A CASE OF INFECTIVE POLYMYOSITIS

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ICH&HC

A two year old female child, second born of non-consanguineous parents,

Admitted in surgical ward and managed as ? multiple abscesses / ? hematoma and later transferred to medical ward.

- H/O painful swelling in the right ankle-3 days
- H/O painful swelling over right side of the scalp-2 days
- H/O fever- moderate grade, intermittent, not associated with chills and rigor.

History continued…

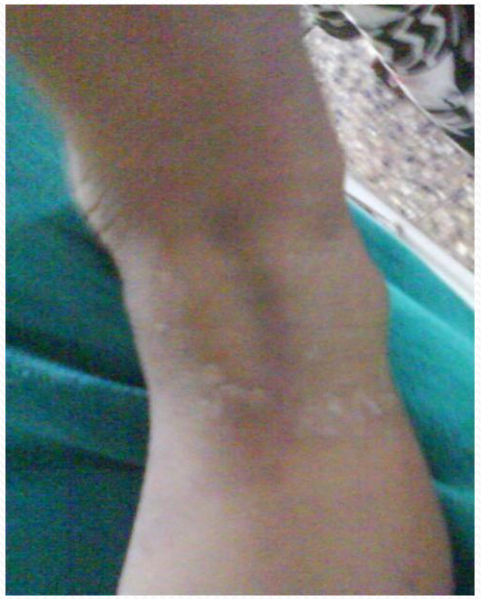
- H/O swelling in the right leg 2cm below knee joint & periorbital swelling which subsided at the time of admission.
- H/O upper respiratory tract infection-1 week back
- No h/o trauma / skin rash / joint swelling / bleeding disorder
- Neonatal period uneventful.
- Developmentally normal.
- Immunized up to age.
- No h/o of contact with open case of tuberculosis.

On General examination,

- Child was awake,
  irritable,
  afebrile
- Pallor present.
- Stable vitals.
- Anthropometry within normal limits.

Local Examination:

- 3X3cm, tender, swelling 2cm just above right ankle, that moves perpendicular to the muscular plane with bluish discolouration over the swelling



- 2X2cm, tender, swelling in the right temporal region

Systemic Examination:

- CVS - Apical impulse IV ICS, S1,S2 heard; No murmur.
- RS - Normal vesicular breath sounds heard; No added sounds.
- P/A - Soft, bowel sounds present.
- CNS – Motor –Tone, power and DTR normal,

  Sensory system – normal.

Course of hospital stay:

New swellings over dorsum of left foot, right side of abdominal wall, left inguinal region and right forearm near elbow.

In brief,

- multiple painful soft tissue swellings
- fever during the course
- h/o recent URI
- No h/o bleeding tendency
- New swellings during the course of stay
- Normal on systemic examination.

DIFFERENTIAL DIAGNOSIS:

1. Haematoma
2. Abscess
3. Myositis
4. Battered baby syndrome

INVESTIGATIONS

1.Complete blood count:

	26.6.10	3.7.10	11.7.10
Hb(g/dl)	5.6	9.1	10.5
TC	14200	11600	9400
DC-Polymorphs	51	48	44
Lymphocytes	43	40	40
Eosinophils	06	04	04
Platelet count	4.67lakh	4.2lakh	4.3lakh

2. *Coagulation profile*

- Bleeding time-2 min
- PT-13.4sec(control-13.6 sec)
- aPTT-27.3sec(control-20 sec)
- INR-0.9(2-4)

3. Acute phase reactants

- ESR-30 min-14; 60 min-28.
- CRP – positive

4. *Serology:*

- ASO - negative
- Rheumatoid factor, ANA – negative
- HIV ELISA - negative

5. ***Blood culture*** - no growth

6. ***Urine Routine*** - albumin, sugar, deposits - nil

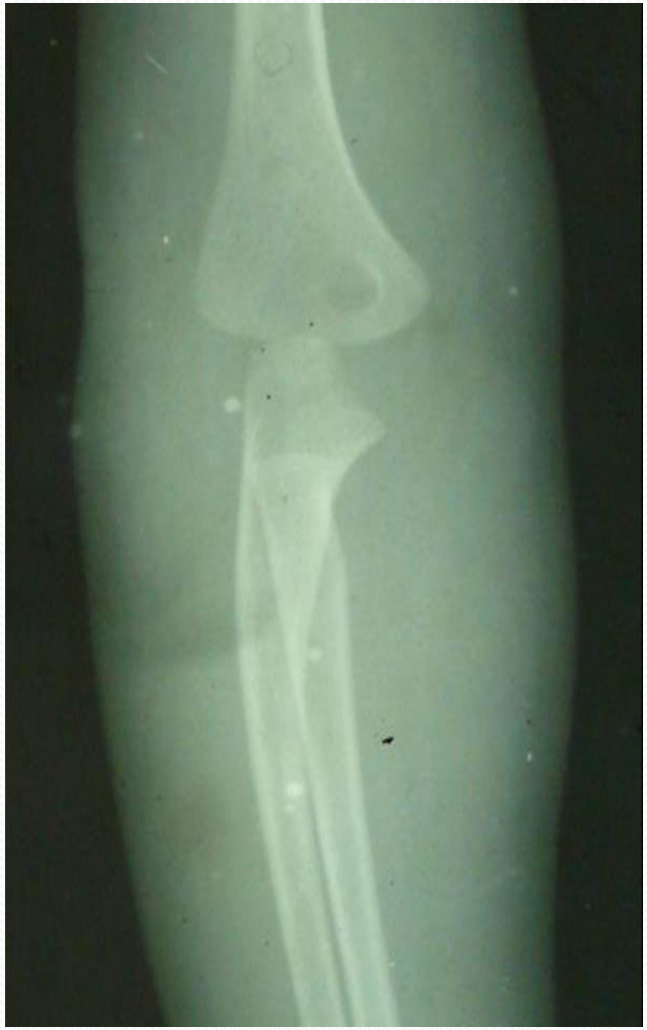
7. Serum Biochemistry:

