



**Sri Ramakrishna
Hospital (MultiSpeciality)**



pulse

Happenings at Sri Ramakrishna...



**WORLD
ASTHMA DAY**
MAY 02, 2023
**ASTHMA CARE
FOR ALL!**



D Lakshminaraswamy
Managing Trustee

It gives me immense happiness to be a part of this organization and a privilege to be part of team that constantly strives to provide the best. We work with a vision to make world-class healthcare affordable a reality. Every day we look forward to providing the best medical help. It's inspiring to see how our medical community has worked during challenging times. As healthcare professionals, we have the opportunity to make a significant difference in people's lives every day.

In the current scenario, the pollution levels are heightened and the need to care for lungs has increased. This World Asthma Day marks the importance of taking care of lungs and also the significance of having healthy lungs. Let's pledge to breathe easier.



Dr P Sukumaran
Dean / Medical Director

Sri Ramakrishna Hospital is the flag bearer for treating the rarest and most complex cases of various diseases. We have always been the best hospital for offering advanced treatment, in most cases a non-invasive surgery helping patients recover as quickly as possible. We have performed various rarest lung surgeries with the help of our dedicated team of surgeons, supported by cutting-edge technology and unwavering commitment. These ground breaking surgeries not only reflect our hospital's expertise and innovation but also highlight our unwavering dedication to providing the highest quality of care to our patients. Along with understanding the significance of World Asthma Day, it is important that we celebrated World Hygiene Day on May 5th, 2023. Clean hands reflect our commitment to health and well being, pertaining to that we took an oath to maintain hand hygiene for a better future. I would like to take a moment to thank all the nurses for their unending support and their contribution in the medical field. Wishing all the nurses a happy World Nurses Day.

In the month of June, we are planning to conduct a webinar on **Approach to Thrombocytopenia-Hematological aspects to unravel the Myths** and one more topic **Stroke Rehabilitation**.

Editorial Team

Dr P Sukumaran
Dean / Medical Director

Dr N Loganathan
Pulmonologist

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Head - Marketing

Sri Ramakrishna Hospital Celebrates Nurses Day by Releasing Balloons To Honour Nurses For Their Endless Dedication To Healthcare

Sri Ramakrishna Hospital celebrated Nurses Day by releasing balloons and highlighting the crucial role of nurses in the healthcare industry.

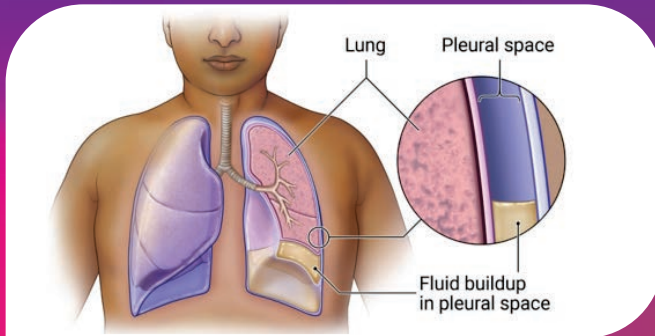
The event took place on May 12th, 2023 at Sree Velumaniammal Kalyana Mandapam, Sri Ramakrishna Hospital Campus, Coimbatore, and aimed to honour and recognize the selfless service of nurses who are at the forefront of patient care.



Sri Ramakrishna Hospital celebrated International Nurses Day to mark or chronicle the endless service of nurses and to commemorate the birth anniversary of Florence Nightingale. Dr.J. Karpagam, Chief Nursing Officer of Sri Ramakrishna Hospital, welcomed the gathering. The function was inaugurated by Mrs. Saramma Samuel, Secretary, RVS Institutions, she delivered the chief guest address. Joint Managing Trustee of SNR Sons Charitable Trust Shri. R. Sundar, delivered the Presidential address. The event was attended by hospital staff, nurses, and management officials, who all shared their appreciation for the tireless efforts of nurses in providing compassionate care to patients. The balloon release symbolized the spirit of care and compassion that nurses embodied, soaring high above the sky as a testament to the nurses' dedication to their work.



Dr.P.Suseela, Consultant Biochemist & Quality Director-Laboratory, received an award from Quality & Accreditation Institute (QAI) for her speech on “**Deep dive into Laboratory Processes: The best Practices of IQC**” and the **QSKOOL** workshop was organized by Quidel Ortho.



