DECEMBER 2022

HealthNews DIGEST

Aster HOSPITALS & CLINICS

We'll Treat You Well

Dr. Sherbaz Bichu

CEO & Specialist Anaesthetist
Aster Hospitals & Clinics

Healthcare is a team endeavor that depends upon harmonization among various disciplines who bring high level of expertise and specialized knowledge to our side.

With the release of 4th edition of Aster HealthNews Digest, I would like to appreciate and thank our clinicians across Hospitals and Clinics for sharing their experiences of managing complex cases with profound sense of dedication aiming at best clinical outcome and delivery of extraordinary healthcare to the community.

HealthNews Digest is a platform to disseminate knowledge related to medical practices, utilizing a collaborative medium of communication for developing skills and capabilities among healthcare professionals.

I encourage our clinical professionals to continue your remarkable clinical achievements and increase your participation in HealthNews Digest's forthcoming editions.

Dr. Ramanathan V

Medical Director
Aster Hospitals & Clinics, UAE

As the Medical Director for Aster Hospitals and Clinics, it brings me great pleasure to see that HealthNews Digest is continuously receiving resounding support and commitment from both our medical fraternities and allied health professionals.

I want to express my gratitude to our exceptional team of Aster physicians for enthusiastically supporting this initiative by contributing their knowledge to ensure clinical excellence and the highest quality of patient care.

Let's keep the momentum going as we travel through this fascinating learning via HealthNews Digest together.

Pregnancy with Gangrene of Jejunal Segment

Pregnancy with Gangrene of Jejunal Segment treated successfully at Aster Hospital, Mankhool

Dr. Vanesha Varik
General & Laparoscopic Surgery (Specialist)

PRESENTATION

A 29 year old female came to Emergency Department of Aster Hospital with complaints of severe upper abdominal pain more at central and the left side. She was 14 weeks pregnant.

CLINICAL FINDINGS

- She was afebrile, with stable vitals (no tachycardia)
- Soft and mild tenderness in abdomen in left hypochondrium (No guarding)
- Bowel sounds were found normal

COURSE IN THE HOSPITAL

She was initially admitted under Obstetrics and Gynaecology Department and was transferred to Gastroenterology Department later. Surgical reference was also given on admission.

Her total count was 15.42 N 92.2; CRP 76.31; and abdominal ultrasound showed a long segment of concentric wall thickening involving jejunum with adjoining mesenteric fat stranding suggestive of Infective or Inflammatory Enteritis (CT couldn't be done due to pregnancy)

She was reviewed in 12 hours, it was observed that there was no improvement in her symptoms or signs, and she was still getting severe bouts of pain - but her abdomen remained very subclinical.

The repeated parameters showed a drastic increase in the values, the total count doubled to 28.61 N 91.5 and CRP at 91.41. Hence, it was decided to go for Diagnostic Laparoscopy

Ultrasound image of Edematous Bowel Loop

DURING PROCEDURE

The OT findings showed a long gangrenous segment of 35 cms in length and 20 cms from DJ flexure. There were dilated bowel loops all over the abdomen and blood-tinged free fluid in abdomen. All the bowel loops were edematous and friable and hence, the decision was taken to convert to open surgery by a supraumbilical midline vertical incision. Affected segment was resected using linear cutter staplers and side to side Jejunojejunostomy was done.

Jejunal Loops with Gangrenous Segment

Resected Segment

POST PROCEDURE

The patient and her foetus withstood the procedure well. She was shifted to the ICU post operation and her recovery was smooth. She was put on clexane 60mg BD for 2 weeks and asked to visit the hematologist at the earliest possible.

She followed up twice in OPD and was completely recovered by her last visit

DISCUSSION

Every attempt was made to uncover a coagulation disorder, but all reports came normal. Eventually no exact cause of the gangrenous bowel could be identified but pregnancy is known for being a hypercoagulable state which might have temporarily affected the mesenteric vessels of said segment.

