URTICARIA, ANGIONEUROTIC OEDEMA AND SJOGREN'S SYNDROME: UNUSUAL FEATURES OF SYSTEMATIC LUPUS ERYTHEMATOSUS-A CASE REPORT.

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Abstract.

Urticaria, Sjogren's syndrome and angioneurotic oedema are rare features of systemic lupus erythematosus (SLE). These are not frequently encountered in SLE as prominent presenting features although these could be seen. It is known that patients with associated renal or central nervous system involvements are not associated with an decreased chance of survival five yedar4s after diagnosis. We report a case of SLE who had rare features with renal involvement.

The case report is on a middle aged woman who has had on and off urticaria for ten years prior to presentation, but in the last two years before presentation, it became worse and more persistent. It could no longer be helped by any medication. She was then referred to our hospital where she was seen and investigated for connective tissue disease. She was found to have some features suggestive of SLE. While being investigated, she showed features of both Sjogren's syndrome and angioneurotic oedema. The angioneurotic oedema subsided completely with antihistamine (chlorpheniramine maleate) while the SLE also got better on steroids (prednisolone). Her voice which used to diminish as speech progressed also got better. She, however, developed marked fluid and electrolyte imbalance at her home, which was very far from our hospital. This abnormality was not corrected at the peripheral hospital that attended to her before she reached our hospital. By the time she was attended to in our hospital, she was oliguric and this rapidly progressed to anuria and she died.

Key words: Urticaria, Angioneurotic oedema, Sjogren's syndrome and Systematic Lupus Erythematosus.

Introduction:

Systemic lupus erythematosus is a connective tissue disorder that is more prevalent in the black than in the white population of the United States of America (1, 2), although its overall prevalence is one in 1000 whites an done in 250 black women (2). It is commoner in women than in men with a general female to male ratio of 9:1 but during the child-bearing years, this ratio increases to 15:1 (1). The onset of the disease occurs between the ages of 14 – 64 years (3, 4) with a 5-year survival of about 90% (5, 6).

The presence of renal or crebrovascular disease decreases the lifespan (5, 6).

The disease has an insidious onset and it has been found that 92% of patients present with arthritis and arthralgia while 84% have fever (7). The typical skin eruptions of systemic lupus erythematosus are characterized by a facial rash over the malar areas and bridge of the nose and occurs in 40% of patients. The skin eruptions may only be seen when patient is exposed to ultraviolet rays or they may be seen in the part of the body exposed to light. Patchy alopecia occurs also in about 40% of patients. Dermal vasculitis is also seen in 20% of patients. Erythema may be seen in the finger. Ulcers in the nose and buccal mucosa may also be seen. Other cutaneous features that may be found include purpura, bullae, hives, urticaria and angioneurotic oedema, although, these are less frequent and unusual. Rynaud's phenomenon is seen in about 30% of patients (8). Renal involvement is SLE has been variously reported ranging from as low as 35% to more than 90%. Clinical manifestation ranges from mild abnormalities of the urinary sediments (predominantly haematuria) to massive proteinuria, and from chronic indolent glomerulonephritis to a fulminant inflammatory process leading to a progressive renal failure. However, if immunoflorescence and electronic microscopy studies of the renal tissue are performed, abnormalities are present in virtually every patient with SLE (5, 8, 9).

Patients with SLE may have thrombocytopenia, anaemia of less than 11g/dl and a leucopenia of total white blood cell count of less than $4500/mm^{3,}$ Lupus erythematosus cells may be present in between 60% - 80% of the patient. Direct comb's test is positive in 14% of patients and positive tests for rheumatoid factor is present in 20% (5, 8, 9). Elevated erythrocyte sedimentation rate (ESR) is seen in patients with active disease.

A diagnosis of SLE is usually made based on the elevent criteria of the Americal Rheumatism Association. These are malar rash, discoid skin rash, photosensitivity, mucus membrane ulcers, arthritis, pleuritis or pericarditis, renal abnormalities, brain irritation (like seizure disorder and psychosis), blood abnormalities (like anaemia, thrombocytopenia, leucopenia), immunological disorders (like positive Lupus Erythematosus preparation test, false positive blood test for syphilis) and a positive antinuclear antibody test. When four or more of these criteria are present, it strongly suggests SLE as these criteria are hardly present in an individual patient at one particular time (5).