Role of Medical thoracoscopy in the evaluation of Pleural Effusion

The pleural space is bounded by two membranes, the visceral pleura covering the lung and the parietal pleura covering the chest wall and diaphragm. Normally, liquid and protein enter from the systemic circulation and are removed by the parietal pleural lymphatics. Pleural pressure is subatmospheric and thus ensures inflation of the lungs. The mesothelial cells covering the pleura are leaky and thus excess pleural fluid can move across into this lower-pressure, high-capacitance space and collect as a pleural effusion. Pleural effusion results from abnormal collection of fluid due to excessive production or decreased pleural fluid absorption. Thus, pleural effusions are common and of highly diverse etiologies. Excess pleural fluid can accumulate in the pleural space when there is an excessive pleural capillary permeability and there is pleural inflammation. The etiologies for the pleural effusion can have pulmonary, pleural and extra pulmonary causes. The fluid can be transudative or exudative depending on the pleural fluid composition [Light's criteria]. The development of a pleural effusion is a common manifestation of pulmonary disease. In 50 percent of all cases of pleural effusion, the diagnosis is apparent after a thorough history and physical examination and a work-up, including diagnostic thoracentesis and with other selected diagnostic tests. Unfortunately, as many as 15% to 20% of all pleural effusions remain undiagnosed despite intensive efforts for the diagnosis after diagnostic thoracentesis and/or closed pleural biopsy. An undiagnosed pleural effusion often needs histological study for a definitive aetiological diagnosis. Medical thoracoscopy/pleuroscopy is a minimally invasive procedure that allows access to the pleural space using a combination of viewing and working instruments. It also allows for basic diagnostic (undiagnosed pleural fluid or pleural thickening) and therapeutic procedures (pleurodesis) to be performed safely in addition to pleural biopsy for etiological diagnosis of pleural effusion.

A thorough history may provide clues to aetiology. Pleural effusions are classified as transudates or exudates according to the light's criteria. The erect PA chest radiograph is usually abnormal once >200 ml of fluid is present, whereas a lateral film will show blunting of the posterior costophrenic angle with as little as 50 ml. Ultrasound can be used to identify even small effusions. Ultrasound is clearly more sensitive for detecting pleural effusions

than a lateral decubitus chest radiograph, and is also better able to predict the nature of the fluid. CT chest allows small amounts of pleural fluid to be detected. CT is helpful in the assessment and management of loculated pleural effusions in addition to obtaining other informations regarding the etiologies of pleural effusion. Why is it important to differentiate transudates from exudates? If a patient has a transudative pleural effusion, then it is only necessary to treat the cause of the effusion, such as heart failure or cirrhosis. However, if it is an exudative effusion, more investigation is indicated to identify the local problem that is causing the pleural effusion.

Medical thoracoscopy, or pleuroscopy, refers to thoracoscopy typically conducted by a nonsurgeon pulmonologist with the patient under local anesthesia and conscious sedation. Pleuroscopy is an endoscopic procedure that examines the pleural cavity, facilitates drainage of pleural fluid, and guides pleural biopsy, talc pleurodesis, and chest tube placement without endotracheal intubation and general anesthesia. Some practitioners perform pleuroscopic sympathectomy for essential hyperhidrosis, and lung biopsy for diffuse lung disease. Medical thoracoscopy is a safe, reliable, and minimally invasive procedure with a high diagnostic yield in pleural effusions of unclear etiology. Contraindications are uncommon and rarely absolute.

The main limitation for thoracoscopy is the size of free pleural space. Thoracoscopic procedures can be Semi-rigid thoracoscopy and rigid thoracoscopy procedures. Traditionally, medical thoracoscopy had been performed using rigid instruments and the same continued to be the case till the introduction of the semi-rigid thoracoscope.

Medical thoracoscopy is an extremely useful diagnostic modality that can often contribute crucially to accurate clinical decision-making in patients with undiagnosed pleural effusion. In patients where a successful pleural biopsy can be obtained, the yield of medical thoracoscopy performed by either rigid or semi-rigid thoracoscopy instruments has been reported to be similar in a randomized comparison between the two techniques. In a prospective randomized study comparing the size, quality and diagnostic adequacy of biopsy specimens obtained by semi-rigid and rigid thoracoscope, it was demonstrated that there were no differences in the quality and interpretability of the specimens obtained by both the

procedures. Although the specimens obtained by semi-rigid thoracoscope were smaller, they were still of adequate quality and the diagnostic accuracy was comparable with that of rigid thoracoscopy in the evaluation of pleural effusion of undiagnosed etiology. In cases, where an aggressive adhesiolysis is not the aim, semi-rigid thoracoscope offers particular advantages in terms of the procedure being less painful, lesser requirements of analgesic drugs and a smaller scar size. The greatest advantage, however, is the ease of adoption of the semi-rigid thoracoscope by bronchoscopist as the handling of the instrument essentially resembles that of a flexible bronchoscope.