There was an immense support from the Radiology (Dr. Pawan), Anaesthesia (Dr. David and team), ICU (Dr. Vikas and team), and Ob/Gyn (Dr. Danu) departments at Aster. This was successful for the mother and her baby because of our multidisciplinary team efforts.

Complex Elbow Limb Saving Surgery

Complex Elbow Limb Saving Surgery conducted effectively at Aster Hospital, Al Qusais

Dr. Raghavendra Kunebelakere Siddappa
Orthopedics (Specialist)

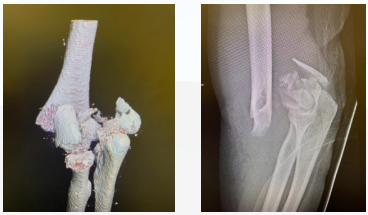
PRESENTATION

- 35 year old female
- History of road traffic accident, fall from non-motorized scooter
- Admitted with:
  - Severe pain and swelling around left elbow and numbness in left hand
  - Inability to move left upper limb
  - ? Compartment Syndrome in left forearm and hand

FINDINGS

During Examination:

- Observation of severe tenderness around right elbow
- Severe swelling around the elbow, forearm, and hand
- Presence of crepitus and abnormal mobility around the lower end of humerus
- Feeble distal radial pulse (Brachial Artery Thrombosis?)
- Numbness over thumb and little finger (Median and Ulnar Compression Neuropathy)



3-D CT Scan and X-ray of the elbow joint showing Complex Comminuted Displaced Fracture Dislocation of lower end of Humerus

SURGICAL PROCEDURE

- Midline posterior incision was made over the left elbow, soft tissues retracted.
- Chevron Osteotomy of the olecranon was carried out.
- The triceps reflected, ulnar and median nerve released from neuropraxia.

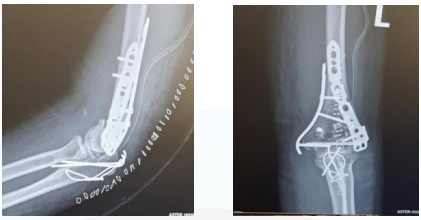
- The comminuted fracture at the lower end of humerus was reduced with the help of K-wires and was fixed with lateral and medial condyle anatomical locking plate and screws.
- The radial pulses improved after the fracture reduction.
- Drain was fixed and wound was closed with the above elbow splinting.

The comminuted fractures around the elbow with Ulnar and Median Nerve Neuropraxia

Reduction of the comminuted fracture with K-wires

POST PROCEDURE

- Patient was on antibiotics, analgesics and left upper limb physiotherapy for 2 days.
- Within 12-18 hours, median and ulnar neuropraxia symptoms improved.
- Patient was discharged after 48 hours of surgery.



Digital X-ray showing anatomical reduction of lower end of Humerus in antero-posterior and lateral views

DISCUSSION

Compartment Syndrome is a known complication of Brachial Artery Injury / Thrombosis. An early intervention and fixing the complex fractures around the elbow will restore the brachial artery blood circulation which eventually prevents the forearm going into compartment syndrome. Our early intervention helped and saved patient's upper limb.

Ludwig's Angina

Ludwig's Angina - A Complex Dental Infection treated with Surgical Decompression successfully at Aster Hospital, Mankhool

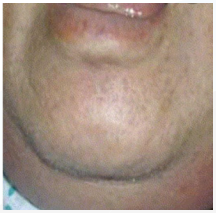
Dr. Renju Prem
Oral & Maxillofacial Surgery (Specialist)

PRESENTATION

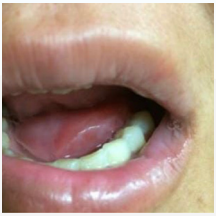
A 33 year old female reported to the emergency with a chief complaint of pain, inability to open the mouth, and swelling involving the neck region since 3 days, associated with difficulty in breathing.
A preliminary diagnosis was established of Ludwig's Angina, clinically and radiologically. Patient was started on intravenous medications, posted for immediate surgical decompression with consent for an emergency tracheostomy if needed.

