

FDA APPROVED DRUGS

DRUG NAME	GENERIC NAME	INDICATION
IV. Zevtera	Ceftobiprole medocartil sodium	Community-acquired bacterial pneumonia
Inj. Lumisight	pegulicianine	Optical imaging agent for the detection of cancerous tissue
IVES. Anktiva	Nogapendekin alfa inbakicept	Bladder cancer
Tab. Ojemda	Tovorafenib	Refractory pediatric low-grade glioma
Cap. Xolremdi	Mavorixafor	WHIM syndrome
Inj. Imdelltra	Tarlatamab	Extensive stage small cell lung cancer
Inj. Rytelo	imetelstat	Low- to intermediate-1 risk myelodysplastic syndromes
Tab. Iqirvo	elafibranor	Primary biliary cholangitis
Inj. Yimmugo	human-dira	Primary immunodeficiency syndrome
Syp. Vigafyde	vigabatrin	Infantile spasms
Vaccine. Capvaxive	pneumococcal 21 valent conjugate vaccine	Pneumococcal disease prophylaxis

Ms.S.Haripriya, II B.Pharm

OUR ACTIVITIES



Nandha College of Pharmacy, in collaboration with The Tamilnadu DR.M. G. R Medical University, Chennai, celebrated World Hypertension Day with a series of impactful activities and events. The highlight of the celebration was a free medical camp held at the seminar hall from 13th to 16th June 2024.



The Nandha College of Pharmacy organized an awareness programme on June 26, 2024, to mark the International Day Against Drug Abuse and Illicit Trafficking. The event focused on educating students and faculties about the dangers of drug abuse and the importance of combating illicit trafficking.



NANDHA PHARMA ALERT

NANDHA
Since 1992
Learn... Serve... Succeed.

An Exclusive Newsletter from Drug Information Center,
Department of Pharmacy Practice, NANDHA COLLEGE OF PHARMACY,
(B.Pharm - NBA Accredited) Koorapalayam, Erode- 52, Tamilnadu.
Phone: 73737 11224, E-MAIL: dicnandha@gmail.com

Issue - 1
(January-April 2024)

Patron : Thiru V. SHANMUGAN, B.Com.,
(Chairman, Sri Nandha Educational Trust)

Editor in chief : Dr. T.SIVAKUMAR, M.Pharm., Ph.D.,
Faculty Editorial

Board : Dr.S.Sengottuvelu, M.Pharm., Ph.D.,
Dr. S.Tamilizharasi, M.Pharm., Ph.D.,
Dr.T.Prabha, M.Pharm., Ph.D.,

Student Editorial

Board : Ms.S.Abinayasri, III B.Pharm
Mr. Kaviarasan, III B.Pharm
Ms.S.Haripriya, II B.Pharm
Mr.N.Praveen, II B.Pharm
Ms.S. Janani, IV B.Pharm
Mr. K.S. Elavarasan, IV B.Pharm

Advisor : Dr.R.Duraisamy, M.Pharm., Ph.D.,
Editor : Dr. Hajasherief, M.Pharm., Ph.D.,



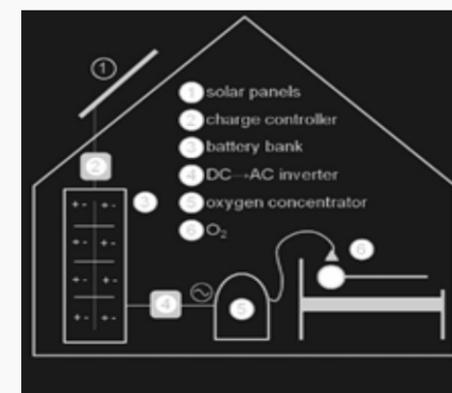
IN THE HIGHLIGHTS:

- SOLAR-POWERED OXYGEN SYSTEMS : A LIFELINE FOR SOMALIAN CHILDREN
- GORHAM-STOUT DISEASE-
- CASE REPORT ON COMBINATION THERAPY IN A PATIENT WITH CHRONIC NEURONOPATHIC GAUCHER DISEASE

SOLAR-POWERED OXYGEN SYSTEMS : A LIFELINE FOR SOMALIAN CHILDREN

Solar-powered oxygen systems have come to symbolize life for Somalian children, in a country where pneumonia accounts for at least one-fifth (15,160) of deaths among children under five years. These systems are more cost-effective than other oxygen technologies and require minimal maintenance after installation due to their minimal moving parts. They are also easy to use, needing only limited training for healthcare staff in rural areas.

One healthcare provider shared, "The system is really easy to use for our healthcare providers and has drastically reduced the logistic and financial burden of always having to fuel our diesel generators." This climate-conscious approach, along with the positive impact on healthcare demand and supply, indicates a vast potential to strengthen primary healthcare in off-grid and infrastructurally challenged settings. By improving access to essential oxygen therapy, these systems are significantly contributing to reducing child mortality rates in regions where most children's deaths occur.



Components of Solar-Powered Oxygen Therapy

1. Solar Panels: Convert sunlight into electricity.
2. Battery Storage: Stores excess energy for use during non-sunny periods.
3. Oxygen Concentrator: Extracts oxygen from ambient air, providing high-concentration oxygen to patients.
4. Inverter: Converts direct current (DC) from the solar panels and batteries into alternating current (AC) required by many oxygen concentrators.

