The history and background of rickets health essay

ASSIGN BUSTER

Rickets is a disease that is lack of vitamin D. It is mostly happening in winter and spring, and children are easy to get the disease when they from 2 to 6 age group. If the children lack of vitamin D, their bones will become soft. (1. Unknown, 2003)

C: UsersDELLAppDataRoamingTencentUsers752503580QQWinTempRichOleBFU4MUDQ]H268WAGFZ_)}M. jpg Keywords: bones, children, cod liver oil, disabled children, diseases, girls, Glasgow Corporation, infants, medicine, orange juice, public health, rickets, sunlight, Vitamin D deficiency

History

1st and 2nd century AD

Soranus, a Roman physician, is the person who first described bony deformities in the 1st and 2nd century AD. He pointed out that bony deformities more appeared in the young children because Roman mothers often lack of nurture and hygiene.

1645

Daniel Whistler, an English physician, is credited with the earliest person who described rickets. In 1645, he published a monograph titled “ Inaugural medical” that provided a description of the signs and symptoms of rickets. An alternate term called “ Paedosteocaces” was used to describe the clinical symptoms of rickets. The signs and symptoms of rickets included bone pain or tenderness, dental deformities delayed formation of teeth, short stature, impaired growth, decreased muscle strength, and a number of skeletal deformities, including abnormally shaped skull (craniotabes), rib-cage

abnormalities (rachitic rosary), bowlegs, and breastbone, pelvic, and spinal deformities. (2. William C. Shiel Jr., 2012)

1650

Francis Glisson, a Cambridge physician published in Latin a treatise on rickets titled “ De Rachitide.” in 1650. Glisson’s work remains a classic among medical texts. Unlike Whistler, Glisson’s sound and elegant observation of rickets is based on clinical and postmortem experience.

1909

Nearly 2 centuries after the Glissonian era, there were no new developments in the study of rickets. At the turn of the 20th century, rickets was heavy among the underprivileged infants living in industrialized cities of North in the United States and several polluted cities in Europe. In 1909, among infants 18 months or less who had died, Schmorl found histopathological evidence of rickets in 96% (214 of 221) at autopsy, highlighting the pervasive nature of rickets during that era. Although it often happened, the exact cause of rickets still unclear. Deficient diet, faulty environment (poor hygiene, lack of fresh air and sunshine), and lack of exercise were all implicated in its etiology. (3. Kumaravel Rajakumar, 2003)

Geography

Rickets mainly happen in anywhere. It is primary cause of lack of vitamin D. the rickets mostly happen in the young children.

Firstly, the sunlight is an important factor of cure rickets because sunlight can facilitate the synthesis of vitamin D when human body exposure to sunlight. Sniadecki, a physicians observed that children living in Warsaw had

a high incidence of rickets, whereas children living in rural areas outside Warsaw did not Based on this observation, he advocated exposure to sunlight as a means of curing this disease. (4. Unknown, 2012)

Secondly, according to Sniadecki’s collections of opinions that indicated the appearance of rickets does not associated with the economy but the locations of the people. The opinions were from some physicians in the British Empire and the Orient showed that rickets was rare in children living in poor cities in China, Japan, and India where people received poor nutrition and lived in squalor, whereas the children of middle class and poor who lived in industrialized cities in the British Isles had a high incidence of rickets. (5. Jan 25, 2011)

Culture

Group

Mostly young children are easy to get rickets, especially dark skin people. Young children need to eat food that includes vitamin D and they need to under the sunlight more than 15 minute every day.

Symptoms

The signs and symptoms of rickets included bone pain or tenderness, dental deformities delayed formation of teeth, short stature, impaired growth, decreased muscle strength, and a number of skeletal deformities, including abnormally shaped skull (craniotabes), rib-cage abnormalities (rachitic rosary), bowlegs, and breastbone, pelvic, and spinal deformities. (6. William C. Shiel Jr., 89[0d2012)

Diagnosed

If we found children have tetany or seizures, X-rays of long bones (radius, ulna, and femur) and ribs, they will get the rickets. (7. William C. Shiel Jr., 2012)

Environmental influence

Pollution from factories can affect the rickets, because the environmental pollution will block the sun’s ultraviolet ray. The sun’s ultraviolet ray is good for our body. It can make our body production of vitamin D to reduce the rickets. (8. Steven M Schwarz, 2011)

Ethical issues

Nowadays people who with darkly pigmented skin or live in industrialized northern cities and the children in certain Arab countries who often cover clothing and stay indoors still at risk of rickets. Besides, in tropical with sunny climates, rickets still a problem in the cities like Calcutta, Johannesburg, and in mostly African-American children in the United States, because children usually consume vegetarian or vegan diets and infants often have low levels of vitamin D as a result of the lactating mothers have low levels of vitamin D. Although rare, diets directly deficient in calcium and phosphorus may also lead to rickets. (9. Unknown, 2012)

Social influence

Rickets can be found much more easily in the developing countries or regions which without clean food and water. Rickets is a kind of bone

structure softening disease, and it can finally lead to breakage, fractures and deformity of the limbs and spine. Rickets usually is due to malnutrition, especially when vitamin D and calcium cannot be got enough from the diet. If infants cannot get enough nutrients, they maybe get rickets much easier. Starvation, inadequate food intake or a poor diet also lead to rickets. In adults, an extreme deficiency in vitamin D can cause osteomalacia too.