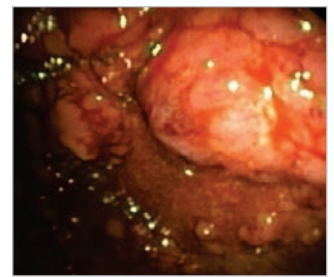
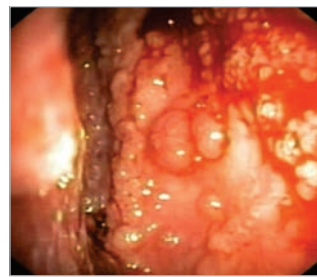
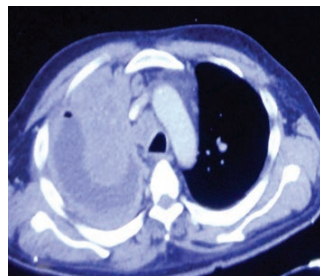
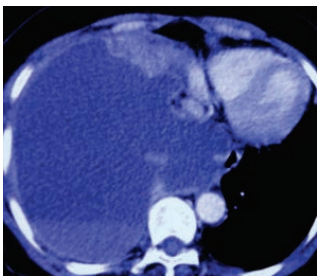
Radiological (CT), thoracoscopy pleural appearance in malignant pleural effusion

Adenocarcinoma Lung

CT chest: Large right pleural effusion with right pleural thickening

Thoracoscopy: Shows variable sized nodules over the parietal pleura with parietal pleural infiltration

Thoracoscopy: Shows large pleural nodules over the parietal pleura with parietal pleural infiltration

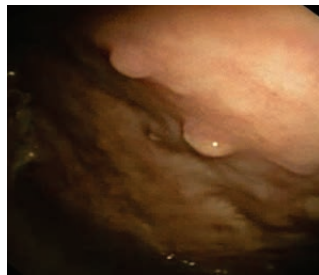


Metastatic pleural effusion

Metastatic pleural effusion

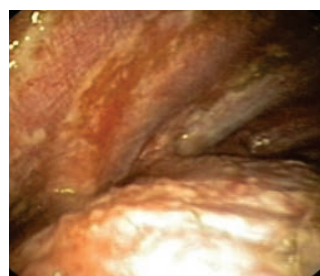
Squamous cell carcinoma lung

CT chest: Large right pleural effusion associated with right pleural thickening with right pleural nodularity



Multiple Pleural adhesions

Multiple parietal pleural nodules



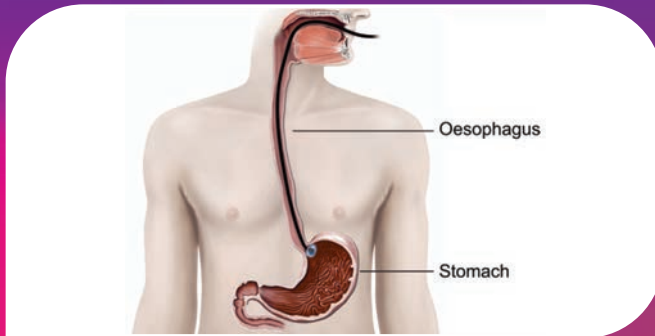
Tuberculosis

Visceral pleural infiltration by tumour

Dr.N.LOGANATHAN

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Consultant & Interventional Pulmonologist & Sleep Specialist





Endoscopic Ultrasound Guided Gastrojejunostomy

Case Report

72 year old elderly female, presented with abdominal pain, vomiting, fever and jaundice. Patient was suffering from periampullary carcinoma, since 2 years and underwent ERCP plastic stenting 2 years back. On evaluation, patient was icteric and pale and mildly febrile. Investigations revealed elevated blood counts and deranged liver profile. Ultrasound revealed dilated intrahepatic biliary radicals, dilated CBD with stent in-situ.

