Case Report on Systemic Lupus Erythematosus

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Abstract

Background: Systemic Lupus Erythematous (SLE) is a multi-system chronic but often episodic, autoimmune condition defined by widespread inflammation of connective tissues and immune complex-mediated vasculitis as well as the involvement of Antinuclear Antibodies.

Case Presentation: The 11 years old female patient who was apparently alright 2 months back admitted in "Acharya Vinoba Bhave Rural Hospital Sawangi (M), Wardha," Maharashtra on date 22/02/2020 with the chief complaint of high-grade fever on and off since 2 months and facial puffiness since 6 days, ascites, constipation and pain in joints. The patient started experiencing fever 02 months back which was high grade and she took treatment on an OPD basis but there was no relief. After that she was admitted at GMC Chandrapur for the complaint of cough, cold, fever and oral ulcer and symptomatic treatment was given and got discharged after 12 days. Fever, facial puffiness, pain in knee joints. The patient had undergone various investigations like complete blood count, urine analysis, lipid profile, anti-nuclear antibodies (ANA), ANTI-DSDNA (Anti-Double Stranded DNA). The patient was treated with antibiotics, corticosteroid, antacid, DMARD (Disease-Modifying Anti-Rheumatic Drug), a loop diuretic, antiemetic and oral paste to treat mouth ulcers. Monitor all vital signs, checked and recorded intake and output, administered medication as prescribed.

Conclusion: The patient was admitted to AVBRH with chief complaints of fever on and off, facial puffiness, ascites, constipation and pain in joints. Immediate treatment was started by health team members and now the patient's condition is satisfactory.

Keywords: *Antinuclear antibodies, autoimmune disease, Systemic Lupus Erythematous.*

Introduction

'Lupus' is the Latin word is 'Wolf'.'Erythematosus' means 'Red Rash'.In 1851, Dr. Cazenave found red rashes that looked like wolf bites on a patient's face and he named that rash is Discoid Lupus Erythematosus (DLE).[1]

In 1885, Sir William Osler recognized that numerous individuals with Lupus had including skin as well as numerous organs or system and he named the disease Systemic Lupus Erythematosus (SLE).[1]

Systemic Lupus Erythematosus (SLE) is a long-term disease characterized by systemic inflammation in connective tissues, like cartilage and blood vessels lining, which give strength and flexibility to structures all through the body. SLE is an autoimmune disorder that occurs when the immune system attacks the body's own tissues and organs.[2]

Incidence: Systemic Lupus Erythematosus is rare in India.[3] Systemic Lupus Erythematous is relatively uncommon in children under the age of 9.[4]In the pediatric population, the overall prevalence of SLE is 10 to 25 cases per 100,000 children.[4] Childhood Systemic Lupus Erythematosus affects girls more often than boys

(8:1 ratio) and more commonly affects Asians, Blacks and Hispanics than Caucasians.[5]

Patient Information

- **Patient present history-** The 11 years old female patient who was apparently alright 2 months back admitted in AVBRH on dated 22ndFebruary, 2020 with the complaints of high-grade fever on and off since 2 months, facial puffiness since 6days, ascites, constipation and pain in joints.
- **Past history-** The patient started experiencing fever 02 months back which was high grade and took treatment on an OPD basis. There was no relief. After that she got admitted to GMC Chandrapur for cough, cold, fever and oral ulcer and they gave symptomatic treatment and got discharged after 12 days.
- **Birth History:**

Prenatal History:

- ✓ **Nature of marriage:** Non-consanguineous
- ✓ **Exposure to radiation:** None
- ✓ **Antenatal checkup:** Not done

Perinatal History:

- ✓ **Type of delivery:** Full Term Normal Delivery
- ✓ **Place of delivery:** Home delivery
- ✓ **Mother condition following delivery:** mother condition was good and she did not have any complication following delivery.

Postnatal History:

- ✓ **Child condition at birth:** normal
- ✓ **No NICU stay.**
- **Immunization History:** The patient received all immunization according to her age.

Diagnostic Assessment: Physical examination, patient history and other investigations reveal different outcomes through clinical evaluation.

Physical Examination:

Vital signs:

- **Temperature:** 39°C
- **Pulse:** 84 beats/min
- **Respiration:** 26 breaths/min

Anthropometry Measurement:

- **Height:** 142 cm
- **Weight:** 20 kg
- **Head circumference:** 50 cm
- **Chest circumference:**58 cm
- **Mid upper arm circumference:**14 cm
- **BMI (Body Mass Index):** 9.9 (underweight)

Head to Foot Assessment:

- **Nourishment:** Undernourished
- **Body built:** Thin
- **Skin:** Rashes were present in the hands and lower extremities.
- **Face:** Pale and puffiness was present
- **Conjunctiva:** Pale
- **Upper and lower extremities:** Pain while movement
- **Hemorrhoid:** Present