Ms.S.Abinayasri, III B.Pharm

GORHAM-STOUT DISEASE

- Gorham-Stout Disease (GSD) is an uncommon pathology first detailed by Gorham and Stout in the 1950s. The condition is characterized by the spontaneous and progressive resorption of bone, often leading to significant skeletal deformities and functional impairment. Despite several hypotheses, the pathophysiology of GSD remains largely speculative, involving aberrant angiogenesis and lymphangiogenesis. The clinical manifestations of GSD are highly variable and depend on the bones involved: Pain: Localized and chronic, often exacerbated by movement or pressure, Swelling: Associated with soft tissue involvement and adjacent vascular anomalies, Pathological Fractures: Due to substantial loss of bone integrity, leading to increased fracture risk even with minor trauma.
- Diagnostic Criteria: The diagnosis of GSD is multidisciplinary, requiring a detailed clinical evaluation and various imaging techniques:
- Radiography (X-rays): Initial modality revealing osteolytic lesions and bone thinning.
- Computed Tomography (CT): Offers comprehensive visualization of the extent of bone involvement and structural compromise.
- Magnetic Resonance Imaging (MRI): Provides detailed images of both bone and surrounding soft tissues, essential for assessing the extent of vascular or fibrous tissue replacement.
- Bone Scintigraphy: May be employed to evaluate metabolic activity of bone lesions.
- Histopathological Analysis: Biopsy of affected bone confirms the diagnosis, showing replacement of bone with angiomatous or lymphangiomatous tissue.
- Pathophysiology: The precise mechanisms driving GSD remain elusive. Proposed theories suggest a dysregulated balance between osteoclast-mediated bone resorption and osteoblast-mediated bone formation, possibly influenced by aberrant angiogenic factors such as vascular endothelial growth factor (VEGF) and platelet-derived growth factor (PDGF).
- Pharmacological Treatment:
- Bisphosphonates: Such as pamidronate and zoledronic acid, to inhibit osteoclast activity and reduce bone resorption.
- Interferon-alpha: Demonstrated to have anti-angiogenic properties, potentially beneficial in limiting vascular proliferation.
- Radiation Therapy: Low-dose radiotherapy can induce sclerosis and halt osteolysis by targeting proliferating vascular and lymphatic tissues.
- Surgical Intervention: Indicated in cases requiring mechanical stabilization, including internal fixation, bone grafting, and prosthetic replacement. Surgery may also be employed for symptomatic relief in cases of spinal involvement or impending fractures.

Ms.S. Janani, IV B.Pharm

CASE REPORT ON COMBINATION THERAPY IN A PATIENT WITH CHRONIC NEURONOPATHIC GAUCHER DISEASE

A 7-year-old Italian boy presented with an enlarged abdomen at 16 months, leading to an oncological examination. Tests revealed anemia, thrombocytopenia, and splenomegaly. Bone marrow biopsy showed foam cells, suggesting a lysosomal storage disease. Biochemical tests indicated elevated acid phosphatase (47.8 IU/L) and chitotriosidase activity (508 nmol/mg protein), along with reduced beta-glucosidase activity (2 nmol/mg/protein). Genetic analysis confirmed Gaucher disease (GD) with homozygous L444P mutations in the GBA gene. The patient began enzyme replacement therapy (ERT) at 18 months and later combined ERT with substrate reduction therapy (SRT) using miglustat at 30 months. Miglustat dosing was adjusted over 4 weeks, along with dietary modifications to improve gastrointestinal tolerance. Over 5 years, the patient showed significant clinical improvements, including reduced splenomegaly, normalized hematological values, and decreased plasma chitotriosidase activity. Neurological evaluations remained normal, and the patient exhibited no cognitive impairments, performing well in school.

Discussion

Chronic neuronopathic Gaucher disease (NGD) involves neurological symptoms in patients with GD. The L444P/L444P genotype typically leads to chronic neurological issues. However, our patient showed no neurological symptoms up to age 7, contrasting with other patients who had neurological impairments within the first 5 years despite ERT monotherapy. Combination therapy with ERT and miglustat has shown mixed results. Some studies noted improved neurological outcomes and pulmonary function, while others did not find significant differences. Early initiation of combination therapy may delay or prevent neurological symptoms, as seen in this case.

Conclusion

This case highlights the potential of combining oral miglustat with intravenous ERT to prevent neurological deterioration in chronic NGD. Dietary adjustments also play a crucial role in managing gastrointestinal side effects of miglustat. Further studies are needed to fully understand the long-term benefits of this combined treatment approach. Mr. K.S. Elavarasan, IV B.Pharm

INTERESTING MEDICAL FACTS

1. Senses: The human nose can detect over 1 trillion different scents, while the tongue senses five basic tastes: sweet, sour, salty, bitter, and umami.
2. Muscle Power: The masseter muscle, used for chewing, is the strongest in the human body, generating up to 500 pounds per square inch (psi) of force.
3. Brain Function: Despite being 2% of body mass, the brain consumes 20% of the body's energy to support its complex functions.
4. Memory: On average, people forget about 90% of newly learned information within days, as the brain prioritizes storing new over old memories.
5. Skin Regeneration: The human skin completely regenerates itself approximately every 27 days, shedding dead skin cells to make way for new ones.

Mr.N.Praveen, II B.Pharm