CLINICO PATHOLOGICAL CONFERENCE CASE DETAILS

IInd Medical unit

DEPARTMENT OF GENERAL MEDICINE
GOVT.RAJAJI HOSPITAL MADURAI

VENUE: AUDITORIUM **DATE: 27.01.2020**

Case history

37 year old male apparently normal 3 weeks back followed by h/o fever with chills,headache and body pain

He was treated with antipyretics and advised bed rest and adequate hydration. After 6 days he noted an erythematous rash affecting his trunk, legs, feet, and hands. One day after that, mild, diffuse abdominal discomfort developed, along with anorexia and multiple episodes of nonbloody diarrhea. During the next 5 days, he had positional dizziness with syncope.

2 weeks back he consulted another hospital for fatigue and a diffuse erythematous rash.The temperature was 37.7°C.

Laboratory evaluation revealed

1.Absolute eosinophil count of 600 per cubic millimeter (reference range at the other hospital, 0 to 200)

2.Eevated levels on liver-function tests.

3.Non contrast Computed tomography (CT) of the chest, -revealed mild, diffuse enlargement of lymph nodes, which were up to 9 mm in diameter in the mediastinum and up to 15 mm in diameter in the porta hepatis.

3.A test of a nasopharyngeal swab for influenza Aand B viruses, a rapid test of a throat swab for streptococcal antigen, and tests ofthe blood for babesia DNA, ehrlichia DNA, hepatitis A virus antibody, hepatitis B virus surface antibody and surface antigen, hepatitis C virus antibody, human immunodeficiency virus (HIV) p24 antigen and antibody, and Lyme disease IgM antibody were negative.

The patient was treated with an unknown antibiotic agent, and after 5 days, he was discharged with prescriptions for cetirizine and hydroxyzine.

The day before current admission, the patient observed new mild swelling of the face and hands, with blisters on the palms. He was seen by her primary care physician the next day, and he reported persistent fevers, chills, rash with blistering, anorexia, and positional light-headedness. As per the advise of his physician,he consulted a rheumatologist who prescribed a single dose of oral prednisolone and referred him to the present hospital for evaluation.

Additional history was obtained in the emergency department. The patient reported pruritus in the areas of the previous leg rash, fatigue, chronic pain in the cervical spine and low back, and a mostly intentional weight loss of 11 kg over the previous 15 weeks. He had had no known exposures to animals or insects. He had a history of hyperlipidemia, depression, and gastroesophageal reflux disease.

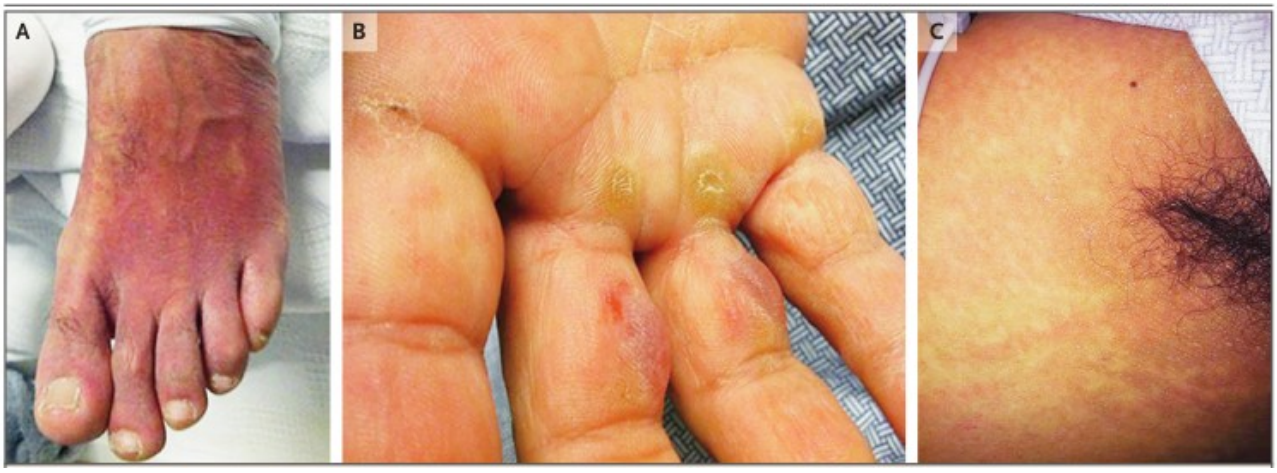
Medications included aspirin, mirtazapine, rosuvastatin, omeprazole, and cetirizine, as well as hydroxyzine as needed for pruritus. He reported that he had started to take a new over-the-counter medication for the treatment of pain approximately 5 weeks before admission but had stopped taking it at the onset of his presenting symptoms. He could not recall the name of this new medication. He had had no adverse reactions to medications.

