A CASE OF RASH WITH LYMPHADENOPATHY

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CLINICAL PRESENTATION (8/04/21)

- 36 years lady, normotensive,nondiabetic
- Intermittent fever for last 8 months
- Papular lesion over right side of face and front and back of the neck
- Decreased appetite and weight loss(8kg)

HISTORY OF

- Tooth extraction 3 months back before the onset of illness
- Taking multiple courses of antibiotic with small duration of relief from the symptoms

CLINICAL EXAMINATION

- Conscious, co-operative, alert
- Afebrile
- BP- 110/70 mm Hg
- PR- 90/min, regular
- **Severe pallor**
- **B/l cervical, axillary and inguinal matted lymphadenopathy**

CLINICAL EXAMINATION

LOCAL

- Multiple papular lesion with some pus collection
- Discharging sinus and scar
- Thickened , indurated skin infiltration
- A 3* 5 cm abscess noticed over right anterior chest wall

GI SYSTEM

- Mild Hepatomegaly- soft, nontender
- Spleen- just palpable

INVESTIGATION

9/4/2021	10/4/2021	14/4/2021
Hb- **6.3 gm/ dl** MCV-77.6 fl MCH- 23.5 pg MCHC- 30.3 gm/ dl TC- **21200(81/15/2/2/1**) Plt- 4.72 lakh/ cmm CRP- **88 mg/L (Ref- 6)** **ESR-112 mm/ 1st hr** **Alb- 2.5 gm/ dl** Glo- 4.7 gm/ dl RFT- ur- 14, Cr-0.9 mg/ dl	Hb- **5.9 gm/ dl** MCV-74.1 MCH-22.4 MCHC- 30.3 RDW- 22.9% (11-14%), anisopoikilocytosis TC- **23,300(88/8/4/0/0), band cell** Plt- 4.86 lakh/ cmm, **increased microplatelet clumps** **CRP- 90 mg/L**	Hb-8.9 gm/ dl MCV-78.2 MCH-23.7 MCHC-30.3 **TC- 28200(80/14/4/2/1)** **Plt- 6.96lakh/ cmm** **CRP- 97.3 mg/ L**

INVESTIGATION...

- Stool OBT- negative
- HPLC- normal analysis
- Iron- 47 microgram/ dl
- Ferritin- 208.4 nanogram/ ml
- TIBC- 160 microgram/dl
- Mantoux test- 14 mm
- ICTC- non reactive
- HBsAg- non reactive
- AntiHCV- non reactive
- VDRL- non reactive
- ANA with ANA profile-negative

INVESTIGATION...

- Urine CS- no growth
- Blood cs- no growth
- Pus from the papule cs- **Staph aureus and klebsiella pneumoniae (Amoxyclav and piperacillin tazobactum)**
- **Sputum AFB and CBNAAT(after induction)- MTB not detected**
- Malaria/ Dengue/ Chik/ Scrub- non reactive

HRUSG OF ANTERIOR CHEST WALL

- A 21*54 mm , heterogeneous, hypoechoic SOL
- Central anechoic area containing echogenic debris
- Inflammatory changes
- **Suggestive of an abscess**

INVESTIGATION...

- CXR PA view- no abnormality detected
- **USG WHOLE ABDOMEN- mild hepatomegaly, splenomegaly 15cm, GB calculus**
- Echocardiography- within normal limit

INVESTIGATION...

- **Fundoscopy-** right eye retinal detachment and hemorrhage and roth spots noted in periphery
- **Axillary lymph node FNAC- reactive hyperplasia, no AFB**
- **LN biopsy-** fibrofatty tissue, acute inflammatory cells with macrophages: **s/o abscess, no growth on MGIT960**

PUNCH BIOPSY FROM THE LESIONS- HPE

- **Epidermis-** Hyperkeratosis and acanthosis
- **Dermis-** Densely infiltrated with lymhocytes, PMNs, plasma cells and histiocytes infiltration and giant cell reaction
- **ZN stain- no AFB**
- PAS stain- no fungal elements
- Culture- no growth

