



# JMA News

THE OFFICIAL NEWSLETTER OF THE JAFFNA MEDICAL ASSOCIATION

## From the Editor

It gives me a great pleasure to share this JMA newsletter for the month of March. Now we see the collective enthusiasm among the medical professionals to publish the newsletter continuously.

There is an ample need to invest in health. We need even more determination to invest in long-term research aiming to solve the health problems of poor populations, and to keep doing this for decades. We need good researches to improve the quality of care. In this issue we highlight a research activity which was widely published in media.

World is ageing. Sri Lanka is not an exception and is too rapidly ageing with increased risk of chronic diseases. Providing appropriate health and social care for elders is at most important. Sri Lankan health system should be able to address the need of the elders.

Sri Lanka is now transforming into middle income country status. This creates increasing educational standards and peoples' expectations, which in turn results in greater demand for quality health care. Concurrently on the negative side, changing lifestyles, living in polluted environments and exposure to trauma are drivers for endangering our health.

We as doctors should prepare ourselves to handle the future challenges imposed on us. JMA would join with other similar kind of organizations to provide Continuous Medical Education for the doctors in Sri Lanka.

**Dr. R. Surenthirakumaran**  
Editor, JMA.

## President's Message

*Dear Friends and Colleagues,*

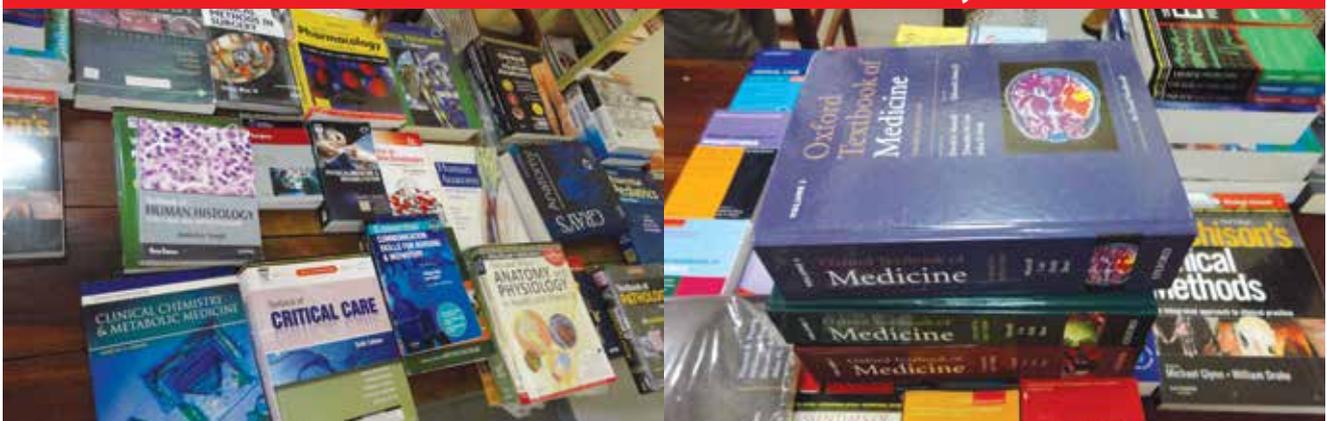
Updating the Knowledge among medical professionals facilitates in making proper diagnoses and to decide on better treatment towards increasing efficiency in the hospital environment. We as the professional body encourage in many ways to update our knowledge. We also associate with other professional bodies like Sri Lanka Medical Association and colleges of various specialties to conduct joint clinical meetings for the benefit of our medical professionals. We are very thankful to the Ceylon College of Physicians and Sri Lanka College of Ophthalmologists for making the joint venture a reality in the coming months April and May this year.

We as the medical professionals should commit in Patient Care, Medical Teaching and Research. We are really lacking in research activities. Though a larger proportion of knowledge based applications are not being practiced in the developing countries due to many constraints still we have to do researches at least to improve the standard of care for the diseases that are exclusively prevailing in our localities.

Hope you all will make use of these opportunities with enthusiasm for your professional development.

Thank You  
**Dr. N. Jeyakumaran**  
President, JMA.

