Some Unique Case Studies

Sarita – Rheumatic Heart Disease or Calcium Toxicity?

History
Sarita, a nine year old girl, who two years previously was diagnosed with Rheumatic Heart disease. She exhibited symptoms of breathlessness on exertion, swelling over both ankles, and knee joint pain.

A recent 2D echo cardiogram revealed mitral stenosis, AML thickened and calcific and PML thickened and calcific, aortic valve thickened, moderate MR and mild AR.

Prior Recommendation:
Patient was recommended surgical management for relief

Our Observations:
Her breathlessness is so severe to the point that Sarita is unable to attend school, which would require her to walk 4 km (3 miles) each way.

At our health center, Sarita's blood pressure, heart rates and cardiac efficiency were very carefully evaluated. Here are our findings:

November 15, 2010
BP = 103 / 70 and Pulse P = 97 BPs(standing) = 99 / 64 and Ps (Pulse) = 81
(Rheumatic Heart Disease – AML, PML is thickened and calcific)

On standing up (exertion), we observed a substantial fall in her heart rate by 16 bpm instead of rising by 10 to 15 bpm. It was concluded that her cardiac efficiency was very poor, since it was also coupled with breathlessness. There was also evidence of calcification of AML and PML in her recent 2D echo cardiogram report.

All this indicated calcium toxicity and magnesium deficiency. Since Sarita's parents were not able to afford the cost of surgery, it was decided to use this window of opportunity to administer therapeutic doses of organic magnesium, at intracellular levels (fortified with other supporting nutrients) in an effort to alter the blood biochemistry, to help dissolve the calcification of the AML and PML. Since calcium is an antagonist to magnesium, it was hoped that by raising intracellular and serum magnesium levels, the body would be able to naturally excrete excess calcium deposited in the body.

Her Progress:
Two weeks later the following readings were observed.

November 24, 2010
BP = 81 / 64 Pulse P = 93 BPs (standing) = 75/53 Ps = 85

The resting heart rate lowered from 97 to 93 and the heart rate on exertion (standing up) increased from 81 to 85. The fall in heart rate on exertion dropped from 16 bpm to 8 bpm in the first two week period. This was an encouraging sign and showed that her body was responding nicely and motivated us to explore this approach further.

Four weeks later, the progress was much better than we anticipated. The following readings were observed:

December 12, 2010
BP = 96 / 64 and Pulse P = 80 BPs = 88 / 56 and Pulse Ps = 76

At this stage, four week after commencing therapeutic doses of organic magnesium at intracellular levels (fortified with other supporting nutrients), all symptoms of breathlessness disappeared and Sarita was now able to join other children at play and can now run around like a normal child.

Sarita now walks 4 km (3 miles) to her school each way and also goes for tuitions in the evenings, to catch up with her lost years at school due to her heart condition. Her tuition class room is 2 km (1.5 miles) each way. Her body weight is improving and there is a healthy glow on her face.

Two years later on October 14, 2012
Heart disease is a distant history and Sarita is now leading a normal life. Her body weight has gone up by 4 Kg. (9 lbs.)

This case is unique, the repairs to the heart were carried out by first dissolving calcification by a simple adjustment of the ratio of magnesium to calcium in the blood biochemistry. Magnesium and calcium are antagonists. So by raising magnesium levels, the body was able to naturally excrete excess calcium. This improved the pumping action of the heart and the general health of the child.

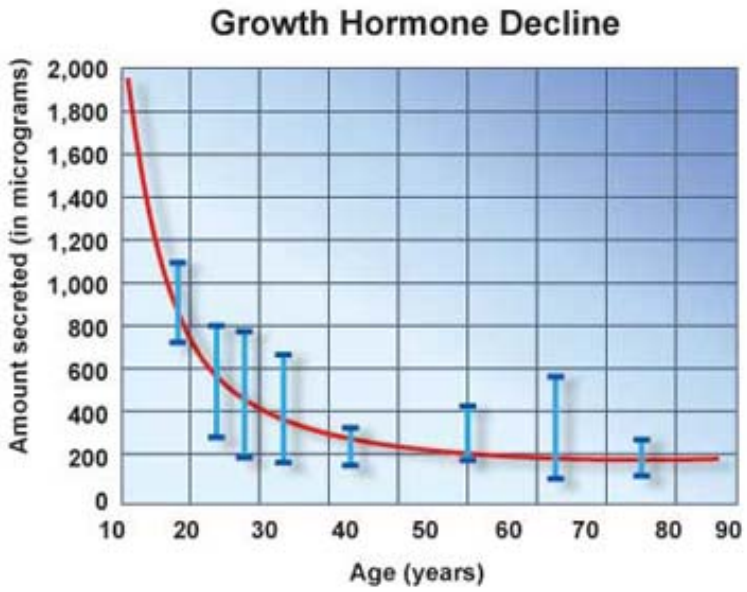
Since the patient was below eleven years of age, her growth hormone levels were at their peak and the body's stem cells have done the magic of repairing and rebuilding the heart.