CLINICAL EXAMINATION FINDINGS

- Respiratory distress
- Temperature 100.8 F
- Pulse rate 102 beats/min
- Blood pressure 130/90mmHg
- Mouth opening: 1-1.5 cm (interincisal distance)
- Extra oral swelling: bilaterally involving the submandibular spaces, submental and sublingual spaces
- Elevation or tongue/floor of mouth



Pre-operative image showing bilateral submandibular and submental swelling



Elevation of the floor of mouth/tongue

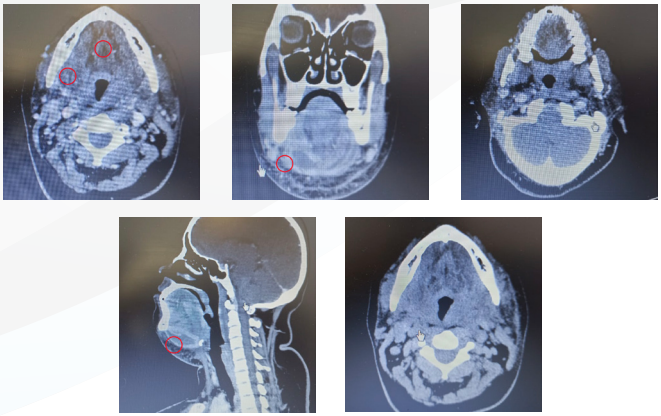
Left sided submandibular swelling showing cellulitis/brawny induration

LABORATORY INVESTIGATION

- CRP levels high (above 200)
- Marked eosinophilia
- Increased TLC count

RADIOLOGICAL FINDINGS

- Soft tissue thickening and stranding extending to parapharyngeal space on left side
- Multiple enlarged cervical lymph nodes



Peripherally enhancing collection in floor of mouth involving sublingual and bilateral submandibular spaces with thickening and edema of soft palate, epiglottis, glosso-epiglottic, aryepiglottic folds causing narrowing of oropharyngeal and laryngopharyngeal airway

PROCEDURE

- Patient was evaluated clinically, preanesthetic parameters checked and posted for surgical decompression under local anesthesia.
- Under LA with necessary aseptic precautions, separate stab incisions were made in the submandibular and submental spaces.
- Sinus forceps used to open up the tissue spaces, pus evacuated along the submandibular and submental spaces.
- Intraorally extraction of the offending tooth (mandibular right third molar) was done, pus drained intraorally along the socket and pterygomandibular spaces, with improved mouth opening achieved intraoperatively.
- Wound irrigated and drain tubes were placed at multiple sites along the tissue spaces involving the submandibular and submental spaces.
- Airway stabilized and secured.

Intra-operative drainage of pus involving the pterygomandibular space with third molar tooth extraction

POST PROCEDURE

Patient withstood the procedure well and was uneventful. Postoperatively patient was shifted to the ICU and monitored thereafter. Respiratory distress was improved effectively postoperative day 1 onwards, monitored with intravenous medications and blood picture showed a steady decline in CRP and TLC levels.

She was stable, with normal vitals, and shifted to the ward post operative day 3. Post-op CT scan revealed a significant improvement of airway and visible reduction in oedema.

DISCUSSION

Ludwig's angina is a form of rapidly and progressive diffuse gangrenous cellulitis and edema of the soft tissues of the neck and floor of the mouth. With progressive swelling of the soft tissues and posterior displacement of the tongue, the most life threatening complication of this condition is an acute airway obstruction. This condition presents as an acute onset and spreads rapidly bilaterally affecting the submandibular, sublingual, and submental spaces.

Early diagnosis and treatment planning could be lifesaving.

In Ludwig's Angina, the primary site of infection is the submandibular space. This space is subdivided by the mylohyoid muscle into the sublingual space superiorly and submaxillary space inferiorly. The majority of cases in this condition are primarily odontogenic in etiology, primarily resulting from infections involving the second and third molars. Infection can spread contiguously to involve the pharyngomaxillary and retropharyngeal spaces thereby encircling the airway completely.