## Donation of Medical Books to JMA Library



*Mr. Suntharalingam Kananathan, Proprietor of Quency Importers and Distributors of Books, has donated many valuable Medical Books to our JMA Library. We appreciate this generous donation and also welcome other wellwishers to do the similar donations.*

# SCORPION STING IN JAFFNA PENINSULA

Scorpion stings and their consequences represent an important cause of emergency, particularly among children in many countries. The epidemiology of the scorpionism in the world is poorly known. There are considerable geographical variations, at the level of incidence and severity. The management of scorpion stings remains a subject of controversy. The use of antiscorpionic serum (ASS), which is the only specific treatment, is disputed by certain specialists (Abroug et al., 1999; Bawaskar and Bawaskar, 2000) and symptomatic or adjuvant treatments is increasingly recognized by all the experts.

In the world, approximately 1500 species of scorpions are described and distributed among 18 families (Prendini and Wheeler, 2005). About thirty of them are recognized as potentially dangerous for humans. They all, except one Scorpionidae, belong to the family of Buthidae which includes nearly 80 genera distributed in both the old and new worlds. Less than a dozen of them are responsible for serious envenomation. The venomous apparatus of the scorpions consists in a venom vesicle, made up of a pair of joined glands, included in the telson, last ring of the post-abdomen. The venom vesicle is surrounded by a striated muscular layer facilitating and regulating venom ejection. This ability partly explains the variation of intensity of the symptoms and the existence of "white" (or "dry") stings, i.e. without inoculation of venom.

According to the most recent studies, seven areas were identified as at risk: North-Saharan Africa, Sahelian Africa, South Africa, Near and Middle-East, South India, Mexico and South Latin America, east of the Andes. These involve 2.3 billion population at risk. The annual number of scorpion stings exceeds 1.2 million leading to more than 3250 deaths (0.27%).

Although adults are more often concerned, children experience more

Sri Lanka was not categorized under at risk area until March 2013, when the first publication of recent research titled "First Report on *Hottentotta tamulus* (Scorpiones: Buthidae) from Sri Lanka, and its Medical Importance" by Kithsiri B. Ranawana, Nandana P. Dinamithra, Sivapalan Sivansuthan, Ironie I. Nagasena, František Kovařík & Senanayake A. M. Kularatne appeared.

severe envenomations with higher mortality. Improvement of the therapeutic management would reduce the lethality very significantly.

Medically important scorpionism in Sri Lanka goes back to late 80s where medical professionals in Jaffna peninsula started to get patients mainly from Vadamarachchi. Nearly a decade, symptomatic treatment had alone sufficed to cure the patients but since mid 1998, it was observed that the symptomatic treatment alone was not sufficient to tackle the problem and resulted in loss of lives purely due to "white scorpion" sting envenomation. From 1998 till 2006, a little more than a dozen of patients whom were young and healthy died in Jaffna.

Then the medical community in Jaffna Hospital got alarmed and started to find the treatment for this evolving novel problem by referring the Indian medical literature. The lesson learnt from India was to use Prazosin, for a severe scorpion sting envenomation patient, which was implemented in 2006 after a death of a young lady. Not all patients with envenomation were treated with prazosin because it looks inappropriate to start prazosin on patients who were having very low blood pressure. Therefore only selected patients were treated with prazosin till 2009. With the prazosin treatment results were promising and observed a dramatic reduction of mortality. After 2009, mortality due to white scorpion sting envenomation is



zero; possibly because of wide spread use of prazosin in almost all the patient who comes with white scorpion sting envenomation.

A scorpion species proved to be lethal to humans was recently recorded from Jaffna Peninsula, in the Northern dry zone of Sri Lanka. This species is morphologically different from all other known scorpions in Sri Lanka. The

species was identified as *Hottentotta tamulus* (Scorpiones: Buthidae), which is commonly found in Maharashtra, India, the closest mainland to Sri Lanka.

There is a high risk of spreading of this species to the rest of the country due to transport of goods and sand from this area. *Hottentotta tamulus* ("red scorpion") is the principal species of scorpion responsible for serious envenomation in India (Bawaskar and Bawaskar, 2000). It is present in all the southern half of India. Scorpion stings represent 0.6% of the calls received by the National Poisons Center based in New Delhi (Gupta et al., 2003). In the remainder of Asia, from Burma to Korea and Japan, there are no epidemiologic data, to suggest that the scorpionism is not a public health problem in those areas.