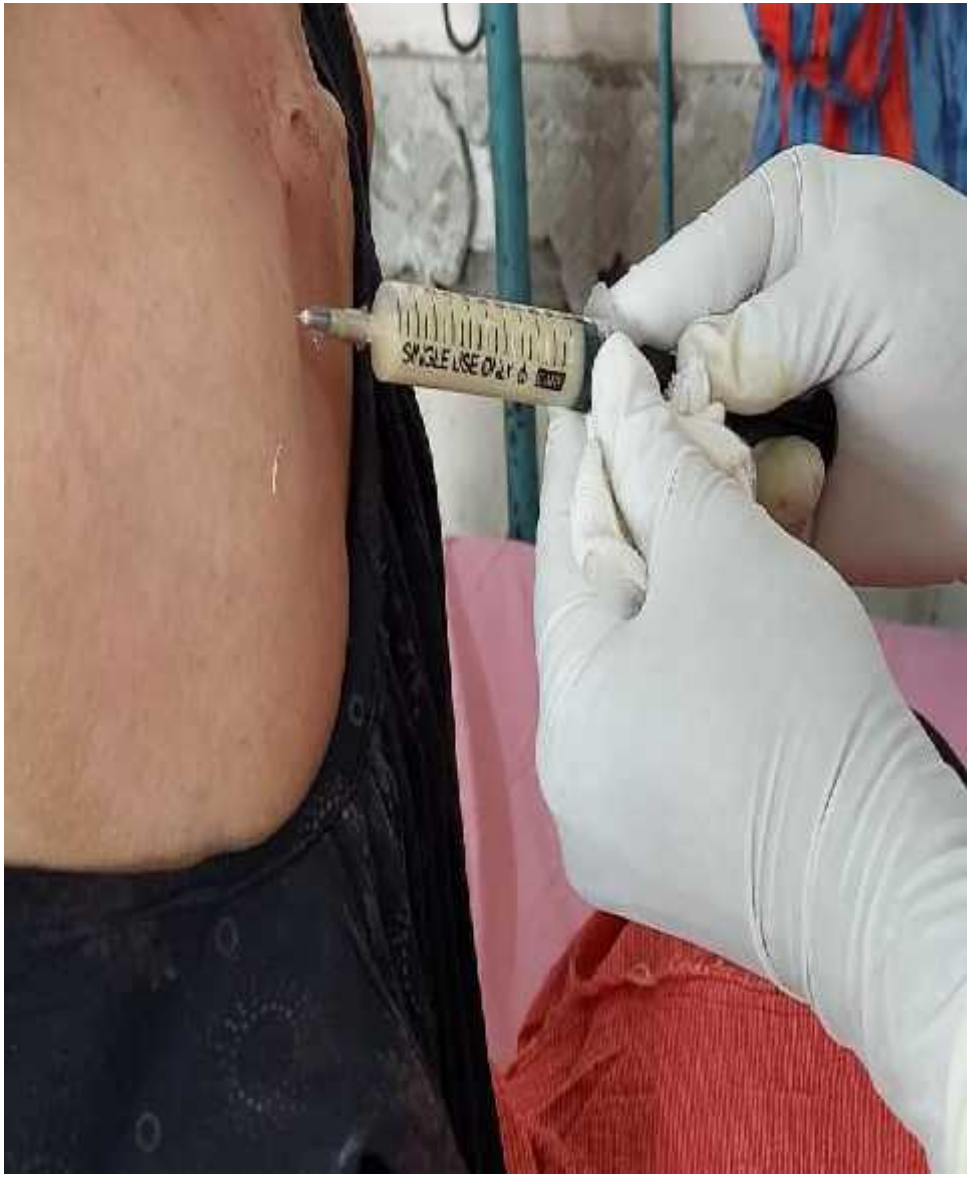
CT THORAX AND ABDOMEN

- **22.8* 37.5 mm oval shaped hypodense focal area of collection noted over right chest wall- necrotic lymph node**
- **Bilateral axillary lymphadenopathy with necrosis**
- Focal area pleural thickening wi th few fibrotic brands
- **Hepatosplenomegaly**
- GB calculus