Beta hemolytic streptococcus associated with anaerobes such as Peptostreptococcus and pigmented Bacteroides have been identified as the causative agents. Airway compromise is synonymous with Ludwig's angina and is the leading cause of death. Airway management is the most important in these patients alongside infection management protocols.

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Dr. Amal Premchandra Upadhyay
Gastroenterology And Hepatology (Consultant)

Dr. Pawankumar Maniyar
Radiology (Specialist)

Dr. Akansha Gandhi
Pathology (Specialist)

Dr. Kirthi Raju
Rheumatology (Consultant)

Aortoarteritis (Takayasu's Disease)

An interesting case of Aortoarteritis (Takayasu's Disease) with TB Lymphadenitis and Elevated IgG4 treated effectively at Aster Hospital, Mankhool

PRESENTATION

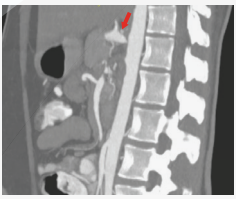
- 30 year old female
- Medical history of hypertension and Aortoarteritis
- No family history of similar illness. Both parents have suffered from TB in the past
- Admitted with:
  - Complaints of severe abdominal pain radiating to the back for 3 days
  - Episodes of vomiting
  - Several visits to ER without resolution of symptoms and without specific diagnosis
  - OE: Left radial pulse was not felt

RADIOLOGICAL FINDINGS

CECT Abdomen:

- Doubtful Subacute appendicitis
- Left external iliac and inguinal lymph node enlargement
- Short segment of high-grade luminal stenosis involving the coeliac artery origin with post-stenotic dilatation
- Thrombotic occlusion of short segment of superior mesenteric artery origin
- Thrombosis of right segmental portal vein
- Atrophic left kidney

CT Angiography Images

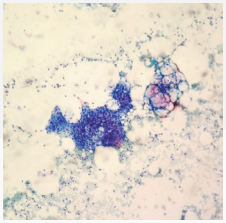


High Grade Stenosis of Coeliac Artery Origin with Post-Stenotic Dilatation and Thrombotic Occlusion of Proximal Superior Mesenteric Artery

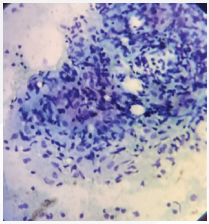
Diffuse Narrowing of Left Renal Artery with Small Left Kidney

Enlarged Left Inguinal Lymph Nodes

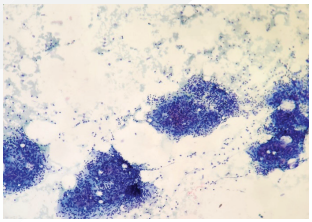
Photomicrographs of Granulomatous Lymphadenitis on FNAC



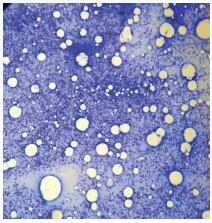
Epithelioid Cell Granuloma in a background of Lymphoid Cells; Papanicolaou 100x



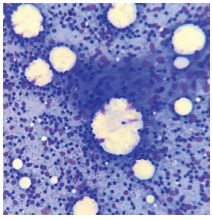
Non Necrotizing Granuloma; Papanicolaou 400x



Multiple Non Necrotizing Granulomas in a Lymphoid background; Papanicolaou 100x



Mixed Lymphoid Cell background with a Compact Granuloma and Scattered Epithelioid Cells; MGG 100x



Epithelioid Cells Granuloma at higher magnification and Mixed Lymphoid Cell Population; MGG 400x

COURSE IN HOSPITAL

- Endoscopy was unremarkable.
- Patient developed bilateral sialadenitis during hospitalization.
- Poorly responsive to PPI (proton pump inhibitors), NSAID, Narcotic analgesia.
- She was treated with LMWH, aspirin, and steroids and responded well to the treatment. Bilateral sialadenitis also responded rapidly to treatment.
- Serum levels of IgG4 were also elevated.
- Interestingly, investigations pertaining to tuberculosis came positive:
  - Mantoux test; QuantiFERON test
  - FNAC from inguinal lymph nodes: Granulomatous Lymphadenitis; consistent with TB

DISCUSSION

Aortoarteritis (Takayasu's Disease) is a rare condition which makes this an interesting case for presentation. Despite the association with TB and the similarity between granulomatous lesions in both diseases, the exact role of Mycobacterium Tuberculosis in the pathogenesis of Aortoarteritis is still unknown.