One of the most important differences between an eleven year old child and a fully grown adult, as far as regenerative medicine is concerned, is the levels of growth hormones in their bodies. Growth hormone (GH) levels rapidly decline after the age of eleven years.

Human growth hormones (HGH) regulate more than just growth. Tissue repair, healing, cell replacement, organ health, bone strength, brain function, enzyme production, as well as the health of nails, hair, and skin all require adequate amounts of HGH.

In the case of adults, it is possible to use precursors in the form of amino acids like Arginine to enhance the release of growth hormones.

Incorporating the use of growth hormone precursors, with the use of stem cells in the patients' bodies, to stimulate the pituitary gland to increase growth hormone production, will ensure two important things. Firstly, it will result in a much higher efficiency in regeneration and repairing of the organs in adults, where growth hormone levels have declined. Secondly, it will also expand the scope of this regenerative medicine to healthy adults of any age and perhaps lay the foundation to regenerating other organs in adults as well.



Administration of multivitamin / mineral supplements to increase the availability of nutrition in the body will also help to improve the overall success rate of adults and children treated with regenerative therapies.

Altering the blood biochemistry, to change the ratio of calcium to magnesium, has improved the left ventricular ejection fraction (LVEF) of the heart. Remember, calcium helps contract muscles and magnesium helps muscles relax. Contraction and relaxation, are required by the heart, which is a muscular organ, to ensure its proper pumping action, e.g. LVEF.

How could Sarita possibly have developed such a problem?
The probable cause could be the overzealous use of calcium and vitamin D injections, inadvertently administered by the family physician, in an effort to help improve Sarita's health as a child. These injections may have actually caused calcium toxicity and calcification of her heart valves. Please refer to side effects of calcium and vitamin D mentioned earlier in this tutorial (pages 51 to 60). For the paper on "Reversal of Primary and Secondary Hypertension + Measuring and Increasing Cardiac Efficiency" in its entirety go to:
http://www.space-age.com/HighBloodPressure.pdf

Blessings,
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Arpita – A Child Born With Neuromuscular Dysfunction is Good at High Jumps!

History:
Arpita is a twelve year old girl diagnosed with mild dyslexia and weak neuromuscular coordination. She also suffers from leg / muscle cramps and poor concentration. She has developed a stooping posture since early childhood.

In spite of these physical challenges, she is a sports person who excels at high jumps at the school level. Her mother and her two aunts are MDs in various specialties of medicine and believe, due to general consensus in the medical fraternity they belong to, that these are congenital defects and are therefore untreatable.

Our Observations:
Due to history of poor concentration and leg / muscle cramps, we decided to check Arpita's ferritin levels to determine the existence of chronic and / or acute anemia at intracellular levels, which most probably could have easily been passed on from mother to daughter at child birth.

Her blood report showed a hemoglobin level of only 11.2 g/dL, while her serum ferritin was only 8.60 ng/mL, against an optimum level of 14.5 g/dL and 200 ng/mL found in healthy people, respectively. The prior diagnoses of chronic anemia since birth and now confirm through a blood report could easily explain "mild dyslexia" (learning disorder) which was observed since childhood in Arpita. Since the ferritin levels were well below 50 ng/mL the diagnosis of chronic anemia was now classified as a more severe acute anemia. Please refer to the note on Dietary Anemia attached to this case study.

Her stooping posture and prior diagnoses of weak neuromuscular coordination was a strong indication of a serious intracellular magnesium deficiency. In spite of these odds Arpita could high jump about 1.30 meters (4ft 3 inches) and had secured position 3 at the school level.

During a routine check up at our health center we found:

On November 09, 2011
BP = 97 / 56 Pulse P = 71 BPs (standing) = 98 / 53 Pulse Ps = 67
We noticed a fall in both her diastolic blood pressure and her heart rate on exercising (standing up). This suggested poor cardiac efficiency.