His family history was notable for lung cancer in his mother and diabetes and coronary artery disease in his father;

Table 1. Laboratory Data.*

Variable	Reference Range, Adults, Office of Primary Care Physician	Morning of Admission, Office of Primary Care Physician	Reference Range, Adults, This Hospital†	On Admission, This Hospital	Day 3, This Hospital
Blood					
Hemoglobin (g/dl)	13.5–17.5	12.2	13.5–17.5	10.4	10.0
Hematocrit (%)	41.0–53.0	35.2	41.0–53.0	30.2	29.9
Red-cell count (per mm^3)	4,200,000–5,400,000	3,910,000	4,500,000–5,900,000	3,360,000	3,100,000
White-cell count (per mm^3)	4500–10,500	18,300	4500–11,000	11,000	6500
Differential count (%)					
Neutrophils	45.0–75.0	24.0	40–70	44	45
Lymphocytes	20.0–44.0	40.3	22–44	24	29
Atypical lymphocytes	0	4	0	4	13
Monocytes	2.0–12.0	10.6	4–11	2	5
Eosinophils	0–4	24	0–8	23	8
Bands			0–10	3	0
Platelet count (per mm^3)	130,000–400,000	90,000	150,000–400,000	111,000	107,000
Mean platelet volume (fl)	7.0–11.0	12.7	8.4–12.0		
Sodium (mmol/liter)	135–145	133	135–145	129	135
Potassium (mmol/liter)	3.5–5.5	3.2	3.4–4.8	4.0	3.5
Chloride (mmol/liter)	96–106	96	100–108	95	101
Carbon dioxide (mmol/liter)	21–32	26	23–32	22	23.7
Urea nitrogen (mg/dl)	6–23	15	8–25	17	17
Creatinine (mg/dl)	0.5–1.4	1.2	0.60–1.50	0.99	1.04
Glucose (mg/dl)	65–99	92	70–110	158	104
Calcium (mg/dl)	8.2–10.1	8.1	8.5–10.5	8.0	7.8
Total protein (g/dl)	6.4–8.2	8.3	6.0–8.3	7.5	5.8
Albumin (g/dl)	3.4–5.0	2.3	3.3–5.0	2.6	2.2
Globulin (g/dl)			2.3–4.1	4.9	3.8
Total bilirubin (mg/dl)	0.0–1.3	0.5	0.0–1.0	0.5	0.5
Aspartate aminotransferase (U/liter)	10–40	95	10–40	99	188
Alanine aminotransferase (U/liter)	20–60	153	10.55	116	160
Alkaline phosphatase (U/liter)	30–150	811	45–115	641	498
Erythrocyte sedimentation rate (mm/hr)	<10.0	74	0–15		
C-reactive protein (mg/liter)	0.10–15.00	41.33	<8		
Lactate dehydrogenase (U/liter)	85–227	725	110–210		490
γ-Glutamyltransferase (U/liter)			8–61	286	
C3 (mg/dl)			86–184	105	
C4 (mg/dl)			16–38	15	
Cryoprotein			None present	None present	
Heterophile antibody			Negative	Weakly positive	
EBV IgM antibody to viral capsid antigen			Negative	Negative	
EBV IgG antibody to viral capsid antigen			Negative	Positive	
EBV IgG antibody to nuclear antigen			Negative	Positive	

