and has been associated with a number of gastrointestinal

(e.g. pyloric stenosis, sigmoid volvulus and ischaemic bowel) and non-gastrointestinal (e.g. chronic obstructive pulmonary disease, depression, multiple sclerosis and systemic lupus erythematosus^{7,8}. Pneumatosis Cystoides Intestinalis has also been reported with anticoagulant therapy⁷. Pneumatosis Cystoides Intestinalis is idiopathic in 15% of cases and secondary in 85% of cases to a variety of disorders⁷. It is an infrequent disease and its clinical diagnosis is difficult. Preoperatively it may be diagnosed by radiological and other imaging investigations. High resolution ultrasound (HRUS) showing the presence of echogenic gas bubbles in the wall of the bowel, as a circle within the circumference of the bowel (circle sign) may be helpful in diagnosing Pneumatosis Intestinalis⁸. The outcome is usually favourable with medical treatment if it is caused by systemic diseases e.g. systemic sclerosis (temporal arteritis, polyarteritis nodosa, SLE etc). Laparotomy and surgical treatment is needed if it is complicated with pneumoperitoneum, haemorrhage intestinal obstruction etc. ^{4,5,6}. The present case was associated with peptic ulcer disease complicated with perforation of duodenal ulcer though the usual association is pyloric stenosis. As in this present case, the operation for peptic ulcer disease could be performed within three hours of onset of symptoms, peritoneal contamination was found less and as the patient had the symptoms of recurrent subacute intestinal

obstruction, localized lesion of Pneumatosis Cystoides Intestinalis in terminal part of ileum was excised.

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An unusual complication following Laparoscopic Cholecystectomy

Dr. R.K.Garyali

Abstract

The author presents an unusual case of well differentiated adenocarcinoma surrounding a gall stone at the epigastric port site following post Laparoscopic Cholecystectomy. The patient presented with colicky abdominal pain and a mass at the epigastric port site one year after Laparoscopic Cholecystectomy.

Case report:

A 40 years old female presented at our clinic with localized pain, colicky in nature, at epigastric and right hypochondriac region. The pain had no relation with food. About a year back she had undergone Laparoscopic Cholecystectomy following which she was symptom free for about 3 months. Thereafter she started feeling pain at right upper abdomen more so at the epigastric port site. Since then she was treated by the operating surgeon as a case of "port site granuloma" and prescribed antibiotics, anti-inflammatory drugs and anxiolytics without any relief of her symptoms.

Examination findings: The patient was an average built lady with mild anemia and with otherwise normal general condition. Her respiratory and cardiovascular system was normal. Abdominal examination revealed a mass felt at the port site, tender and nodular. There was no organomegaly and no free fluid in the abdomen.

Routine laboratory investigations were within normal limit. Ultrasound of abdomen was reported as normal. CT scan showed a focal enlargement of rectus abdominus muscle near right hypochondrium. Overlying subcutaneous fat showed irregular focal hyper density. CT guided FNAC suggested (?) spindle cell tumour.

Exploration was done under G.A. It revealed a firm swelling in the anterior abdominal wall at the port site with a malignant look. The mass was totally excised. There was no significant intra peritoneal finding.

On gross examination of the mass a gall stone was seen in the center of the excised mass. Histopathology of the mass was reported as differentiated Adenocarcinoma.

Post operative period was uneventful. The patient was given three cycles of chemotherapy with Gemcitabine and Cysplatine.

Discussion:

Spillage of stone into the peritoneal cavity and at port site following Gall Bladder rupture is known complication of Laparoscopic Cholecystectomy. Residual stones at the port site with abscess formation and gall stone granuloma have also been reported and well documented in the literature.

In the present case there may be a possibility that the gall bladder might had been ruptured in the process of its removal through the port and the patient was suffering from occult malignancy of the gall bladder which got implanted at the port site and subsequently developed into a mass lesion.

Precautions regarding the removal of gall bladder from port site, avoiding rupture of gall bladder and use of endobag can be useful in preventing such complications.

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Address for correspondence: Dr. R. K. Garyali, opp. Raj palace, Dhaar Road, Udhampur, J&K-182101

Journal scan

Cost-effectiveness of misoprostol to control postpartum hemorrhage in Low-resource settings

International Journal of Gynecology and Obstetrics. 2007 Apr; 97(1):52-56.

Bradley SE | Prata N | Young-Lin N | Bishai DM

Objective: To test the cost-effectiveness of training traditional birth attendants (TBAs) to recognize postpartum hemorrhage (PPH) and administer a rectal dose of misoprostol in areas with low access to modern delivery facilities.

Method: A cost-effectiveness analysis, modeling two hypothetical cohorts of 10,000 women each giving birth with TBAs: one under standard treatment (TBA referral to hospital after blood loss greater than or equal to 500 ml), and one attended by TBAs trained to recognize PPH and to administer 1000 µg of misoprostol at blood loss greater than or equal to 500 ml.

Result: The misoprostol strategy could prevent 1647 cases of severe PPH (range: 810-2920) and save \$115,335 in costs of referral, IV therapy and transfusions (range: \$13,991-\$1,563,593) per 10,000 births. By preventing severe disease and saving money, it dominates the standard approach.