After assessment patient was taken for ERCP which showed blockage in the previously deployed stent and ampullary growth causing duodenal obstruction. The previously deployed stent was retrieved and uncovered metallic stent was deployed. Patient improved symptomatically, abdominal pain and fever subsided and the bilirubin levels reduced. The patient continued to have vomiting due to duodenal obstruction.

The options to relieve the duodenal obstruction were:

- Surgical gastro jejunostomy (open or laparoscopic),
- Duodenal stenting
- Endoscopic ultrasound guided gastro jejunostomy

Surgical gastro jejunostomy was not preferred due to it being an invasive procedure and post operative morbidity. Duodenal stenting was not opted due to risk of tumour in-growth and stent block. After explaining the pros and cons of all the procedures the patient's relatives opted for EUS guided GJ. The procedure went on successfully and the patient recovered and was able to tolerate diet. The patient was discharged after 48 hours.

Discussion

With malignant GOO, data available from the limited number of studies conducted, demonstrated the superiority of EUS-GJ when compared to standard enteral stenting in terms of decreasing recurrence of GOO and need for reintervention.

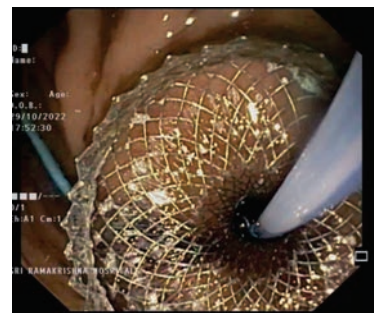
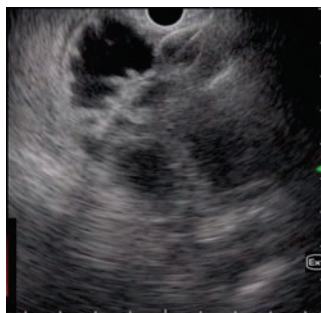
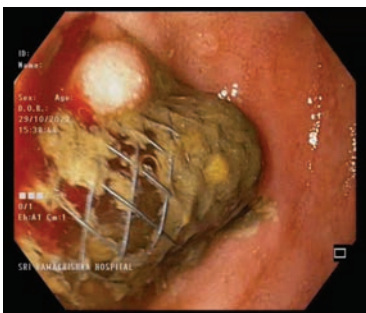
With benign GOO, EUS-GJ offers a solution to the long-term patency and recurrence issue encountered with enteral stenting and endoscopic balloon dilation. EUS-GJ offers a less invasive approach than surgery for the treatment of several etiologies, giving the patients the option to avoid adverse events associated with surgery.

Endoscopic ultrasound guided gastro jejunostomy or gastroenterostomy (EUS-GJ, EUS-GE) is a novel endoscopic procedure that has recently emerged as a new treatment for some benign and malignant etiologies. EUS-GJ has been employed in the treatment of benign and malignant gastric outlet obstruction (GOO) (1) for the most part. Additionally, EUS-GJ has been used in the treatment of afferent loop syndrome (2). EUS-GJ involves obtaining access to the jejunum endoscopically and sonographically from the stomach, using a biflanged lumen apposing metal stent (LAMS). This is achieved through a newly formed fistulous tract. Thus creating a gastrojejunal bypass fully endoscopically.

EUS-GJ has been validated in several animal studies and in some case series. Recently the multicenter studies that have been published mainly highlighting the use of EUS-GJ in treatment of GOO and afferent loop syndrome.

References

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2. Brewer Gutierrez OI, Irani SS, Ngamruengphong S, et al. Endoscopic ultrasound-guided entero-enterostomy for the treatment of afferent loop syndrome: a multicenter experience. *Endoscopy* 2018;50:891-5. 10.1055/s-0044-102254 [PubMed] [CrossRef] [Google Scholar]



Dr.M.MURUGESH

MD, DM., (GASTRO)

Consultant Medical Gastroenterologist & Hepatologist



Upcoming Events

Academics - Sri Ramakrishna Hospital, Coimbatore

Webinar

LIVEWEBINAR

SRH ACADEMICS
WEBINAR FOR DOCTORS

Dr.SRIDHAR GOPAL
MD, Fellowship in Clinical Haematology
Consultant Haematology - Oncologist &
Stem Cell Transplant Physician