If malnutrition is the main cause, protruding bones and muscles may be visible. And if caught early on, rickets can be treated. The treatment for rickets caused by malnutrition should start by treating the malnutrition or malabsorption of foods. This means following a healthy diet that includes whole grains, fruits, vegetables, protein and dairy. Another recommendation is a high-calorie nutritional supplement to promote and encourage weight gain. Sometimes doctor may also recommend vitamin D and calcium supplements with the precise dosage, and along with frequent monitoring of calcium and vitamin D levels in the blood. (10. Julie Boehlke, 2011)

Change agents

Daniel Whistler

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Harry Steenbock

In 1924, University of Wisconsin-Madison biochemist Harry Steenbock discovered a method that exposure to ultraviolet irradiation can increase the vitamin D content of certain foods, virtually eliminating the debilitating condition of rickets. (12. The Guardian, 2010)

K. Huldschinsky

In 1919, the German researcher K. Huldschinsky carried out a remarkably innovative experiment and cured children of rickets using artificially-produced ultraviolet light. (13. Unknown, 2009)

Alfred F. Hess and L. F. Unger

In 1921, researchers Alfred F. Hess and L. F. Unger of Columbia University first showed that by simply exposing rachitic children to sunlight, they were able to cure them of the disease. (14. Unknown, 2009)

Steenbock

Recognizing that simply irradiating certain foods that were common in most people’s diets could spare large numbers of children from the bone disease, Steenbock patented the food irradiation process using ultraviolet light in 1924, donating all future proceeds to support research at the University of Wisconsin. (15. Unknown, 2009)

Innovation

The description of conditions with bony deformities in ancient medical writings dates back to the 1st and 2nd centuries. Despite rickets common occurrence, the exact etiology of rickets remained elusive. An English

physician, Edward Mellanby made a series of experimental study and postulated, “ It therefore seems probable that the cause of rickets is a diminished intake of an antirachitic factor which is either fat-soluble A, or has a somewhat similar distribution to fat-soluble A.” Even though his conclusion has soon been proved incorrect, His work still clearly established the role of diet in the cause of rickets.

In 1861, Professor Armand Trousseau, a French internist state that rickets was caused by lack of sun exposure and a faulty diet, and cod-liver oil could effectively cure it. After many year further research and clinical trials, by the 1930s, the use of cod-liver oil in the treatment and prevention of rickets became common place. The eventual public health prevention initiative of fortification of milk with vitamin D led to eradication of rickets in the United States. (16. Kumaravel Rajakumar, 2003)

When people get more information about rickets, they can think about how to prevent rickets.

Contemporary uses and resources

Rickets can be prevented by consumed balanced and nutrition diets. In order to prevent the rickets, foods that are high in calcium (such as milk, cheese, and salad greens) and vitamin-D (such as breakfast cereals and orange juice) should be provided (17). Evidence has showed that supplements of 400 IU of vitamin D each day can be effective in preventing the diseases (18)

Vitamin D deficiency has become a serious problem throughout the world. In New Zealand, around 31% of children aged in 5-14 years suffer vitamin D deficiency (19).

Foods: oily fish, liver, eggs, meat, oatmeal.

Breakfast:

Lunch:

Dinner:

Vitamin D in pregnancy diet

The National Academy of Sciences recommended that pregnant women get 200 IUs (5 micrograms) of vitamin D each day if they’re not exposed to adequate sunlight (your body makes vitamin D when exposed to the sun). Many experts believe this amount isn’t nearly enough. For example, Bruce Hollis, professor of pediatrics at the Medical University of South Carolina, who has researched vitamin D needs, recommended that pregnant women take a supplement of 4, 000 IU of vitamin D a day. And lactating women take a supplement of 6, 000 IU daily. And the National Academy of Sciences is reviewing its guidelines on vitamin D currently, so the data may change.

Egg, fortified milk, fish liver oil, and fatty fish, and cereal products all contain vitamin D. Be sure to check food labels: Some cheeses, yogurts, eggs, and cereals are fortified while others aren’t. All milk is vitamin D fortified.

Here are some of the best food sources of vitamin D:

-3 ounces catfish, cooked: 570 IU

-3. 5 ounces salmon, cooked: 360 IU

-3. 5 ounces mackerel, cooked: 345 IU

-3 ounces tuna fish, canned in oil: 200 IU

-1. 75 ounces sardines, canned in oil, drained: 250 IU

-1 cup milk, fortified with 25% of daily value (DV) of vitamin D: 100 IU

-1 cup orange juice, fortified with 25% of DV of vitamin D: 100 IU

-1 cup fortified skim milk: 98 IU

-1 tablespoon margarine, fortified: 60 IU

-1 cup ready-to-eat cereal, fortified with 10% of DV of vitamin D: 40 IU

-1 egg yolk: 20 IU

the BabyCenter Medical Advisory Board, 1997. “ Vitamin D in your pregnancy diet” Retrieved on 10th November 2012 from

http://www. babycenter. com/0_vitamin-d-in-your-pregnancy-diet_661. bc?page= 2

Future trends

Application to an establishment