In Northern part of the Sri Lanka scorpionism is becoming a public health problem. Few deaths due to scorpion envenomations were recorded at the Teaching hospital, Jaffna. In the year 2003 twelve children died of envenomation. Later, one death was recorded in each year in 2006, 2007 and 2009. In many occasions stings occurred inside the houses where scorpions were found even among clothes.

In addition, these scorpions are found close to human dwelling among leaf litter, logs, and piles of firewood. Often, stinging scorpions are not caught, but some victims come to the hospital bringing a killed or captured scorpion. Dr. S. Sivansuthan, a Consultant Physician at Jaffna Teaching Hospital has kept some dead specimens of scorpions brought by the patients and relatives.

During the past few years, several patients have been admitted to the Teaching Hospital, Jaffna, at a rate of about four patients every week, to receive treatments for scorpion stings. Because of the gravity of this problem, clinical and epidemiological data of scorpion sting were collected at the Medical Unit and analyzed in collaboration with Faculty of Medicine, University of Peradeniya, Sri Lanka.

People in the area called this offending scorpion 'White Scorpion' because of its pale coloration when compared to commonly found 'Black Scorpions' (mainly *Heterometrus* spp., also commonly called a giant forest scorpion) found in this country. Eighty cases were reported from January, 2012 till March 2013, of which 52% were females and 48% were males. Of the 80 treated cases, 30% were children between 3 and 12

years of age. It was found that most of the victims were children and housewives. Soon after sting, the patient develops intense pain at the site of sting followed by numb sensation. Predominant clinical effects include excessive sweating, agitation and palpitation. Blood pressure of the victim goes up, and if not promptly treated leads to acute heart failure. These manifestations are attributed to over activation of autonomic nervous system; patients are treated with frequent doses of an alpha adrenergic blocker, prazosin. This has saved many lives with the treatment and monitoring patients as they recover after 24–48 hours. As documented, all 80 victims reported from January 2012 till March 2013 did recover without any long term sequelae.

The symptomatic treatment is important and should not be neglected. Pain can be attenuated by simple analgesics like paracetamol, local cooling of the sting site by any means available (water, ice, cooling agents). Salicylates and derivatives can be of great help, both as analgesic or anti-inflammatory drugs. When the stings occur at a finger, ring block with local anesthesia can give good pain relief. In 95% of the cases, this treatment will be sufficient for an adult. The pulmonary edema can benefit from antihypertensive drugs like prazosine (Bawaskar and Bawaskar, 2000).

Prevention comprises three aspects: 1. Individual precautions which consist in checking the absence of scorpion in cloths or shoes while getting dressed, 2. Collective measures of prevention, in particular cleaning of accesses to the houses and surroundings and use

of smooth coating for the construction of house walls 3. Insecticide spraying (Spirandelli Cruz et al., 1995). Use of insecticide is of a debatable effectiveness and poses the problem of the pollution and toxicity.

### Conclusion

The scorpionism, although geographically limited, concerns at risk population is of almost one million people in Jaffna Peninsula. Scorpions live in dry and hot areas but some of them can be adapted to man made environment. The scorpion stings occur throughout the year, mainly during the nights and early mornings at home. The incidence is underestimated with the absence of exhaustive report of the cases; mortality is probably better known.

Since 2009 average case fatality rate is zero percentage in Jaffna. Prazosin therapy and supportive treatment could have made this change. However, envenomations are more severe in children in whom mortality is higher than in adults. Pain, intense and persistent, remains often the only symptom. Appearance of digestive symptoms within the first few hours marks the entry of the patient in a serious stage of the envenomation, which can consequently evolve to end up in pulmonary edema or hypotension, arrhythmia or cardiac ischemia. The death can occur early due to cardiovascular collapse.

### Future of the scorpionism in Sri Lanka

We are in the process of writing on scorpion sting envenoming "Novel clinical problem, Epidemiology and clinical

features of scorpion sting envenomation in Jaffna peninsula, Sri Lanka" and also currently studying the behavioural pattern of the "white scorpion" (Hottentotta tumulus). In future, we are planning to analyze the scorpion venom to develop antivenom serum against the deadly scorpion venom in Sri Lanka.