SCHEDULED ON

Date: 17.06.2023 | Day: Saturday
Time: 04.00 to 05.00 PM

Prof.V.S.SEETHARAMAN
MPT (Ortho)
HOD, Department of Physiotherapy

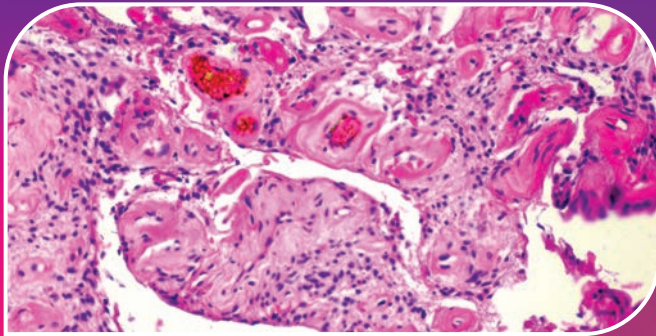
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<https://www.sriramakrishnahospital.com/category/webinar/>





A Very Rare Association of PRES Syndrome in Acute Severe Necrotizing Pancreatitis

Case Report

A 10-year-old boy with a history of severe abdominal pain and vomiting for two days was evaluated in a primary care centre and was diagnosed to have acute pancreatitis. The child was started on intravenous (IV) fluids, antibiotics and supportive drugs. Later, on the same day the child developed few episodes of seizures and started on IV levetiracetam and was shifted to tertiary care centre (Sri Ramakrishna hospital) and was admitted in paediatric intensive care unit (PICU) for further management. On examination, the child was tachypneic, had tachycardia, peripheries were cold, severe tenderness noted in upper abdomen with sluggish bowel sounds. Nasal Oxygen was started, bladder catheterized and vitals were monitored closely. Ryle's tube with continuous drain placed and was advised Nil Per Oral. Fluid resuscitation with maintenance was started as per protocol. Paracetamol infusion was started for pain management and IV levetiracetam was continued.

Laboratory Investigations

Day	D1	D7	D10	D12	D14	D19	D21	D26
Investigations								
WBC count (cells/mm ³)	22250	24750	41050	32990	27760	13690	12860	7070
Hb (g/dL)	15.8	9.9	8.5	8.4	8.4	9.5	10.4	11.1
Hematocrit	51 %	30.9	27	26	27.2	31.3	34.2	36.3
Platelet count (10 ³ /uL)	337	384	659	715	943	805	778	619
CRP (mg/L)	40.9	279.12	169.7	-	-	26.95	-	-
Urea	29	-	22	-	-	-	-	-
Creatinine	0.5	-	0.4	-	-	-	-	-
Sodium	136	-	137	-	-	-	-	-
Potassium	4.3	-	4.2	-	-	-	-	-
Amylase (U/L)	1755	275	-	-	-	157	-	-
Lipase (U/L)	12337	685	-	-	-	481	-	-
Triglycerides (mg/dL)	115	-	-	-	-	-	-	-
SGOT (U/L)	47	-	-	42	-	-	-	-
SGPT (U/L)	21	-	-	15	-	-	-	-
TSH (IU/mL)	0.749	-	-	-	-	-	-	-
Procalcitonin (ng/mL)	-	0.74	5.3	3.6	1.8	0.22	-	-
PT	15.2	-	-	-	-	-	-	-
INR	1.01	-	-	-	-	-	-	-
aPTT (Seconds)	33	-	-	-	-	-	-	-

Other Investigations:

Contrast-enhanced computed tomography (CECT) abdomen done on Day 2, showed features of acute necrotizing pancreatitis with acute necrotic collection, moderate ascites, bilateral mild pleural effusion with CT severity score >8.

MRI brain on Day 2 showed Cortical and subcortical T2 and FLAIR hyperintensity with petechial haemorrhages in bilateral frontoparieto occipital lobes. Acute haemorrhage in right frontal lobe. Subarachnoid haemorrhage noted. No evidence of aneurysm, arterio venous malformation or thrombus in dural venous sinuses. Features suggestive of Posterior Reversible Encephalopathy syndrome (PRES).