SLE may be associated with other autoimmune disorders like Sjorgren's syndrome, systemic sclerosis, in which the symptoms of SLE exist together with features of the other disorder. In Sjogren's syndrome, features of SLE exist together with dryness of the eyes, dryness of the mouth and chronic arthritis. At times, the parotid salivary gland may be affected and swollen (8).

This case report intends to highlight the fact that SLE can present with the less common features of its skin manifestations. This calls for awareness, and medical practitioners to be on the alert and to heave a high index of suspicion.

CASE REPORT:

J. A. was a 41 year-old female teacher who presented to ur hospital 2 years ago with a 10 year history of recurrent generalized itchy maculopapular rash. The rash developed after scratching and started from one part of the body and spread to involve other parts of the body. It involved the whole body most times, including the face, palms and soles of the feet. The rash was associated with generalized alopecia (although not scarring type of alopecia), knee joint pains and swelling, but no joint stiffness. She had no history of weight loss. She used to attend a peripheral hospital for these symptoms and had some symptomatic relieve with the prescribed non-steroidal anti-inflamatory drugs (NSAID) and antihistamines. Two weeks before presentation in our hospital, 2 years ago, there was no significant beneficial effect of the said medications, and predmisolone was added.

At presentation, 2 years ago, she had associated dryness of the mouth together with odinophagia and a feeling that food gets stock to her throat. She had a dysphagia to both solid and liquid foods. In the past obstetric history, she had a still birth 5 years prior to presentation which was 2 years go, and thereafter, has never tried to get pregnant. She also had appendectomy 3 years prior to presentation.

This middle aged woman was found to be chronically ill – looking, afebrile, pale, with rashes on the scalp, face and limbs, at various stages of healinjg. The face had hyperpigmentation on the malar areas, tip of the nose and forehead. Healed rashes on other parts of the body left hyperpigmented scars. She was also found to have bilateral parotid swelling which were not tender. Her blood pressure was found to be elevated to 150/110mmHg supine. All the other systems were apparently normal.

A provisional diagnosis of connective tissue disease probably SLE with Sjogren's syndrome was tentatively made and patient was continued on prednisolone. The following investigations were carried out as she came on admission. These are:

1.	Full Blood Co0unt (FBC):	Packed Cell volume (PCV)	-	-3%
	Total White Blood Cell (WBC) count		-	-,300/mm^3
	Differential count:	Neutrophils	-	-5%
		Lymphocytes	-	-2%
		Monocytes	-	-3%

Platelets count -339,000/m^3

Blood Film: -Hypochromia ++

-Anisocytosis ++

2. **LE Cells** – Positive in the 2 samples sent for test.
3. **Urinalysis**: Protein +

   Blood + (Last Menstrual Period two weeks prior to sample collection)

   - PH: 6.0
   - Specific gravity: 1.025
   - Other parameters were within normal limits.
4. 24 hour **protein** excretion was 1.24g/24hrs.

   24 hour **creatinine** clearance was 14.1ml/min
5. **DRL** was non-reactive.
6. **HIV screening** was non-reactive.
7. **HbsAg** was non-reactive
8. **Rheumatoid factor** was non-reactive
9. **Abdominal ultrasound scan** – showed marked hepatomegaly with increased parenchymal echogenicity. No ascites. Other organs were normal.
10. **Electrolytes and Urea**:
    - Na^+ 146mmol/1
    - K^+ 4.0mmol/1
    - Cl- 103mmol/1
    - $HCO-^3$ - 22mol/1
    - Urea - 6.8mmol/1
    - Creatinine - 226mmol/L
11. **ESR** - 60mm/hour

These made our tentative diagnosis of SLE stronger.

Her condition remained the stable until the 15th day of admission when she developed massive generalized swelling of the head and neck. She could not open her eyes because of the swelling. Before the onset of the swelling, she had not eaten any strange foods, i.e. food eaten was something she had been used to eating, and had no past history of drug allergies. A diagnosis of angioneurotic oedema was made and chlorpheniramine maleate 4mg thrice daily was added with great improvement in the oedema. Patient did well and was discharged on haematinics, prednisolone and chlorpheniramine maleate. She continued to attend our medical

outpatient for follow-up. A repeat full blood count done six months after discharge showed some improvement. The results were as follows:

FBC : PVC - -31%
WBC - -8.200/mm^3
- Differential

count:
- Neutrophils - 55%
- Lymphocytes -45%
ESR - 10mm/hour.