Recent systematic review of several published articles found that most of the current studies supported the presence of TB in patients with Takayasu Arteritis (TAK). Interestingly, this patient was found to have elevated IgG4. The presence of bilateral sialadenitis that responded rapidly to steroids may be a manifestation of IgG4 related disease. However, IgG4-RD is a distinctive, unique, and treatable cause of large-vessel vasculitis. It can also involve blood vessels secondary to perivascular tumefactive lesions.

The most common manifestation of IgG4-related vasculitis is aortitis with aneurysm formation. The most common secondary vascular manifestation is periaortitis with relative sparing of the aortic wall. The patient was not noted to have these distinctive radiological features; hence she is currently being treated for TB + Takayasu Arteritis.

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Dr. Muhammed Shafeeq Kalladi
Pulmonology (Specialist)

Dr. Chaitanya Prakash Prabhu
Critical Care Medicine (Specialist)

Acute Respiratory Distress Syndrome (ARDS)

Severe Acute Respiratory Distress Syndrome (ARDS) treated successfully with Mechanical Ventilation at Aster Hospital, Al Qusais

PRESENTATION

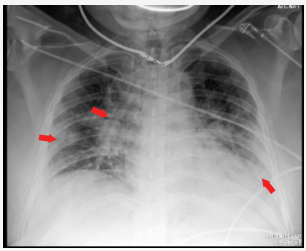
- 56 year old obese male, known case of Diabetes Mellitus on medications
- Medical history of COVID-19 Pneumonia that required long hospitalization for 30 days
- Admitted with:
  - Complaints of fever and cough for 1 week
  - Shortness of breath
  - High-grade fever associated with chills and rigors
  - Cough with yellowish sputum
  - Chest pain while coughing and deep inspiration

The patient was referred to Aster Hospital for further management due to the persistence of symptoms.

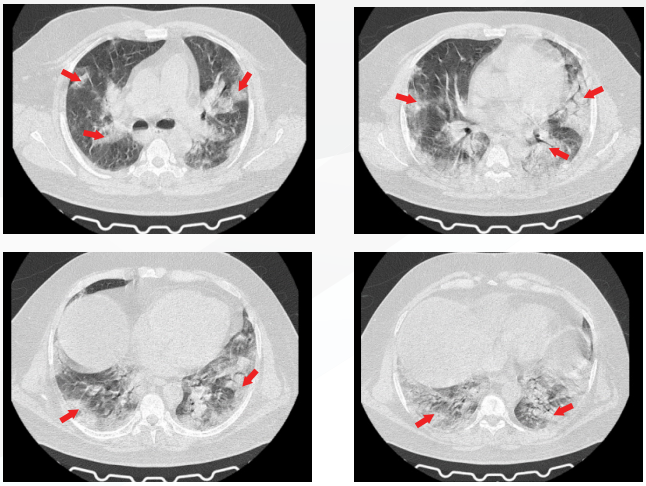
FINDINGS

During Examination in the ER:

- Conscious and oriented
- Febrile (40 °C)
- Tachycardic with a heart rate of 130/min
- Patient was dyspneic and tachypneic with respiratory rate of 32/min and saturation level of 85% on
- room air
- Respiratory examination revealed Bilateral Coarse Crackles over both lung fields



Chest X-ray showing Bilateral Non-homogeneous Radio Opacities predominantly in the Mid and Lower Zones



HRCT Thorax showing multifocal areas of sub-segmental consolidations and GGOs in the Bilateral Lung Fields; more predominant in the lower lobes

DURING PROCEDURE

Patient's initial evaluation in ER revealed leukopenia and thrombocytopenia with a CRP level of 162 mg/dL. Chest X-ray revealed bilateral alveolar infiltrates predominantly in the mid and lower zones suggestive of bilateral bronchopneumonia, and ABG test revealed Acute Respiratory Failure with Hypoxia. His liver function test revealed Transaminitis.