### References

1. Abdel-Haleem, A.A., Meki, A.M.A., Noaman, H.A., Mohamed, Z.T., 2006. Serum levels of IL-6 and its soluble receptor, TNF and chemokine RANTES in scorpion envenomed children: their relation to scorpion envenomation outcome. *Toxicon* 47, 437 – 444.
2. Abroug, F., Elatrous, S., Noura, S., Haguiga, H., Touzi, N., Bouchoucha, S., 1999. Serotherapy in scorpion envenomation: a randomised controlled trial. *Lancet* 354, 906 – 909
3. First Report on Hottentotta tamulus (Scorpiones: Buthidae) from Sri Lanka, and its Medical Importance Kithsiri B. Ranawana, Nandana P. Dinamithra, Sivapalan Sivansuthan, Ironie I. Nagasena František Kovařík & Senanayake A. M. Kularatne *Euscorpium - Occasional Publications in Scorpology*. 2013, No. 155.

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	<b>THE JAFFNA MEDICAL ASSOCIATION (JMA) JOINT CLINICAL MEETING</b>
	<b>Sri Lanka College of Ophthalmologists</b>
<b>Date:</b>	
12 <sup>th</sup> of May, 2013	
<b>Venue:</b>	
Public Library Auditorium, Jaffna	
<b>Registration Free</b>	
<i>All are welcome</i>	

<b>Answers for Image Challenge (February Issue)</b>
1. Primary nodal osteoarthritis.
2. Charcot's arthropathy.
3. Tuberos sclerosi.
4. Branch retinal vein occlusion.
5. Choroid tubercles. Millitary TB.
6. Kayser- Fleisher ring.
7. Hyperostosis frontalis interna. Benign condition.
8. A sea snake - Hydrophis spiralis



## Ageing & Frailty

Average life expectancy is now higher than ever around the world. It is not the ageing itself but the age related diseases and frailty is the major challenge for health care.

Frailty is defined as a progressive physiological decline in multiple organ systems marked by loss of function, loss of physiological reserve and increased vulnerability to disease and death.

Ageing has been defined as a progressive, generalised impairment of function resulting in a loss of adaptive response to stress and in a growing risk of age related disease, the loss of adaptability giving rise to increased frailty and the probability of death.

Healthier ageing is achievable through modifying some life style factors such as stop smoking, being more physically active and eating a balanced diet. Also preventing chronic diseases may promote healthier ageing through better physical and mental health.

It is very important to have the knowledge of frailty associated with ageing, since dependency caused by frailty directly challenges the normal balance in life. An insult that would result in a reversible impairment in a fit person could cause permanent disability in a frail person.

A frailty phenotype was proposed in 2001 to suggest that an individual is frail if he/she experiences three or more of the following five symptoms:

1. Slowness 2. Weight Loss 3. Impaired strength 4. Exhaustion 5. Low physical activity/energy expenditure.

Phenotype definition for frailty can be insensitive and non-specific especially in relation to Parkinson's disease, Dementia and some cancers.

As we age there is wear and tear on our systems the cost of which is reduced redundancy. Clinically failure in walking appears as falls; failure in cognitive multitasking appear as delirium or confusion; failure in using any tools appears as functional decline; and failures of social awareness appear as incontinence, social withdrawal or other behavioral issues.

The Frailty Index( FI) takes a different view to frailty as a syndrome, seeing frailty instead as a state of vulnerability that arises in relation to the accumulation for health deficits. Frailty index is measured by comparing the ratio of health deficits present within an individual to possible health deficits using a pre-specific list of health conditions.

There is a screening tool such as Clinical Frailty Scale with which the assessor makes a judgment about the degree of a person's frailty based on clinical data in a 9-point ordinal scale. In this scale the health professional considers information about cognition, mobility and functions and co-morbidities based on the history and examination.

The Clinical Frailty Scale is shown in the table below.

Clinicians in geriatric medicine may remember the geriatric giants which is characterized by 4 'I's, Immobility, Incontinence, Instability and Impaired intellect, this was defined by Bernard Isaacs, one of the forefathers of Geriatrics in United Kingdom.

A related concept is that, of 'atypical disease presentation', which suggests that older adults tend to present with symptoms that are seemingly unrelated to the primary organ in which the disease is occurring. For eg; some one presenting with falls may have an infection either in his/her urine or chest.