Treatment Course and Outcome: The child was started with clear liquids through Ryle's tube from Day 4 and was well tolerated. He had high grade fever spikes with elevated WBC count and CRP since admission - Sepsis vs Systemic Inflammatory Response Syndrome (SIRS) was considered and started on IV Meropenem. Despite the initiation of antibiotic, the child continued to have high grade fever spikes and the repeat WBC counts, CRP and procalcitonin levels were highly elevated. On Day 7, a repeat CECT abdomen was done which showed acute necrotic collection replacing tail and uncinata process of pancreas extending into peripancreatic plane with multiple locules of necrotic collections in lesser sac, cranial to splenic flexure and left anterior pararenal space. Mild ascites, complete thrombosis of splenic vein with floating thrombus in portal vein, thickened walls of ascending colon and hepatic flexure -- probably due to mesenteric venous ischemia was noted. In comparison, to prior CT scan done on Day 2 the necrotic collections were well organised and ascites has decreased. Hence, Percutaneous Pigtail catheter was placed into acute

Aetiological Work-Up

Work-up	Results
Gall bladder stone/ sludge	Nil
Triglycerides	Normal
Abdominal Trauma	Nil
Calcium/ Parathormone level	Normal
COVID- 19 RT PCR	Negative
COVID antibodies	IgM – Negative, IgG – Positive
IgG4 level	Normal
Herpes simplex DNA PCR I & II	Negative
ANA (If method)	Negative
P ANCA and C ANCA	Negative
Family History	Third degree relative (Cousin) - Recurrent Acute Pancreatitis due to Pancreatic divisum
Genetic work up for Familial Pancreatitis	Not done
MRCP during follow-up	No pancreatic divisum or any other congenital abnormality
ANA	Negative
Direct Coomb's Test	Negative
Homocysteine level	Normal
Vitamin B12 level	Normal
Thrombophilia work up during follow up	Negative

Necrotic collection near tail of pancreas on the same day as a step-up approach. Antifungals (IV Fluconazole) and antibiotics (Ofloxacin, Teicoplanin) were also added. After analysing the risk vs benefit, Low Molecular Weight Heparin (LMWH - Enoxaparin) was started in view of probable mesenteric venous ischemia. Bladder catheter was removed and Central venous line was placed into right internal jugular vein on Day 8. Ryle's tube was removed and oral liquid diet started from Day 9. Blood cultures at 3 different sites (right cubital, left cubital and right femoral), urine culture and pigtail DT fluid culture didn't show any growth. DNA sepsis panel (PT PCR) was sent and showed pan-bacterial DNA detected (Medium level), pan-fungal (DNA) detected (low level), VIM/NDM-1 detected. However, Colistin was not started as there was a decreasing trend in total WBC counts, CRP, procalcitonin level with the already given antibiotics and antifungals. After a week of the antibiotics coverage, total WBC count, Procalcitonin, CRP level reduced significantly. Both tachycardia and tachypnea settled. Occasional drop of blood pressure was stabilised with fluid bolus and never required an inotropic/vasopressor support. Two units of PRBC transfused on Day 13 and day 15 to correct anaemia. Soft diet was started with pancreatic enzyme supplement from Day 14. Early ambulation and chest physiotherapy was started by physiotherapists appropriately. Meropenem, Fluconazole and Ofloxacin were stopped after 14 days. Repeat CECT abdomen on Day 24 showed - acute necrotising pancreatitis sequelae with intraparenchymal walled off collections in uncinate process and tail. Small collections with fat saponification in bilateral pararenal space (L>R), bilateral paraaortic gutter, perisplenic and perihepatic region. Mild ascites. Splenic vein thinning with gastric fundal varices. When compared to CT done on Day 7, the collections have reduced in size. Also, repeat CECT Brain on Day 24 showed - Resolving haematoma with surrounding oedema in right frontal lobe. On Day 25, LMWH was stopped and continuing with oral anticoagulants was

not considered in view of frontal lobe hematoma, though ideally it need to be continued for 3-6 months. Folic acid and low dose aspirin were started. During the follow-up, repeat CECT abdomen showed collection and necrosis settled well and CT Brain showed resolved hematoma with complete resorption of petechial haemorrhages in bilateral frontoparieto occipital lobes. The child is continued on low fat diet, pancreatic enzyme supplementation and antiepileptic levetiracetam for an year now and the child is keeping well.

