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In This Issue ...

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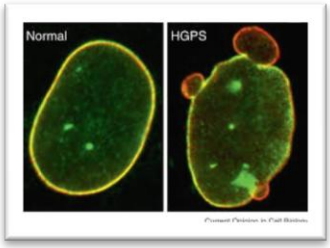
Hutchinson-Gilford progeria syndrome (HGPS)

Hutchinson-Gilford progeria syndrome (HGPS) is an extremely rare hereditary disease that affects the skin, musculoskeletal system, and vasculature. HGPS is characterized by signs of prematureaging most notable in the skin, cardiovascular system, and musculoskeletal systems. **HGPS is caused by mutations in LMNA that result in the production of an abnormal form of lamin A termed progerin.**

LMNA (Lamin A/C) is a Protein Coding gene. Lamin proteins are thought to be involved in nuclear stability, chromatin structure and gene expression. Mutations in this gene lead to several diseases: Emery-Dreifuss muscular dystrophy, familial partial lipodystrophy, limb girdle muscular dystrophy, dilated cardiomyopathy, Charcot-Marie-Tooth disease, and Hutchinson-Gilford progeria syndrome.



Epidemiology

HGPS is a rare disease with a reported prevalence of 1 in 8 million births. The true prevalence,however, has been suggested to be closer to 1 in 4 million births because many cases likely go undiagnosed or are misdiagnosed. The incidence in the Netherlands over the last century was 1:4,000,000. Approximately 100 cases of HGPS have been reported in the literature.

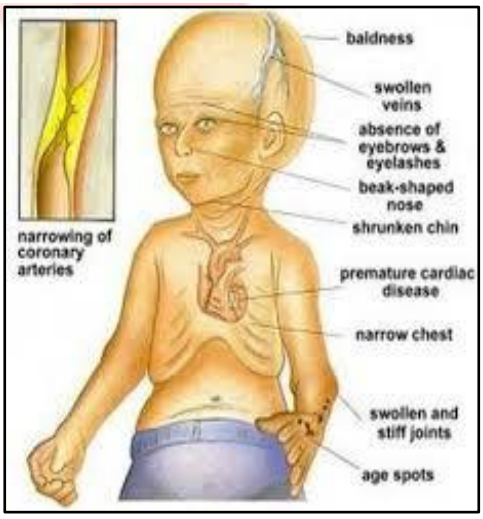
White persons represent 97% of reported patients. The reason for this racial disparity is unknown.

HGPS has a slight male predilection; the male-to-female ratio is 1.5:1.

Pathophysiology

Evidence of Hutchinson-Gilford progeria syndrome (HGPS) begins within the first 2 years of life. At birth, infants usually appear healthy, although sclerodermatous skin changes have been noted in some patients.Typically, the onset of the disease occurs at age 6-12 months, when skin changes and alopecia are first noted and when the infant fails to gain weight. The following are the suggestive findings :

- High-pitched voice
- Short stature and low weight for height, with prenatal onset of growth failure
- Incomplete sexual maturation
- Generalized osteoporosis and pathologic fractures
- Feeding difficulties
- Delayed dentition, anodontia, hypodontia, or crowding of teeth
- Low-frequency conductive hearing loss
- Hypertension
- Prolonged prothrombin time, elevated platelet counts, and elevated serum phosphorus levels.
- Narrowed face, small lower jaw, thin lips and beaked nose
- Head disproportionately large for the face
- Prominent eyes and incomplete closure of the eyelids
- Hair loss, including eyelashes and eyebrows.
- Thinning, spotty, wrinkled skin.
- Visible veins.



Laboratory Studies

Abnormalities in serum lipid levels are limited to low high-density lipoprotein levels, which are associated with atherosclerotic disease. Serum low-density lipoprotein and total cholesterol levels are normal in patients with Hutchinson-Gilford progeria syndrome (HGPS).

Elevated levels of hyaluronic acid excretion are seen in the urine of patients with HGPS but are not diagnostic.

Radiography

Findings usually begin to manifest within the first or second year of life and most commonly involve the skull, thorax, long bones, and phalanges, findings are as follows:

Generalized osteopenia, acroosteolysis (distal bone resorption) of the phalanges and distal clavicles, , "Fish-mouth" vertebral bodies, coxa valga and hip dysplasia , attenuated cortical bone, widened metaphyses, epiphyseal overgrowth, and narrow diaphysis, avascular necrosis of the femoral head, focal concave cortical defects at or near to the insertion of a major muscle group, dystrophic calcification, typically distal to the tufts of the fingers, normal bone age.

Treatment

There's no cure for progeria, but regular monitoring for heart and blood vessel (cardiovascular) disease may help with managing your child's condition.

During medical visits, your child's weight and height is measured and plotted on a chart of normal growth values. Additional regular evaluations, including electrocardiograms and dental, vision and hearing exams, may be recommended by your doctor to check for changes.