Conclusion: Training TBAs to administer misoprostol to treat PPH has the potential to both save money and improve the health of mothers in low-resource settings.

Effect of peppermint water on prevention of nipple cracks in lactating primiparous women: A randomized controlled trial

International Breastfeeding Journal. 2007 Apr 19;2(1):7.

Sayyah Melli M | Rashidi MR | Delazar A | Madarek E | Maher MH

Nipple pain and damage in breastfeeding mothers are common causes of premature breastfeeding cessation. Peppermint water is popularly used for the prevention of nipple cracks in the North West of Iran. The aim of this study was to determine the effectiveness of peppermint water in the prevention of nipple cracks during breastfeeding in comparison with the application of expressed breast milk (EBM). One hundred and ninety-six primiparous breastfeeding women who gave birth between February and May 2005 in a teaching hospital in Tabriz, Iran, were randomized to receive either peppermint water or EBM. Each woman was followed for up to three visits or telephone calls within 14 days and then by telephone call at week six postpartum. Women who were randomized to receive peppermint water were less likely to experience nipple and areola cracks (9%) compared to women using EBM (27%; p less than 0.01). Women who used the peppermint water on a daily basis were less likely to have a cracked nipple than women who did not use peppermint water (relative risk 3.6, 95% CI: 2.9, 4.3). Nipple pain in the peppermint water group was lower than the expressed breast milk group (OR 5.6, 95% CI: 2.2, 14.6; p less than 0.005). This study suggests that peppermint water is effective in the prevention of nipple pain and damage.

Further studies are needed to assess the usefulness of peppermint water in conjunction with correct breastfeeding techniques.

(Compiled by Dr. S. K. Baasu)



Dr. N.H. Antia, M.B.B.S., F.R.C.S., F.A.C.S. (Honorary) founder, Director and Trustee of The Foundation for Medical Research and The Foundation for Research in Community Health born on 8th February, 1922 passed away on Tuesday the 26th of June, 2007.

Five lifetimes were packed into five decades of an illustrious career. Starting with innovative surgical procedures on leprosy patients at Kondhwa, Dr. Antia went on to establish a reputed department of plastic surgery at the Grant Medical College and Sir J. J. Group of Hospitals. His role as a teacher and an inspirer is evinced in the cadres of senior plastic surgeon spread all over the world who are carrying both the science and art of his discipline forward.

The bestowal of several awards in surgery, biomedical research and public health reflected his passion and urgency to work for the marginalized rural population for whom he had an abiding affection and respect. The starting of Association of Rural Surgery of India (ARSI) was a testimony to this. He envisioned the ARSI to be a valuable complement to his visionary efforts in health where he demonstrated the remarkable powers of rural women to undertake multiple functions related to health and medical care and rural development. A charming personality with a sharp wit endeared him to all brushed. With his passing away society at large has lost a unique and a lovable being.

He is survived by, his wife Arnie Antia, daughter Avan & a son Rustom and his numerous pupils, disciples and admirers who pledge to continue his life's work.



2nd International Conference of Rural Surgery at Ifakara, Tanzania



**Following are the information regarding travel itinerary and
expenditure for members interested to attend 2nd International
conference of Rural Surgery to be held at Ifakara, Tanzania**

Tentative dates for booking are: 25th Sept. 2007 Mumbai to Dar es salam
(maybe an overnight stay depending on the time of the flight)
26th Sept. 2007 leave for Ifakara
(arrangements made by the Organizers of the Conference)
27th to 29th Sept 2007 Conference at Ifakara
30th Sept 2007 Reach Dar es salam (half day local tour)
1st Oct 2007 Dar es salam to Mumbai for those who are not joining the Safari trip.
31st Sept 2007 to 7th Oct Tour of Tanzania as per the schedule that
will include the following:
Safari 2 Nights 3days Ngorongoro and Lake Manyara.
Transfer to Kilimanjaro Airport, Accom. in Dar es Salam
Bus Fare
Accomm in Znz at Tembo House Hotel
City and Spice Tours in Zanzibar
Airport Transfers in Znz
Accomm at Blue Bay Beach Resort
Total Cost: 1,000 USD

Air fare by Emirates/Qatar/ Kenya Airways is ex Mumbai 30,000 inclusive of visa charges and taxes. The names will have to be given to the airlines as a group to avail a better rate as soon as possible. All those who would like to join us in the trip will have to send a payment of at least 25.000/- per pax to book the tickets. The draft has to be made in the name of "Tanzania Tour" payable at Mumbai and to be sent to the Address below. The total cost for the trip is at the moment about 30,000 + 43,000 = 73,000 per pax. If we have a good enough number traveling then we could perhaps get the trip down to 60,000 per pax. It all depends on the number of confirmed pax. Kindly give us the following information: Name, Age, Address.

For further information, kindly contact

Dr. Ms. Swaran Arora, M.Ch. (Plastic Surg.), FRCS, PGDHA
Org. Sec., ARSICON 2007, PUNE
7, Daulat Baug, 36th Road, Bandra (W)
Mumbai 50, INDIA, Mobile: 9820986110



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