Discussion: Posterior reversible encephalopathy syndrome (PRES) is characterized by the clinical findings of headache, altered mental functioning, seizures, and loss of vision associated with symmetric and bilateral cerebral edema, most commonly in the occipito-parietal regions, on the neuroimaging studies. Hypertensive encephalopathy, eclampsia, immunosuppressive agents, and cytotoxic drugs can cause PRES. A patient with PRES may recover without sequela after removal of the causative factors. Notably, uncertainty in diagnosis and delay in treatment would have probably aggravated CNS injuries or death. However, the underlying mechanism of the disease remains unclear and controversial. For pancreatitis, most of the previously reported patients had a history of leukemia or heavy drinking, but only one case so far reported history of recurrent pancreatitis with no other etiology. In such scenario, the automatic regulation of cerebral vessels hypothesis does not account for the full spectrum of pathophysiology of this disorder, as with other patients with moderate hypertension. After recurrent pancreatitis, hyperactivation of trypsinogen and the release of various inflammatory mediators, cytokines, and chemokines likely cause subsequent endothelial dysfunction that can lead to resultant hypoperfusion and ischemia. Moreover, in our case the patient did not have a previous history of pancreatitis and this being the first episode. Thus, that pancreatitis itself may be an etiology of PRES. Acute pancreatitis is one of the common clinical disorders presenting as an acute abdomen, while pancreatitis itself can be life-threatening. This case reminds clinicians of unusual complication. In pancreatitis patients with classic neurologic symptoms, the possibility of PRES should be considered regardless of the timing of the onset of symptoms. So far, the association of PRES Syndrome in acute pancreatitis less than 10 cases are reported in the literature.

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EBUS TBNA: A Game-Changer in the Diagnosis of Sarcoidosis with Mediastinal Lymphadenopathy

Introduction

Sarcoidosis is a systemic inflammatory disease that can affect various organs in the body, including the lungs, lymph nodes, skin, eyes, heart and joints. The exact cause of sarcoidosis is still unknown, but it is believed to be related to an abnormal immune response. The diagnosis of sarcoidosis can be challenging, as the disease can mimic other conditions, including tuberculosis.

One of the diagnostic tools for sarcoidosis is endobronchial ultrasound-guided transbronchial needle aspiration (EBUS TBNA) with biopsy. EBUS TBNA is a minimally invasive procedure that allows interventional pulmonologists to visualize and sample mediastinal lymph nodes using a specialized ultrasound probe and a needle. The biopsy sample obtained during the procedure can be used to confirm the diagnosis of sarcoidosis by identifying non-caseating granulomas, which are characteristic of the disease.

Case 1:

A 45-year-old policeman admitted under Internal medicine division with complaints of weight loss, general weakness, and fatigue of 2 months duration. Physical examination was rather unremarkable. Initial routine infective workup were all negative. Viral panel tests were negative, Mantoux was negative. CECT thorax showed mediastinal lymphadenopathy with minimal parenchymal infiltrates. EBUS TBNA with biopsy was performed from subcarinal and right lower paratracheal lymph nodes, histopathological analysis of which revealed non-caseating granulomas; microbiological work up for TB including AFB smear, TB NAAT and AFB culture of lymph node aspirate were all negative. Thus a

diagnosis of Sarcoidosis was confirmed. Bronchoscopic lavage analysis was inconclusive. The patient was started on corticosteroid therapy and subsequently showed significant improvement in his symptoms.

Case 2:

A 55-year-old male presented to eye OP with uveitis, joint pain and skin rashes. Skin biopsy revealed non specific panniculitis. RA factor, Anti CCP and ANA were negative. C-ANCA & P-ANCA were also negative.

A chest X-ray revealed bilateral hilar lymphadenopathy, and a CECT thorax confirmed mediastinal lymphadenopathy.

Since, diagnosis remained elusive EBUS TBNA with biopsy was performed from subcarinal, right and left lower paratracheal lymph nodes, histopathological analysis of which revealed non-caseating granulomas. Microbiological tests like AFB smear, TB NAAT and AFB culture were done on the lymph node aspirate, were all negative.

The patient was started on corticosteroid therapy, and gradually his symptoms improved significantly. Uveitis resolved, skin lesions improved as well.

Both these cases of Sarcoidosis, even with classic clinical presentations mimic tuberculosis. The two conditions share many clinical and radiological features, and as such can make the diagnosis challenging.

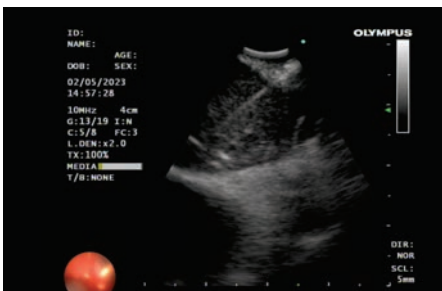
Tuberculosis is caused by the Mycobacterium tuberculosis bacteria, which can be identified using special stains or cultures. In contrast, sarcoidosis does not have a specific infectious agent that can be identified. Instead, the diagnosis of sarcoidosis is based on the presence of non-caseating granulomas on biopsy and negative reports on microbiology.