Variable	Reference Range, Adults, Office of Primary Care Physician	Morning of Admission, Office of Primary Care Physician	Reference Range, Adults, This Hospital†	On Admission, This Hospital	Day 3, This Hospital
Cytomegalovirus antigenemia assay			Negative	Negative	
Antitreponemal antibody			Negative	Negative	
HIV-1 and HIV-2 antibody and HIV-1 p24 antigen			Negative	Negative	
HIV-1 on PCR assay			Not detected		Not detected
Hepatitis A virus total antibody			Negative		Negative
Hepatitis A virus IgM antibody			Negative		Negative
Hepatitis B virus surface antigen			Negative		Negative
Hepatitis B virus surface antibody, qualitative			Negative		Negative
Hepatitis B virus core antibody			Negative		Negative
Hepatitis C virus antibody			Negative		Negative
Tryptase (ng/ml)			<11.5		14.5
Antinuclear antibody			Negative at 1:40 and 1:160		Positive at 1:40 and 1:160, speckled
Urine					
Color		Yellow	Yellow		Yellow
pH		6.0	5.0–9.0		5.5
Specific gravity		1.025	1.001–1.035		1.008
Glucose		Negative	Negative		Negative
Ketones		Negative	Negative		Negative
Protein		Trace	Negative		Negative
Leukocytes		Negative	Negative		Negative
Blood		Negative	Negative		Negative