For clinicians newly armed with an understanding of frailty, it will follow the atypical disease presentations are manifestations of the failure of highest order functions therefore indicates underlying frailty. Such presentations in older people indicate an acute medical illness and needs urgent medical attention.

A Doctor's understanding and recognising frailty gives an opportunity to address the person's overall health and to assess the prognosis and to optimise use of health care resources.

Provision of information about what to expect with disease progression can affect the choices people make.

In contrast older adults who are not frail greatly benefit from any interventions focused on single illness. Care of the frail older adults, especially when they are ill is more complex. Such care requires a skill set that can embrace this complexity and not to seek to reduce it to single problem, on a problem list and treated at one at a time.

A research opportunity is possible to introduce the measurement of frailty and to apply it in clinical practice in Sri Lanka.

Compiled by:

**Dr Kantha Niranjan**

FRCP(Lon)FRCP(Ed)

Consultant Physician with Special interest in Geriatrics & Stroke

Ex-President and Trustee for MIOT(UK)

### For further reading

1. Moorhouse, P., and K. Rockwood. "Frailty and its quantitative clinical evaluation." The journal of the Royal College of Physicians of Edinburgh 42.4 (2012): 333.

Item	Description	Details
1	Very fit	Robust, active, energetic, well motivated and fit. Exercises regularly
2	Well	Without active disease but less fit than category 1
3	Managing well	Disease symptoms are well controlled compared with those in category 4
4	Apparently vulnerable	Although not frankly dependent, commonly complain of being slowed up or have disease symptoms
5	Mildly frail	Limited dependence on others
6	Moderately frail	Help needed with IADLs <sup>1</sup> & BADLs <sup>2</sup>
7	Severely frail	Completely dependent for all BADLs and IADLs
8	Very severely frail	Completely dependent, approaching end of life. Could not recover from even a minor illness
9	Terminally ill	Life expectancy <6 months but not otherwise frail

1. IADLs= instrumental activities of daily living; banking, transportation, cooking, cleaning, medication management, shopping

2. BADLs= basic activities of daily living: feeding, bathing, dressing, toileting, and ambulation



**Ceylon College of Physicians**  
**Joint Clinical Meeting with the Jaffna Medical Association**  
**Date: 5<sup>th</sup> - 6<sup>th</sup> of April 2013**  
**Venue: Public Library Auditorium**



**Day 1 : 5<sup>th</sup> of April 2013 Time: 8.15 am to 4.30 pm**

08:15	-	<b>Registration</b>	11:50 - 13:00	<b>Multidisciplinary approach to multiple myeloma</b>
08:40	-	Lighting of Oil Lamp and National Anthem	11:50 - 12:05	<b>Clinical presentation</b> Dr. S. Srikanan Consultant Physician, BH Chavakachcheri
08:45	-	Jaffna Medical Association Anthem		
08:50	-	Welcome address by Dr. N. Jeyakumaran President, Jaffna Medical Association	12:05 - 12:20	<b>Radiological diagnosis</b> Dr. K. Sivasithamparam Consultant Radiologist, TH Jaffna
08:55	-	Welcome address by Dr. Udaya Ranawaka President, Ceylon College of Physicians	12:20 - 12:35	<b>Histological diagnosis</b> Dr. T. Sooriyakumar Consultant Haematologist, TH Jaffna
09:00 - 10:20		<b>Symposium on infectious diseases</b>		
09:00 - 9:20		<b>Dengue management: Current concepts</b> Dr. Upul Dissanayake Consultant Physician, GH Kalutara	12:35 - 12:50	<b>Management of MM</b> Dr. Chrisanthy Rajasooriyar Consultant Clinical Oncologist, TH Jaffna
9:20 - 9:40		<b>Typhus</b> Dr. S. Ghetteeswaran Consultant Physician, TH Jaffna	12:50 - 13:00	<b>Discussion</b>
			13:00-13:45	<b>Lunch</b>
			13:45-15:15	<b>Symposium on Non Communicable Diseases</b>
9:40 - 10:00		<b>Melioidosis</b> Dr. T. Kumanan, Senior Lecturer Faculty of Medicine, University of Jaffna	13:45-14:15	<b>Update on Diabetes mellitus</b> Dr. Arosha Dissanayake, Senior Lecturer, Faculty of Medicine, University of Ruhuna
10:00 - 10:20		<b>Antibiotic prophylaxis in infection prevention</b> Dr. Panduka Karunanayake, Senior Lecturer Faculty of Medicine, University of Colombo	14:15-14:45	<b>Update on Ischaemic heart disease</b> Dr. P. Prakash Resident Cardiologist, NHSL
			14:45-15:15	<b>Update on Metabolic syndrome</b> Dr. S. Sivansuthan Consultant Physician, TH Jaffna
10:20 - 10:40		<b>Tea</b>		
11:00 - 11:50		<b>Geriatric Medicine</b>	15:15- 15:30	<b>Tea</b>
11:00 - 11:20		<b>Principles of geriatric rehabilitation</b> Dr. V. Sujenitha Consultant Physician, TH Jaffna	15:30-16:30	<b>Symposium on NCDs continued</b>
11:20 - 11:40		<b>Mental health in geriatric care</b> Dr. S. Sivayogan Consultant Psychiatrist, TH Jaffna	15:30-16:00	<b>Update on Stroke</b> Dr. K. Ajantha Consultant Neurologist, TH Jaffna
11:40 - 11:50		<b>Discussion</b>	16:00-16:30	<b>Update on Asthma</b> Dr. Gowri Selvaratnam Consultant Chest Physician, TH Jaffna
			19:00-20:00	<b>Trainers and Trainees Meeting</b> <b>TILKO HOTEL</b>