- Renal function test: Within normal limits.
- Liver function test: Within normal limits.
- CPK (28.6.10) - 1871 U/L

  CPK (at the time of discharge) - 23 U/L

˙*8. Imaging:*

- X-Ray chest - normal study
- X-Ray Lower limb, upper limb and skull thickening in muscular plane
- Ultrasound of abdominal swelling - Non specific thickening in the muscular plane measuring 0.9 mm; subcutaneous plane normal



9. EMG of right quadriceps muscle:

- No spontaneous activity
- QMUP (Quantitative evaluation of Mean motor Unit Potential direction) and interference could not be assessed as patient was not co-operative.

- ***Rheumatology opinion***: Infective myositis.

  Suggested - Tab prednisolone to be added.

In brief,

- multiple painful soft tissue swellings
- fever during the course
- h/o recent URI
- No h/o bleeding tendency
- New swellings during the course of stay
- Normal on systemic examination.

- Elevated CPK
- Thickening in muscular plane in radiograph
- Leucocytosis
- ↑ Acute phase reactants
- Sterile blood culture
- Absent auto antibodies
- Normal coagulation profile.

INFECTIOUS MYOSITIS

-VIRAL

Treatment given:

- IV fluids (for the first two days)
- Antibiotics, Antipyretics and Prednisolone.

On discharge **-** child was clinically normal.

On follow up –

- Prednisolone tapered and stopped.
- Child clinically normal.

DISCUSSION

MYOSITIS

- **Definition** :

  Inflammation of the muscle fibres with infiltration of the inflammatory cells leading to phagocytosis of muscle fibres.

- **Types of myositis occurring in children:**

  1.Infectious myositis

  2.Inflammatory myositis

  3.Juvenile polymyositis.

INFECTIOUS POLYMYOSITIS:

- Acute, transient.
- Characterized by fever, headache, rhinitis, cough, nausea and vomiting that lasts for 2 to 3 days..
- This is followed by severe proximal calf pain and tenderness exacerbated by movement.

CAUSES:

- Viral :

1.Influenza-most common cause

2.HIV-one of the most common cause ofmyositis

3.HTLV-1

4.CMV

5.Group B cocksackie virus(epidermic myalgia)

- Bacterial:

1. Staph aureus (most common-70%)
2. Strep viridans, pyogenes, pneumoniae
3. Salmonella enteritidis, klebsiella pneumoniae
4. Clostridium freundii, bartonella, E.coli.
5. Yersinia species, citrobacter species
6. Pseudomonas aeruginosa,,Neisseria species.

- Fungal:

1. Cryptococcus neoformans, candida sp,
2. Histoplasma capsulatum,
3. Coccidiodes sp,actinomyces,
4. Aspergillus sp,
5. Pneumocystis jirovecci

- Spirochetal: Borrelia burgdorferi
- Mycobacterial: M. Avium intracellulare complex
- Parasitic: Trichinella species,

  Echinococcus granulosus,

  Taenia solium, Taenia cruzi

  Microsporidia.

Viral myositis

- Most important cause is influenza.
- Occurs mostly in children.
- Characterised by onset during recovery phase of viral illness.
- Characterised by predominantly severe bilateral pain and tenderness of the gastrocnemius and soleus muscles.
- Elevated serum muscle enzymes(CK, AST)
- Recovery in 3-5 days.
- Treatment is bed rest, IV fluids, antipyretics and analgesics.

Staph pyomyositis:

- Abcess in skeletal muscle that occurs after local muscle injury.
- It affects all ages and is more common in boys
- Lesions may be solitary or multiple, usually located in thigh, calf, buttock, arm, chest wall.
- Low grade fever usually present.
- Treatment is with systemic antibiotics for 3 weeks- Cefazolin or ceftriaxone, vancomycin.
- Corticosteroids decrease inflammation.

INFLAMMATORY MYOSITIS:

- Most common is JUVENILE DERMATOMYOSITIS
- Characterised by rash, proximal and symmetric muscle weakness that is responsive to the immunosuppressive therapy.
- A periorbital violaceous rash (heliotrope rash)
- Gottron papules - florid rash palpable over joints
- Myositis and calcinosis develop in amyopathic form.
- Mechanic's hands - thickened skin, cuticle over growth.
- Treatment - Corticosteroids, hydroxychloroquine and immunosuppresants.

JUVENILE POLYMYOSITIS:

- Uncommon, occurs in 5 to 14 yr old (average 7 yrs)
- Male: female ratio is 1.7: 1
- Risk factors-Administration of penicillamine or growth hormone
- Both proximal and distal muscles are weak, no associated cutaneous abnormalities, the nail fold capillary pattern is normal.
- Severe muscle weakness - hypotonia and dysphagia are present at onset
- Disease pursues a chronic course, relatively unresponsive to glucocorticoids.

ICH STATISTICS:

Over last 5 year period number of cases:

In males-5

In females-6

Total-11

No deaths

KEY FEATURE-

Focal presentation of a common systemic disease

THANK YOU