She did well until March 2005 when she developed diarrhea, vomiting and cough for two weeks. She had been taken to a peripheral hospital for two weeks before she was transferred because she was not making urine, though she was our patient. Examination revealed that she had anasarca, with associated oliguria, and within 24 hours of admission, we observed she became anuric. Electrolytes and urea showed a markedly elevated serum K+ of 7.1mmol/l. Urea was 18.9mmol/l with an urgent PVC of 25%. While electrolytes were being repeated to be sure that the K+ was truly high, (as other parameters of renal function were not that deranged) and not as a result of red cell haeemolysis, and patient being prepared for dialysis by way of investigation, insulin and glucose were administered in then ratio 1 unit of insulin to 3g of glucose. Patient died within the next 24 hours. The results of the investigations done while on this second admission were as follows:

Electrolytes and urea:

- Na^+ 140mmol/1
- K^+ 7.1mmol/1
- Cl- 122mmol/1
- $HCO-^3$ - 23mol/1
- Urea - 18.9mmol/1
- Creatinine - 226mmol/L

11. **ESR** - 60mm/hour

Repeat serum electrolytes and urea were as follows:

- Na+ 136mmol/1
- K+ 6.7mmol/1
- Cl- 118mmol/1
- HCO-3 - 12mmol/1
- Urea - 29.4mmol/1

PVC -25%

DISCUSSION:

The diagnosis of SLE was made on this patient based on the presence of arthritis and arthralgia of both knee joints, the skin eruptions that were typical of SLE (malar rash, photosensitivity of the sun exposed parts of her head and neck), mouth ulcers, renal abnormalities (in this case glomerulonephritis), patchy alopecia and even the less common skin manifestations of urticaria and angioneurotic oedema. From investigations also, there was anaemic (PVC – 23%, with a leucopenia of 3,300/mm^3 and lymphopenia. Plateless were within normal limits. The presence of lupus erythematosus cells and the absence of rheumatoid factor rules out other connective tissue diseases like rheumatoid disease and systemic sclerosis. There were no features of systemic sclerosis, i.e. thinning of the skin of the face or fingers, there was no

spindling of the fingers and other features of systemic sclerosis. There was no joint stiffness in this patient, and rheumatoid factor test was non-reactive, therefore, making the diagnosis of rheumatoid disease less likely.

A urinalysis carried out showed the presence of proteinuria and red blood cells which together with the elevated blood pressure suggest the diagnosis of glomerulonephritis. The presence of blood in her was unlikely due to her menstrual period because she had finished her menstruation two weeks before the urine sample was collected. The 24 hour creatinine, clearance was 14.1ml/min. This shows that there was aiready at presentation, late renal failure. It is known that this occurs in between 35%-90%, so that our patient falls within this category of patients. Renal involvement carries a poor prognosis, hence our patient died after the diarrhea and vomiting episode and an attempt to correct dehydration led to fluid retention.

Sjogren's syndrome is a connective tissue disorder that can either occur alone or in association with other connective tissues disorders. In this patient, Sjogren's syndrome was diagnosed based on the presence of the eyes and mouth, arthritis and bilateral parotid swelling. She also had odynophagia suggesting dryness of the throat as well. Steroids and antihistamines actually helped these syntoms, except that her voice became weak terminally, i.e as she spoke, her voice gradually disappeared, which is a feature seen in those with Sjogren's syndrome.

The angioneurotic oedema she developed while on admission 2 years ago, is a less common presence of SLE. It has not recently been documented (8), although, previous editions of some textbooks (9) have it as a less common feature of SLE. Angioneurotic oedema in patients with SLE is said to occur unprovoked by any allergens(9). Hence in this patient, there was known strange food ingestion that could have predisposed her to this allergic reaction. However, she did very well on chlorpheniramine maeate.

This patient, who had lupus glomerulonephritis with sudden diarrhea, vomiting and cough, had oliguria that progressed to anuria and patient died. We believed that she had inadequate fluid replaced before presentation. This worsened the renal status and patient progressed to acute-on-chronic renal failure and died.

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