**Day 2 : 6<sup>th</sup> of April 2013, Time: 9.00 am to 12.10 pm**

9.00-9.30	<b>Update on Osteoporosis</b> Dr. Lilani Panangala, Consultant in Rheumatology & Medical Rehabilitation, Rehabilitation Hospital Ragama	11.00- 11.30	<b>Achieving Remission in Rheumatoid Arthritis</b> Dr. Duminda Munidasa Consultant in Rheumatology & Medical Rehabilitation, Rehabilitation Hospital, Ragama
9.30-10.00	<b>Diagnostic workup of Chronic Kidney Disease</b> Dr. T. Peranandarajah, Consultant Physician, TH Jaffna	11.30-12.00	<b>Management of Hypothyroidism</b> Dr. G. Elankumarabahu, Consultant Physician, GH Kilinochchi
10.00-10.30	<b>Tea</b>		
10.30-11.00	<b>Revisiting Acute Poisoning</b> Dr. Arosha Dissanayake, Senior Lecturer, Faculty of Medicine, University of Ruhuna	12.00 -12.10	<b>Concluding Remarks</b> Dr. Udaya Ranawaka, President- CCP

**Symposium on Non Communicable Diseases and Rehabilitation**

**Workshop for Nurses**

**Date : Friday, 5 April 2013, Venue : Auditorium, Nurses Training School, Jaffna, Time : 9.30 am to 4.15 pm**

# MCQ in Surgery

**1) Indication for surgery in Multi Nodular Goiter (MNG) includes**

- a) Thyroiditis
- b) Features of airway obstruction
- c) Retrosternal extension
- d) Relapses of toxic symptoms
- e) Cosmetic appearance

**2) In managing head injury patient, the most important initial step would be**

- a) securing the airway
- b) X ray of cervical spine
- c) intravenous access
- d) suturing of scalp laceration
- e) scoring the GCS

**3) A 30 year old male motorcyclist is admitted to Emergency Unit for observation after a grade III splenic injury (CT Scan); which of the following indicates doing a laparotomy?**

- a) Haemoglobin 10g/dl
- b) Serum amylase 300(0-250)
- c) extraperitoneal bladder injury
- d) leucocytosis 15000 / mm<sup>3</sup>
- e) air under the diaphragm in erect CXR

**4) Commonest cause of mechanical small bowel obstruction in an adult?**

- a) Gall stone ileus
- b) Post operative adhesions
- c) Irreducible hernia(inguinal)
- d) Malignancy
- e) Intrabdominal sepsis

**5) Which of the following DOES NOT warrants a thyroidectomy in a multinodular goiter?**

- a) Cosmetic unacceptance
- b) retrosternal extension
- c) toxic change
- d) change to follicular neoplasm
- e) Hypothyroidism