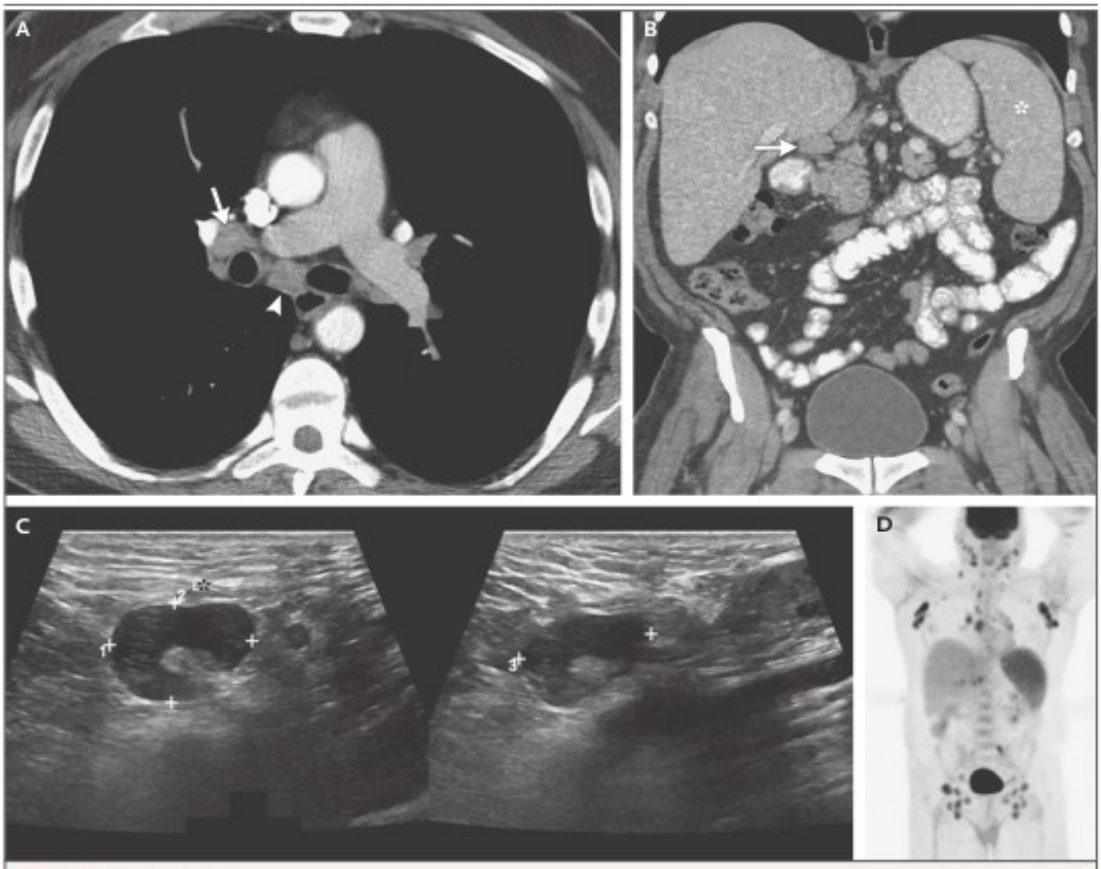


Figure 2. Imaging Studies.
CT was performed after the intravenous administration of contrast material. An axial image of the chest (Panel A) shows enlarged right hilar (arrow) and subcarinal (arrowhead) lymph nodes. A coronal image of the abdomen (Panel B) shows enlarged periportal lymph nodes (arrow) and splenomegaly (asterisk). Ultrasound images of the leg (Panel C) show an enlarged right inguinal lymph node (asterisk), with preservation of a normal fatty hilum. A positron-emission tomographic scan (Panel D) shows lymphadenopathy with intense ^{18}F-fluorodeoxyglucose (FDG) avidity in the neck, chest, abdomen, and pelvis and diffuse increase in FDG uptake in the spleen.

there was no history of autoimmune or dermatologic disorders. He had smoked two packs of cigarettes daily and marijuana once weekly for the past 30 years. He did not drink alcohol or use illicit drugs. He worked as a manual laborer and driver. He was single and had had multiple female sexual contacts but had always used barrier protection; the young grandchild of his current sexual partner had recently had a self-limited febrile illness with a diffuse maculopapular, eryhematous rash.

On examination, the patient appeared fatigued. The temperature was 37.1°C, the heart rate 89 beats per minute, the blood pressure 132/57 mm Hg, and the oxygen saturation 98% while he was breathing ambient air. The weight was 79 kg, and the body-mass index was 28.1. He had mild periorbital edema and mild exfoliative scale on the temple and forehead.

A blanching, maculopapular rash was present on the trunk. On the arms, legs, and dorsal feet, there were thin, faintly violaceous plaques with mild exfoliative scale. Small flaccid bullae, including some that were hemorrhagic, were noted on several fingers and the palms, and a few had ruptured. He did not have a rash on mucosal surfaces or nail changes.

There were mildly tender, mobile lymph nodes in the bilateral cervical, submandibular, axillary, and inguinal distributions, including a 1-cm axillary node and a 2-cm inguinal node.

There was mild abdominal tenderness in the upper quadrants, with hepatosplenomegaly. The stool was guaiac-negative. The remainder of the examination was normal. Blood levels of thyrotropin, creatine kinase, troponin T, amylase, lipase, and vitamin D were normal, as were the serum osmolality, basophil count, prothrombin time, and activated partial-thromboplastin time. Other laboratory test results are shown in Table

The patient was admitted to the general medicine unit. Two sets of blood cultures were obtained. Examination of a peripheral-blood smear revealed atypical-appearing mononuclear cells.

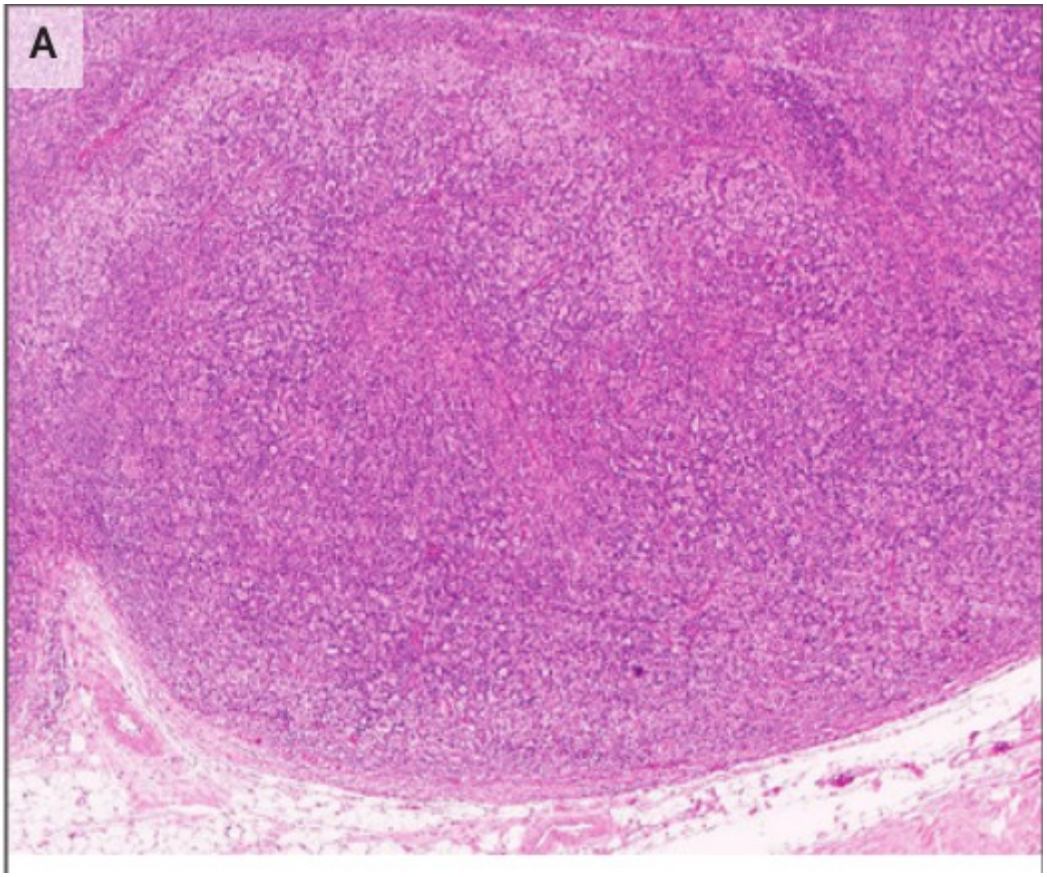
On the second hospital day, CT of the chest, abdomen, and pelvis was performed after the intravenous administration of contrast material. There were areas of centrilobular emphysema and bronchial-wall thickening, scattered pulmonary nodules (2 to 3 mm in diameter) in the upper lobes, and multiple enlarged lymph nodes . There was also splenomegaly (spleen length, 15.2 cm; normal length, ≤12.0 cm), with a splenic cyst