HRCT thorax was done which revealed multifocal areas of sub-segmental consolidations and ground glass opacities in the bilateral lung fields more predominant in the lower lobes suggestive of ARDS. 2D-ECHO was done which came normal. His procalcitonin (PCT) was 4.7 ng/mL and HbA1C was 10.3%. Based on the clinical history, clinical examination, ABG and radiological findings, a diagnosis of ARDS was made and the patient was started on intravenous antibiotics, with NIV support and was admitted in the ICU. He was under observation for 24 hours on NIV support, antibiotics, antivirals, intravenous steroids, prophylactic anticoagulants, nebulization, insulin, and other supportive measures.

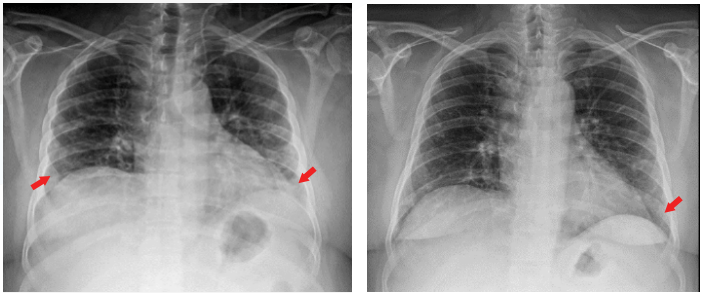
Endotracheal Intubation (Rapid Sequence Intubation Technique):

After an observation of 24 hours, the patient was still not able to maintain saturation even on NIV with 70% FiO2 and his ABG on the next day showed a P:F ratio of 101 indicating moderate to severe

ARDS; hence he was electively intubated on the same day. He required mechanical ventilatory support for almost a week. He was gradually weaned off from the ventilatory support and got extubated after a week later. Additionally, he required supplementary oxygen for 2-4 days after extubation and was shifted to the ward after stabilization.

POST PROCEDURE

The patient was observed in the ward for 3-4 days where he remained afebrile and clinically stable. His serial inflammatory markers (CRP), blood counts, and chest x-ray showed significant improvement. Hence, the patient was discharged on oral medications in a stable condition.



Follow up chest X-rays showing gradual clearance of the radiological opacities in both the lung fields

DISCUSSION

Acute Respiratory Distress Syndrome (ARDS) is an acute, diffuse, inflammatory form of lung injury associated with various etiologies. Recognizing and promptly treating ARDS is critical in reducing the associated high mortality. Patients typically present with dyspnea and a reduction in arterial oxygen saturation after 6 to 72 hours (or up to a week) following an inciting event. In addition, patients on examination may have tachypnea, tachycardia, and diffuse crackles over bilateral lung fields. The chest imaging findings for these patients usually will be bilateral alveolar infiltrates. Acute Respiratory Distress Syndrome (ARDS) previously had a mortality rate greater than 50%, but now, the mortality rate has declined mainly because of changes in the management of ARDS, including improved approaches to mechanical ventilation and supportive care.

Mechanical ventilation is the cornerstone of treatment for ARDS. For most patients with ARDS, proceeding directly to invasive mechanical ventilation rather than performing an initial noninvasive ventilation (NIV) trial is suggested. NIV may be reserved for the occasional patients with mild ARDS

who are haemodynamically stable, easily oxygenated, do not need immediate intubation, and has no contraindications to its use.

Systemic Steroid Therapy is recommended in patients with moderate to severe ARDS who are relatively early in the disease course and have persistent or refractory moderate to severe ARDS (PaO2/FiO2 ratio <200) despite initial management with standard therapies.

Systemic steroids may potentially improve mortality, shorten ventilation time, and increase the number of ventilator-free days in ARDS patients.

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