**6) Prophylactic antibiotic indicated in**

- a) Mastectomy
- b) Burr hole aspiration of EDH
- c) Internal fixation of femur
- d) Interval appendisectomy
- e) TURP

**7) Hand infection**

- a) caused by staphylococcus aureus
- b) hand elevation reduces complications
- c) Paronychia abscess is effectively treated with cloxacillin
- d) Palmer abscess should be treated surgically
- e) Abscess drainage should not be sutured primarily

**8) A 60 year old male has developed fever, chest pain and subcutaneous emphysema after application of a self expanding covered stent for a malignant stricture at midoesophageal level. The most likely diagnosis**

- a) Myocardial infarction
- b) Aspiration Pneumonitis
- c) Pulmonary embolism
- d) Oesophageal perforation leading to mediastinitis
- e) Cardiac tamponade

**9) Acute appendicitis**

- a) common between 15-35 years
- b) ultrasound scan is essential before deciding on appendisectomy
- c) always managed by surgical treatment
- d) leads to peritonitis early in children
- e) pelvic appendix may present with loose stools

**10) Painful perianal conditions**

- a) Abscess
- b) Haematoma
- c) Acute fissure
- d) Fistula
- e) Mucosal prolapse

Compiled by

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**Answers for MCQ in Obstetrics & Gynaecology  
(February Issue)**

- |          |           |
|----------|-----------|
| 1. TFTTT | 6. TFTTT  |
| 2. TTFTT | 7. TTTTT  |
| 3. FTFTF | 8. FTFFF  |
| 4. TFTTT | 9. FTTF   |
| 5. TFTTT | 10. TTTFT |

## Highlights of JMA's Clinical Meeting Series - March 2013



Dr. Murali Vallipurathan, Consultant Community Physician attached to Ministry of Health was introduced by the President, JMA to the audience.



Dr. Murali Vallipurathan when delivering a lecture on “Presenting Research” on the JMA's Clinical Meeting Series held on 23rd of March 2013.

## Introduction of Quality Improvement Programme at the Divisional Hospital, Chankanai.



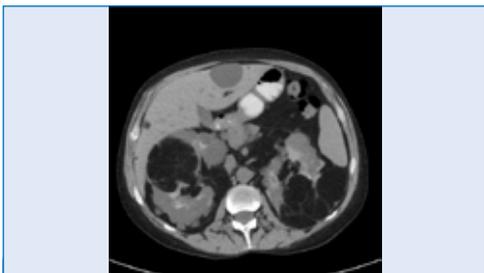
# Image Challenge



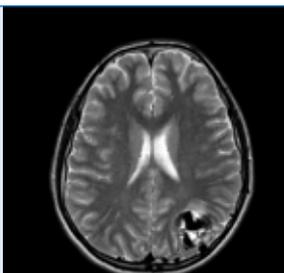
1. A 26 year old male presented with insidious onset of Left lower limb pain; X ray left distal femur is shown; what is the diagnosis?



2. CXR of a man who presented with right sided chest pain; What is the diagnosis?



3. CT abdomen of a young female with epilepsy; What are the CT findings and the most probable diagnosis?



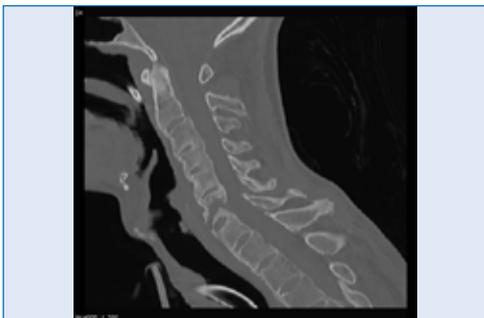
4. MRI brain of a patient with intractable epilepsy; What is the diagnosis?



5. CXR of a patient with cough and fever of 3 days duration; What is the diagnosis?



6. An X ray lateral cervical spine of a 26 year old man with sore throat and fever of one month duration; What is the diagnosis?



7. CT cervical spine – bone window of an adult patient with long term neck stiffness, acutely presented with upper limb weakness following a trauma to the neck; What is the diagnosis?



8. Patient was found to have rigid abdomen on examination. What is the radiological sign in this abdominal X-ray suggesting diagnosis?

Compiled by: **Dr.Mrs. P. Sheyamalan**, Consultant Radiologist, Base Hospital, Point Pedro.

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