Upon checking her blood pressure, heart rate, and cardiac efficiency, it became apparent that the earlier diagnoses of neuromuscular disease was actually a serious magnesium deficiency. This was also clearly evident because of her stooping posture. Her heart rate fell upon exercising, an indication of poor cardiac efficiency. A routine blood report further confirmed serum magnesium deficiency (1.97 mg/dL) against an optimum level of 2.4 mg/dL found in healthy people.

Since calcium helps muscles contract and magnesium helps muscles relax, it was highly probable that once the serum and erythrocyte magnesium levels were raised to optimum levels, Arpita's performance at high jump would improve substantially. She would then be able to progress from school to district / state level and then to national level participation.

Also, raising her hemoglobin levels to an optimum of 14.5 g/dL and ferritin to 200 ng/mL would improve her oxygenation level and allow her to perform better at a sport she was naturally good at.

Her Progress:
Her poor cardiac efficiency referenced above was hindering her from reaching her full potential as an athlete.

She was immediately prescribed therapeutic doses of organic magnesium (fortified with other supporting nutrients) and organic iron (fortified with other supporting nutrients), which were carefully formulated at our in house compounding pharmacy, to work at quickly altering intracellular values.

Within two weeks of beginning intracellular magnesium therapy (with other supporting nutrients), the stooping posture had disappeared and she was standing erect and tall for the first time in her life.

A few months later (5/26/2012) I got an e-mail from her mother:
" Arpita is doing well. She got gold medal in high jump with a performance of 1.38 meters (4 ft. 6.5 inches) at district level and has been selected for state level. " -:)

In May 2012 Arpita received a Gold Medal at District level - 1.38 meters (4 ft. 6.5 inches)

In September 2012 she received a Gold Medal at State level - 1.40 meters (4 ft. 7.5 inches)

On September 24, 2012 her excited mother called to tell me Arpita won Gold at National Level - 1.46 meters (4ft. 9.5 inches). Some more events are in the pipe line for this gifted under 14 year old.:-)

We wish her all the best.

On March 11, 2013 (15 months later)
Hemoglobin had increased from 11.2 g/dL in Nov 2011 to 12.9 g/dL
Ferritin had increased from 8.60 ng/mL in Nov 2011 to 179.15 ng/mL
Serum Magnesium had increased from 1.97 mg/dL in Nov 2011 to 2.12 mg/dL

On October 05, 2013
BP = 105 / 67 Pulse P = 64 BPs (standing) = 106 / 66 Pulse Ps = 67
A slight increase in heart rate on exercising is observed. If optimal, the systolic / diastolic blood pressure and heart rate should increase by 10 to 15 points on exertion. For the paper on "Reversal of Primary and Secondary Hypertension + Measuring and Increasing Cardiac Efficiency" in its entirety go to: http://www.space-age.com/HighBloodPressure.pdf

We still have a long way to go to bring Arpita's body to stellar athletic performance. Hopefully, we can do this next year, after Arpita graduates from high school and she can devote more time to health care and sports.

Anemia Profile – Females			
	Hemoglobin	*** Serum Iron**	**** Ferritin**
Standard Reference Range	**11.5 to 15.0 g/dL**	**43 to 150 µg/dL**	**10 to 291 ng/mL**
Optimum Value	**14.5 g/dL**	**100 µg/dL**	**200 ng/mL**
Anemia Profile – Males			
Standard Reference Range	**12.5 to 17.0 g/dL**	**43 to 150 µg/dL**	**10 to 350 ng/mL**
Optimum Value	**16.5 g/dL**	**100 µg/dL**	**250 ng/mL**

Note:

***** Ensure Optimum Values of creatinine at 0.8 mg/dL and serum uric acid at 4.0 mg/dL.
Serum Iron levels tend to show falsely elevated values in case of some kidney insufficiency.

****** Optimum Value of ferritin is determined after optimizing serum B_{12} levels to ≈ 800 pg/mL.
Poor levels of B_{12} (typically in the 200 to 400 pg/mL range) tend to show falsely elevated values of ferritin which can be quite misleading.

Serum Ferritin

Serum ferritin concentrations of 70 ng/mL or greater are required to stop hair fall, while 100 ng/mL or greater are required to stop greying hair and promote hair regrowth.

Critical Ferritin Levels at which Chronic Anemia passes over to Acute Anemia:

Ferritin typically below 50 ng/mL

Optimum Value of Ferritin for Females = 200 ng/mL
Optimum Value of Ferritin for Males = 250 ng/mL

Therapeutic dose of Intracellular Organic Iron required to be given to correct Ferritin levels below 50 ng/mL:

100 mg Elemental Iron with other supporting Nutrients when orally delivered at Intracellular levels, bid, for minimum of six months will help to raise below critical levels of Ferritin to above 100 ng/mL.