Certain therapies may ease or delay some of the signs and symptoms. Treatments depend on your child's condition and symptoms. These may include:

- **Low-dose aspirin.** A daily dose may help prevent heart attacks and stroke.
- **Other medications.** Depending on your child's condition, the doctor may prescribe other medications, such as statins to lower cholesterol, drugs to lower blood pressure, anticoagulants to help prevent blood clots, and medications to treat headaches and seizures.
- **Physical and occupational therapy.** These therapies may help with joint stiffness and hip problems to help your child remain active.
- **Nutrition.** Nutritious high-calorie foods and supplements can help maintain adequate nutrition.
- **Dental care.** Dental problems are common in progeria. Consultation with a pediatric dentist experienced with progeria is recommended.

Lifestyle and home remedies

Here are some steps you can take at home to help your child:

- **Make sure your child stays well-hydrated.** Dehydration can be more serious in children with progeria. Be sure your child drinks plenty of water, especially during an illness, with activity or in hot weather.
- **Provide frequent, small meals.** Because nutrition and growth can be an issue for children with progeria, giving your child smaller meals more often may help increase calorie intake. Add healthy, high-calorie foods and snacks or supplements as needed.
- **Provide opportunities for regular physical activity.** Check with your child's doctor to learn which activities are appropriate for your child.
- **Get cushioned shoes or shoe inserts for your child.** The loss of body fat in the feet can cause discomfort.
- **Use sunscreen.** Use a broad-spectrum sunscreen with an SPF of at least 15. Apply sunscreen generously and reapply every two hours — or more often if your child is swimming or perspiring.
- **Make sure your child is up to date on childhood immunizations.** A child with progeria isn't at increased risk of infection, but like all children, is at risk if exposed to infectious diseases.
- **Provide learning and social opportunities.** Progeria won't affect your child's intellect, so he or she can attend school at an age-appropriate level. Some adaptations for size and ability may be needed.
- **Make adaptations.** You may need to make some changes at home that enable your child to have some independence and to be comfortable. These can include household changes so that your child can reach items such as faucets or light switches, clothes with special closures or in special sizes, and extra padding for chairs and beds

Lonafarnib May Lower Mortality in Hutchinson-Gilford Progeria

Lonafarnib monotherapy is associated with lower mortality among patients with Hutchinson-Gilford progeria syndrome (HGPS), according to a study published in the April 24 issue of the Journal of the American Medical Association.

Among patients with HGPS, lonafarnib monotherapy, compared with no treatment, was associated with a lower mortality rate after 2.2 years of follow-up," the authors write. "Study interpretation is limited by its observational design." WEDNESDAY, April 25, 2018.

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Test Your Knowledge

1- When a patient s blood pressure medication was changed from HCTZ to propranolol. he or she became at risk of:

a- Hypercalcemia b- hypokalemia

c- hyperlipidemia d- hypoglycemia

2- Which of the following antihypertensive agents has NO adverse effect on glucose tolerance:

i Metoprolol ii Atenolol iii Captopril

a- i only b- iii only c- I & ii only d- ii & iiionly e- i, ii, iii

3- Ortho – Novum 777 is classified as:

a- monophasic b- triphasic c- biphasic d- mono andtriphasic

Healthy Food (Cruciferous vegetables)

Cruciferous vegetables are vegetables of the family Brassicaceae (also called Cruciferae) with many genera, species, and cultivars being raised for food production such as cauliflower, cabbage, kale, garden cress, bok choy, broccoli, Brussels sprouts and similar green leaf vegetables

All contain phytochemicals, vitamins and minerals, and fiber that are important to yourhealth they may help to lower your risk of getting cancer. May also help to protect against cardiovascular disease To maximize taste and nutrition, here are some tips for buying and cooking cruciferous vegetables:

Don't overcook cruciferous vegetables. They can produce a strong sulfur odor and become unappealing.You can buy several types of cruciferous vegetables ready-to-go in the frozen or fresh packaged sections of your supermarket, including broccoli, cauliflower, and Brussels sprouts.

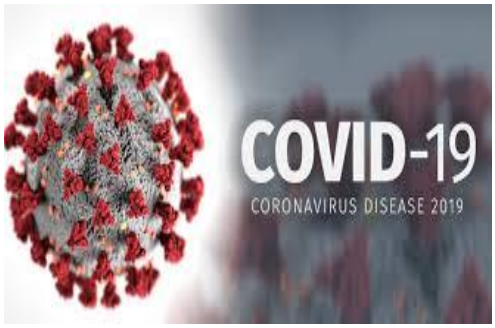
No raw veggie platter is complete without dark green broccoli or snowy white cauliflower florets.

Add raw broccoli or cauliflower florets to your green salad to give the nutrients a big boost.