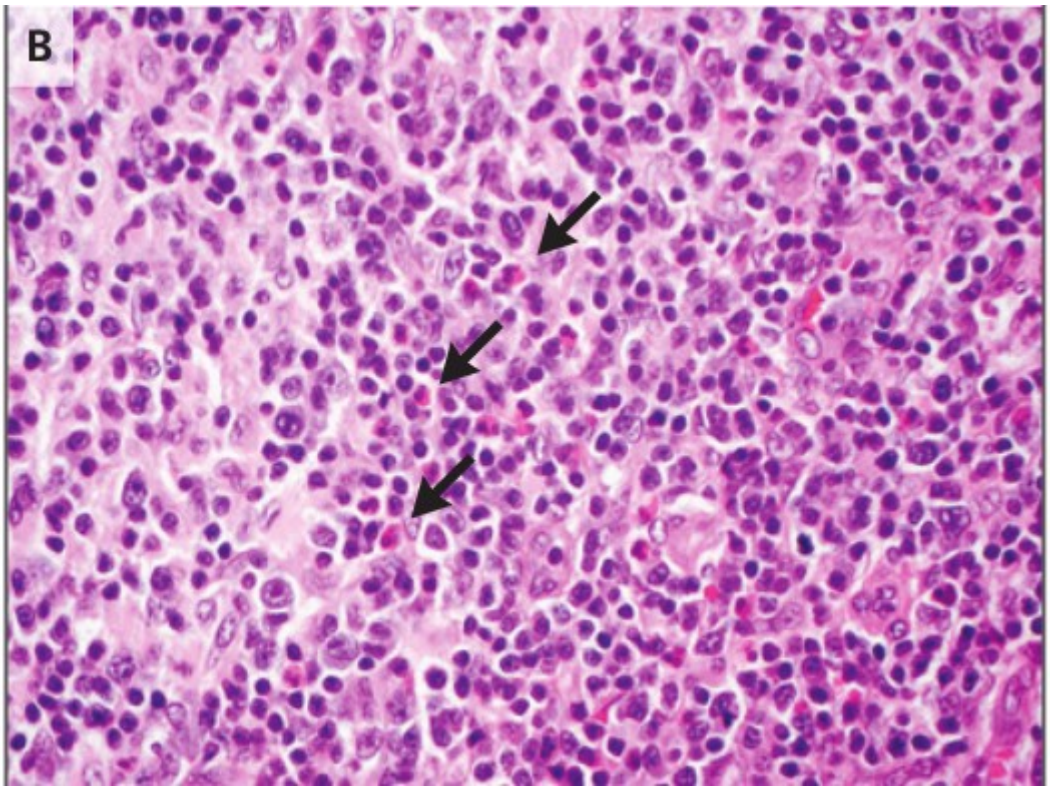
On the third hospital day, the temperature rose to 38.4°C and the heart rate was 110 beats per minute. Laboratory test results are shown in Table . Cultures of the urine and blood were obtained. Serum protein electrophoresis revealed mild, diffuse hypergammaglobulinemia, with a level of IgG lambda M component in the gamma region of 0.07 g per deciliter. Levels of serum free kappa and lambda light chains were normal. Additional imaging studies were obtained.