Blood Investigation report

- ✓ Hb% was 6 gm% (severe anemia), monocyte count was decreased 03%, total RBCs count was 1.73 million/cu.mm (decreased), total platelet count was 1.34 lacs/cu.mm (decreased), HCT was 17.8% (decreased), MCV (mean corpuscular volume) was increased 102 cub. Micron, MCH (mean corpuscular hemoglobin) was 34.3 picogram (increased), ESR (Erythrocyte Sedimentation Rate) was 90/1st hour (increased).
- ✓ **Peripheral Smear:** RBC mass reduced. RBC – Predominantly normocytic mild hypochromic with few macrocytic RBC has seen. Platelet- reduced on smear, APC- 1,34,000 cells//mm3
- ✓ **Liver function test:** AST (SGOT) was increased to 285 U/L, alkaline phosphate was increased to 607 U/L and albumin was 2.4 g/dl.
- ✓ **Lipid profile:** HDL was 19mg/dl, triglyceride was 382 mg/dl and verylow-density lipoprotein was 76 mg/dl.
- ✓ **Antinuclear antibodies (ANA):**Positive
- ✓ **ANTI-DSDNA:** Positive
- ✓ **USG:**

- It shows bilateral minimal pleural effusion,
- Ascites
- Hepatomegaly
- Spleen is mildly enlarged.

Therapeutic Intervention:

The following treatment was given to the patient:

Name of Medicine	Dose	Frequency	Route
Tab. Cefpodoxime	100 mg	BD	Oral
Tab. Flucon	150 mg	OD	Oral
Tab. Cetirizine	10 mg	SOS	Oral
Tab. Hydroxychloroquine	200 mg (1/2 tab)	BD	Oral
Tab. Neurokind	1500 mg	OD	Oral
Tab. Folinine	1500 mg	OD	Oral
Syp. Gelusil	5 ml	BD	Oral
Tab. Lasix	20mg	BD	Oral
Tab. Prednisolone	20 mg	BD	Oral
Tab. Zincot	850 mg	OD	Oral

Nursing Management: As per criteria, the nursing care was given to maintain the health status and to prevent further complications.

- Provided a comfortable position to the patient
- Monitored vital signs of the patient.
- Administered all the prescribed medications.
- Monitored intake and output.
- Assisted in doing the daily activity of the patient.

Nursing Diagnosis:

Nursing diagnosis according to patient complaints are as follow:

1. Acute pain related disease condition.
2. Constipation related to low fiber diet as well as medication use.
3. Fluid volume excess related to steroid therapy.
4. Disturbed sleeping pattern related pain.
5. Knowledge deficient related to the treatment regimen.

Prognosis: The survival rate is currently 90 percent at 5-10 years after initial diagnosis with the latest treatment. The significant reasons for deaths are an infection that secondary to immunosuppression), renal failure and Central Nervous System complicationtoo many long-term trials are underway to determine long-term survival (50 years) in children diagnosed with systemic lupus erythematosus.

Follow up and outcomes: At the time of discharge, the patient's condition was satisfactory. The relatives were informed about the prognosis of the disease, drug therapy and personal hygiene and the importance of taking medication in time. It is also told that they should come after 7 days for routine follow to see the disease outcome.

Discussion:

SLE is essentially the same disease in children as in adolescents with incredibly comparative etiologies, pathogenesis, clinical symptoms and laboratory diagnosis. Nevertheless, because of the effect of the disorder and its treatment on physical and psychological growth and development, the care of children and adolescents with SLE varies significantly from that of adults.[5] Children typically have more malar rash, severe onset renal disease and higher rates of involvement with other organs than adult SLE. SLE diagnosis are made with the presence of signs and symptoms and investigations. It is triggered by the immune system which erroneously attacks the body's own tissue, leading to inflammation of the skin, joints, kidneys, lungs, nervous system and other organs. Balwani et al had reported a case of lupus having rapidly Progressive Renal Failure. Usually, systemic lupus erythematosus starts to be seen in adolescents average age is 12. It's rarely seen with children before age 5. It is more common among females and some ethnic groups, such as African-American, Hispanic, Southeast Asian and Native American.[7] Pediatric onset of systemic lupus erythematosus (SLE) is not rare and the ratio between female and male varies. Pediatric SLE patients undergo more serious disease at the onset, higher organ involvement rates and more rapid clinical progress than adults. There is no known specific cause for SLE. This is assumed to be a combination of many factors. This may involve the environment (e.g., reactions to a virus, sun or drug reaction), hormones (puberty), and/or hereditary predisposition to an overactive immune system. Nobody knows how to prevent it because the origin of SLE is unknown. Taking calcium and vitamin D will reduce the risk of osteoporosis.

Strength: An 11 years old female patient tolerates all medication and responded well within 7 days to the therapeutic treatment.

Informed consent: Before taking this case, information was given to the patient and their relatives and informed consent was obtained from the patient as well as relatives.

Conclusion

The systemic lupus erythematosus (SLE) is an autoimmune disease affecting different parts of the body. Lupus flares can be reduced by avoiding exposure to the sun (wearing strong sunscreen, hats, long-sleeved shirtson sunny days), getting adequate sleep and taking recommended medicines.

Ethical Clearance: Taken from institutional ethics committee.

Source of Funding: Self.

Conflict of Interest: Nil.

Reference

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