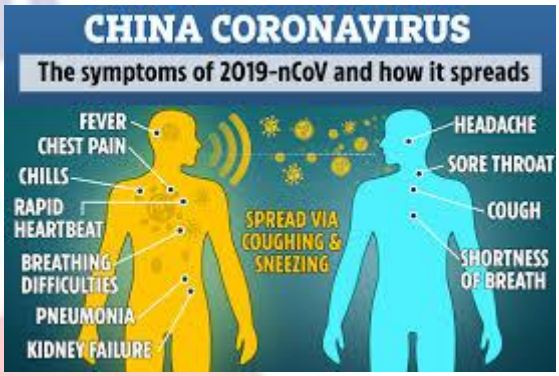
Add chopped cruciferous veggies to soups, stews, and casseroles.When buying fresh broccoli, look for firm florets with a purple, dark green, or bluish hue on the top. They're likely to contain more beta-carotene and vitamin C than florets with lighter green tops. If it has yellow in it or is limp and bendable, the broccoli is old -- don't buy it.

https://www.webmd.com/food-recipes/features/super-veggies-cruciferous-vegetables#2

Updates of Coronavirus disease(COVID-19)



The outbreak was declared a Public Health Emergency of International Concern on 30 Jan,2020.
On 11 February 2020, WHO announced a name for the new coronavirus disease: COVID-19.
Coronaviruses (CoV) are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV). A novel coronavirus (nCoV) is a new strain that has not been previously identified in humans. Coronaviruses are zoonotic, meaning they are transmitted between animals and people. Detailed investigations found that SARS-CoV was transmitted from civet cats to humans and MERS-CoV from dromedary camels to humans. Several known coronaviruses are circulating in animals that have not yet infected humans. Common signs of infection include respiratory symptoms, fever, cough, shortness of breath and breathing difficulties. In more severe cases, infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and even death. Middle East Respiratory Syndrome (MERS-CoV)is viral respiratory illness that is new to humans. It was first reported in Saudi Arabia in 2012 and has since spread to several other countries, including the United States. Most people infected with MERS-CoV developed severe respiratory illness, including fever, cough, and shortness of breath. Many of them have died.SARS coronavirus (SARS-CoV) – virus identified in 2003. SARS-CoV is thought to be an animal virus from an as-yet-uncertain animal reservoir, perhaps bats, that spread to other animals (civet cats) and first infected humans in the Guangdong province of southern China in 2002.



28 February 2020

In a daily COVID-19 press briefing the WHO Director-General said that more than 20 vaccines are in development globally, and several therapeutics are in clinical trials. But we don't need to wait for vaccines and therapeutics. There are things every individual can do to protect themselves and others today.
Your risk depends on where you live, your age and general health. WHO can provide general guidance. You should also follow your national guidance and consult local health professionals.

But there are 10 basic things that you should know:-

- First, clean your hands regularly with an alcohol-based hand rub, or wash them with soap and water.Touching your face after touching contaminated surfaces or sick people is one of the ways the virus can be transmitted. By cleaning your hands, you can reduce your risk
- Second, clean surfaces regularly with disinfectant – for example kitchen benches and work desks.
- Third, educate yourself about COVID-19. Make sure

your information comes from reliable sources – your local or national public health agency, the WHO website, or your local health professional. Everyone should know the symptoms – for most people, it starts with a fever and a dry cough, not a runny nose. Most people will have mild disease and get better without needing any special care.

- Fourth, avoid traveling if you have a fever or cough, and if you become sick while on a flight, inform the crew immediately. Once you get home, make contact with a health professional and tell them about where you have been.
- Fifth, if you cough or sneeze, do it into your sleeve, or use a tissue. Dispose of the tissue immediately into a closed rubbish bin, and then clean your hands.
- Sixth, if you are over 60 years old, or if you have an underlying condition like cardiovascular disease, a respiratory condition or diabetes, you have a higher risk of developing severe disease. You may wish to take extra precautions to avoid crowded areas, or places where you might interact with people who are sick.
- Seventh, for everyone, if you feel unwell, stay at home and call your doctor or local health professional. He or she will ask some questions about your symptoms, where you have been and who you have had contact with.This will help to make sure you get the right advice, are directed to the right health facility, and will prevent you from infecting others.
- Eighth, if you are sick, stay at home, and eat and sleep separately from your family, use different utensils and cutlery to eat.
- Ninth, if you develop shortness of breath, call your doctor and seek care immediately.
- And tenth, it's normal and understandable to feel anxious, especially if you live in a country or community that has been affected. Find out what you can do in your community. Discuss how to stay safe with your workplace, school or place of worship.

Real Enquiries

At the "Drug Information Center", we respond to enquiries from the professional healthteam as well as from the community. Here's one of the enquiries received at the center:

Enquiry received from: **EPVC (Egyptian Pharmaciviglance Center -MOH)**

Enquiry: Is the intake of Finasteride, side effects such as sexual dysfunction, as well as mental impairment symptoms or disorders, have been reported?

Summary of the answer:

Finasterideinhibits type II 5-alpha reductase, resulting in inhibition of the conversion of testosterone to dihydrotestosterone and markedly suppresses serum dihydrotestosterone levels.

Patients should be aware of the risk of sexual dysfunction (including erectile dysfunction, ejaculation disorder, and decreased libido) when starting finasteride therapy, sexual dysfunction may persist for more than 10 years after discontinuation of therapy.

Mood changes (including depressive mood, depression, and suicidal thoughts) have been reported also .

So, Patients treated with Finasteride should be monitored for psychiatric symptoms.

Answers of test Your Knowledge

1- (E) **2- (B)** **3- (B)**