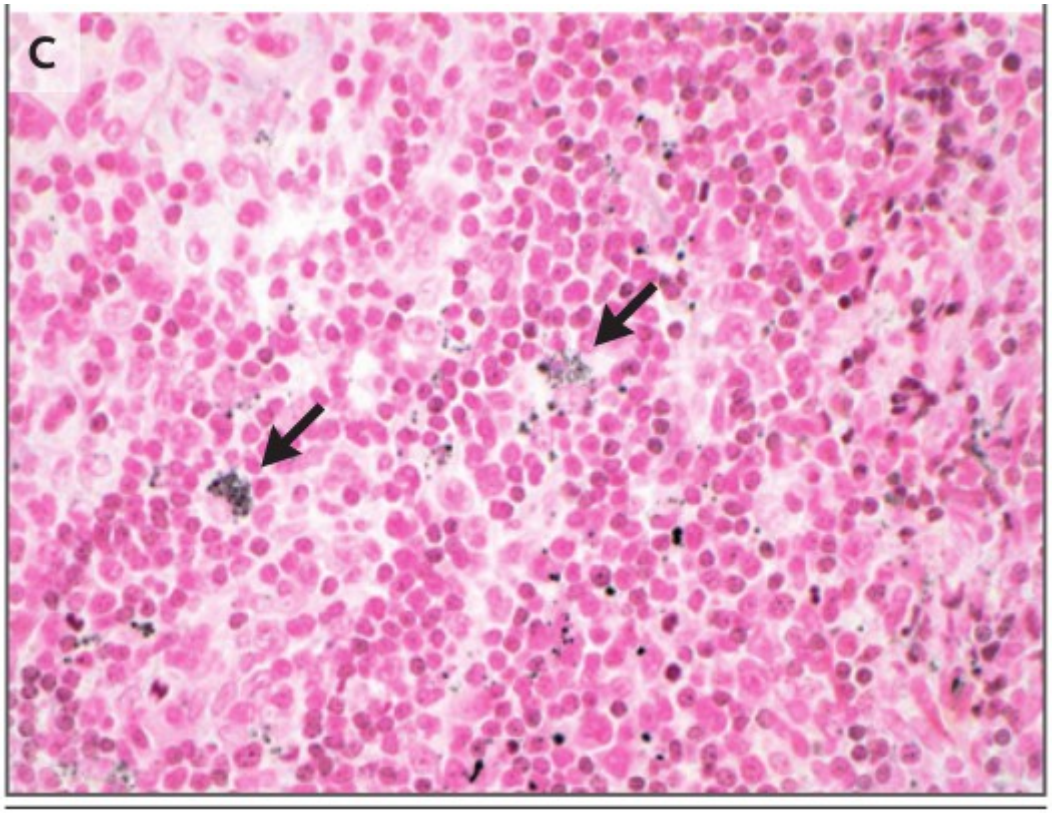
Ultrasonography of the legs and arms was negative for venous thrombosis; however, enlarged lymph nodes were noted incidentally . CT with positron-emission tomography (PET) was performed on the sixth hospital day. There were multiple lymph nodes with 18 F-fluorodeoxyglucose (FDG) avidity in the axillary, cervical, supraclavicular, paratracheal, hilar,subcarinal, portal, iliac, and inguinal distributions, and there was diffuse increase in FDG uptake in the spleen Flow cytometry of a peripheral blood specimen was negative for a monotypic B-cell population and for T cells with immuno- phenotypic abnormalities.

NEXT INVESTIGATION ? AND APPROACH DISCUSSION TO DIAGNOSIS

Biopsy specimen of enlarged right inguinal lymphnode



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