DIFFERENTIAL DIAGNOSIS

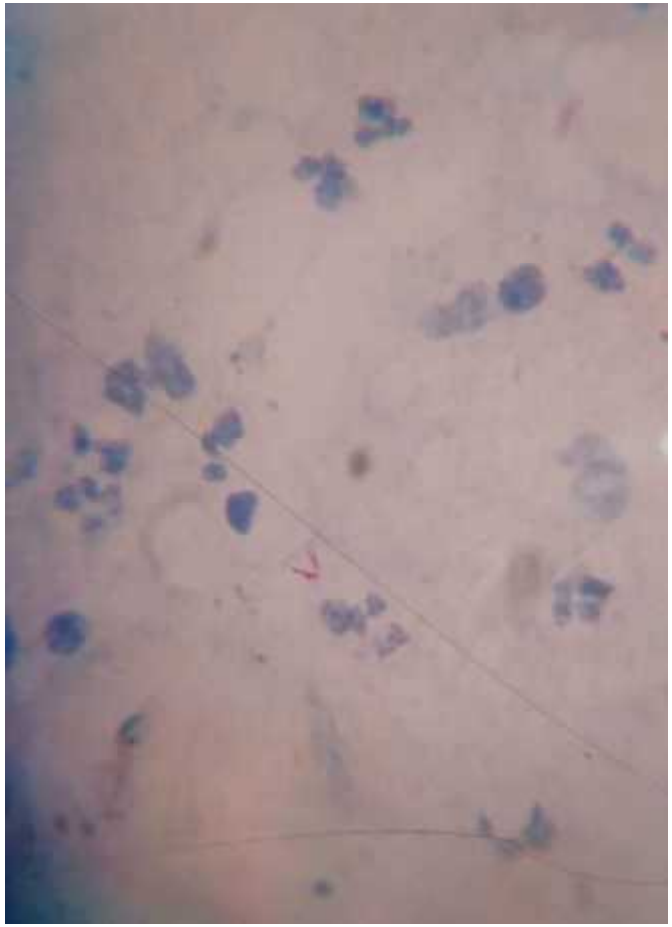
- Non – tubercular mycobacterial infection
- Cervico facial actinomycosis
- Tuberculid reaction
- Scrofuloderma
- Hyperkeratotic skin lesions with superadded bacterial infection

- Gram stain- plenty of pus cells
- Fungal stain- no fungal elements
- **ZN stain- few AFB noted**
- **CBNAAT- MTB not detected**
- Aerobic Culture- no growth
- AFB Culture- no growth



ZIEHL- NEELSEN STAIN

- few acid fast bacilli



TREATMENT(12/4/21)

- Inj Amikacin 500 mg iv OD(10 mg/ kg)
- Tab. Clarithromycin 500 mg BD
- Tab. Linezolid 600 mg BD
- RFT monitoring

OUTCOME AFTER 2 WEEKS

- Papular lesion reduced
- Only erythema was there
- Size of chest wall abscess reduced
- Total count started to normalise (**11700- 60/32/5/3/0**)
- Plt- count- 2.17 lakh/ cmm
- **CRP reduced- 2.7 mg/ L**

DISCHARGED(1/5/21)

- With amikacin, clarithromycin and linezolid
- Asked for follow up after 2 weeks

SECOND VISIT 1/7/21

- Pt stopped medication after 1 month
- Repeat appearance of papular lesion involving both right and left face and right sided neck
- Right sided anterior chest wall swelling
- Poor generalized condition

INVESTIGATION

- **Hb- 7.9 gm/ dl**
- MCV- 81.8 fl
- MCH- 28.4 pg
- MCHC-30.4 gm/ dk
- **TC- 29100(86/11/1/2/0)**
- PLT- 4.53 lakh/ cmm
- **CRP- 84.8 mg/ L**
- LFT- WNL

- **Pus from anterior chest wall-**
- Gm stain- plenty of pus cells
- **ZN stain- few AFB noted**
- **CBNAAT- not detected**
- Fungal stain- no fungal elements

DIAGNOSIS

- Extensive cutaneous disseminated lesion by non tubercular mycobacteria

DERMATOLOGY OPINION

- **LMDF- Lupus miliaris disseminatus faciei**
- Chronic inflammatory dermatosis- single or crops of yellow- brown papular lesion in central face, around the eyelids
- Etiology- unknown
- HPE- epithelioid cell granuloma and caseous necrosis
- Cosmetically debilating and potential for scarring
- Rx- Minocycline 100 mg BD for 4 weeks