Another interesting thing to note is that serum ACE which was the sole diagnostic marker for sarcoidosis in earlier days, was negative in both the above cases. So acquiring tissue for microbiological and histopathological examination is the key in such cases.

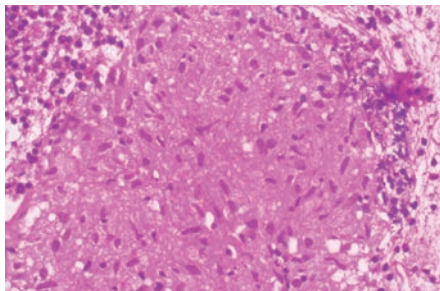
EBUS TBNA has emerged as a minimally invasive technique for obtaining tissue samples from mediastinal lymph nodes, which are often affected in sarcoidosis. EBUS TBNA involves passing a small ultrasound probe through the airways and into the mediastinum, where it can visualize the lymph nodes and surrounding structures in real-time. A fine needle is then passed through the probe, and tissue samples are obtained by aspirating cells from the lymph

nodes. The main advantage of EBUS TBNA is that it allows for the accurate and safe sampling of mediastinal lymph nodes, which are often difficult to access by other means. The procedure has a high diagnostic yield, with reported sensitivity and specificity rates of up to 94% and 100%, respectively, for the diagnosis of sarcoidosis. EBUS TBNA can also be used to diagnose other conditions that can affect the mediastinum, including lymphomas, tuberculosis, lung malignancies and metastatic diseases. Sampling yield can be furthermore improved by introducing a forceps needle/ cryobiopsy probe into the mediastinal lymph node through EBUS scope.

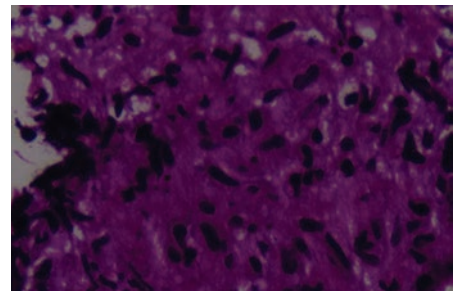
In conclusion, EBUS TBNA has revolutionised the diagnosis of sarcoidosis by providing interventional pulmonologists with a minimally invasive and accurate technique for obtaining tissue samples from mediastinal lymph nodes. The procedure has a high diagnostic yield and can help differentiate sarcoidosis from other conditions that can cause mediastinal lymphadenopathy.



EBUS TBNA needle as traversing the subcarinal node



Non necrotising granuloma of Sarcoidosis in the case-1 patient
(Pic courtesy: Dr T Sethumadhavan, Oncopathologist, SRH)



Non necrotising granuloma of Sarcoidosis in the case- 2 patient
(Pic courtesy: Dr M. L. Raman, Pathologist, SRH)

References: Oki M, Saka H, Kitagawa C, Tanaka S, Shimokata T, Kawata Y, Mori K, Kajikawa S, Ichihara S, Moritani S. Real-time endobronchial ultrasound-guided transbronchial needle aspiration is useful for diagnosing sarcoidosis. *Respirology*. 2007 Nov;12(6):863-8.

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WORLD HAND HYGIENE DAY (MAY 5th 2023)

World Hand Hygiene Day is observed on 5th May of every year to raise the awareness and spread the importance of handwashing. On this day, the WHO calls for healthcare workers, patients and the broader community, to clean their hands and unite together to support a culture of safety and quality in our health service organizations. Hand hygiene saves millions of lives every year when performed at the right time and in the right way during health care delivery most of these infections are caused by multidrug resistant organisms, which again pose a burden on health delivery system. So, hand hygiene is a common goal to save lives. The theme for 2023 is "Accelerate action together; save lives; clean your hands".

To emphasise the importance of hand hygiene our infection control team has made an initiative to educate the usefulness of hand hygiene to the patient and patient attendant on May 5th, 2023. The Link nurses (infection control) from various wards were also involved in this training activity. We have educated more than 100 patients and their attendants from various wards like cardiology ward, step down unit, medical ward, surgical ward, oncology wards, special wards and paediatric wards.



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