RE- INITIATION OF TREATMENT

- Tab. Clarithromycin 500 mg BD
- Inj Amikacin 500 mg IV OD
- Inj. Imipenem 500 QDS
- Tab. Minocycline 100 mg BD

OUTCOME AFTER 2 WEEKS

- General condition improved
- TC normalised
- Disappearance of rashes and chest wall abscess

- **Discharged with-**
- Tab. Clarithromycin 500 mg BD
- Tab . Doxycycline 100 mg BD
- Tab. Moxifloxacin 400 mg OD
- ECG monitoring

DISCHARGED (1/8/21)

SKIN AND SOFT TISSUE

NTM

- M. fortuitum- responsible for 60% of localised cutaneous infection in imunocompetent
- M.chelonae- immunosuppressed
- M. abscessus
- M.marinum
- M.ulcerans – Buruli ulcer
- M. haemophilum- immunosuppressed pt

Bennett's Principles and Practice of Infectious Diseases, 9th edition

TREATMENT

M. fortuitum	M. chelonae	M. abscessus	M.marinum	M.ulcerans	M. haemophilum
Amikacin Cefoxitin Tigecycline Imipenem Ciprofloxacin Moxifloxacin Clarithromycin Doxycycline Linezolid Sulfonamides	Amikacin Cefoxitin Tigecycline Imipenem Tobramycin **Clarithromycin(drug of choice)** Moxifloxacin Doxycycline (25%)	Amikacin Cefoxitin Tigecycline Imipenem **Clarithromycin** Linezolid Clofazimine Azithromycin	Rifampin Ethambutol doxycycline Minocycline Clarithromycin TMP- SMX	Rifampin Ethambutol Clarithromycin Streptomycin Dapsone Sulfonamides	Clarithromycin Rifampin or rifabutin

- ***Mandell, Douglas and Bennett's Principles and Practice of Infectious Diseases, 9th Edition***

SUGGESTED REGIMEN IN EXTRA PULMONARY NTM

Species	Suggested regimens[a]
Mycobacterium abscessus complex	
Macrolide-resistant *M. abscessus*	**Severe (initial)**: amikacin + cefoxitin/imipenem + tigecycline
	Severe (continued) or mild: 3–5 of the following antibiotics: clofazimine, linezolid, minocycline, moxifloxacin, co-trimoxazole
Macrolide-susceptible *M. abscessus* and *M. massiliense*	**Severe initial**: amikacin + cefoxitin/imipenem + azithromycin/clarithromycin
	Severe (continued) or mild: azithromycin/clarithromycin + 2–4 of the following antibiotics: clofazimine, linezolid, minocycline, moxifloxacin, co-trimoxazole
Mycobacterium chelonae	**Severe (initial)**: azithromycin/clarithromycin + tobramycin ± imipenem
	Severe (continued) or mild: azithromycin/clarithromycin + clofazimine or linezolid or doxycycline
Mycobacterium fortuitum	**Severe (initial)**: amikacin + quinolone + minocycline
	Severe (continued) or mild: quinolone + minocycline
Mycobacterium marinum	**Severe (initial)**: amikacin + azithromycin/clarithromycin + rifampin + ethambutol
	Severe (continued) or mild: azithromycin/clarithromycin + rifampin + ethambutol
Mycobacterium ulcerans	**Severe (initial)**: rifampicin + streptomycin
	Severe (continued) or mild: rifampicin + clarithromycin or moxifloxacin
Mycobacterium avium complex	
Macrolide-susceptible	**Severe (initial)**: amikacin/streptomycin + rifampin + ethambutol + azithromycin/clarithromycin
	Severe (continued) or mild: rifampin + ethambutol + azithromycin/clarithromycin

[a] *In vitro* drug susceptibility tests should be performed as soon as possible after species identification.

TREATMENT

- Duration of therapy is usually 4-6 months (continued for 1-2 months after symptom resolution)

- Monotherapy with quinolones is not recommended due to increase risk of resistance
- Monotherapy with clarithromycin is not recommended

THANK YOU