Around this time please do a CBC, Serum Iron and Ferritin Test after discontinuing all Iron supplements for a minimum period of 7 days.

Continue Iron supplements thereafter till Ferritin reaches Optimum Values given above.

Do not use prophylactic doses of Iron designed to work at serum levels to correct Ferritin levels. These formulations, typically containing Ferrous Sulfate, are not designed to penetrate intracellular spaces to correct Ferritin Values.

Calcium interferes with absorption of iron. Calcium supplements or high intake of dairy products which are a rich source of calcium can cause iron deficiency anemia.

Problems with pregnancy: Maternal iron deficiency can have significant consequences for the development of unborn child. A retrospective analysis conducted by the Centers for Disease Control and Prevention found an increased risk of preterm birth in mothers with low hemoglobin levels during the first two trimesters of pregnancy. In non-African American women, moderately low maternal hemoglobin levels, defined as 9.0 <10.0 g/dL during the first trimester and as 8.5 <9.5 g/dL during the second trimester, also was associated with a higher risk of stillbirth. In addition, women with hemoglobin levels of <10 g/dL during the first twelve weeks of pregnancy had a three-fold greater risk than their non-anemic counterparts of giving birth to an infant with low birth weight.

Iron deficiency during gestation and lactation also is associated with changes in nervous system development and functioning. Possible complications in a pregnant woman with iron deficiency anemia are premature labor, dangerous anemia from blood loss during labor requiring blood transfusions and increased susceptibility to infection after childbirth.

Problems in children: Children with iron deficiency anemia perform more poorly in cognitive and motor skills tests and show delayed social and emotional development. Anemia also affects physical growth and mental development. Other consequences—including reduced levels of energy and productivity and impaired immune system function—develop as children mature. ***Even before they are deficient enough to get anemic, children who are iron deficient, are associated with a decrease in attention span, alertness, and learning ability.*** Memory and school performance are decreased. Athletic performance suffers. Kids with anemia tend to get sick more often. Prolonged or severe anemia can cause marked irritability, decreased appetite, and delayed growth. Untreated anemia can cause physical and mental delays in infants and children in areas such as walking and talking.

(The symptoms of Aripta – dyslexia (learning disorder) and poor concentration, are marked in red italics above to show that it was not a congenital defect but caused by just acute anemia and could be correctly through Orthomolecular Medicine i.e. nutrition administered at intracellular levels. Iron deficiency also affected her athletic performance.)

Blessings,
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Chronic Kidney Failure (CRF) or Ischemic Heart Disease (IHD)?

Here are my observations / recommendations after going through the last twelve months of patient's medical reports.

Patient is in a very critical condition.

We have two serious complications - one is the failure of his kidneys (he has been on dialysis for the past few months) and at the same time we have his heart with a very low ejection fraction of 28% to 40%.

I see that he has been on Shelcal 500 mg (calcium 500 mg + vitamin D) twice a day for the last many months. We also see calcium deposits in the brain, an indication of excessive calcium (toxicity).

If your attending doctors agree, I would like to find out if they are comfortable discontinuing calcium + vitamin D supplementation for the moment. This will be helpful under the present condition and will allow the heart to work more efficiently. I would go one step further to recommend immediately administering magnesium sulfate injections to improve cardiac efficiency, after taking a decision to stop calcium + vitamin D supplements (twice a day). Magnesium can only be effective after suspending the use of calcium supplements. This will allow his heart to begin pumping more efficiently and the left ventricular ejection fraction (LVEF) can be brought up to much safer value of 50% to 60% to enable the kidneys to begin working more efficiently. Raising serum magnesium levels may also help to dissolve excessive calcium deposits (in the brain for instance) from the body and help to reduce calcium toxicity.

Once this has been achieved, the patient's chances of returning to a normal life will improve considerably.

The reason why the patient may have been prescribed calcium supplementation during the past months, could be to counteract the low serum calcium values. However, calcium is released from the bones to counteract the acidity of the blood. The solution is to correct the pH of the blood by administration of sodium bicarbonate, which has been successfully done for this patient, in the past. The serum calcium values will automatically rise once the pH is successfully controlled. Administering calcium supplement will not really help to raise serum calcium values, as the calcium will be excreted out of the body due to the acidic pH of the blood.

Also, administering magnesium will help to raise serum calcium levels. This is how the human biochemistry works. Calcium and magnesium are antagonists and work in this manner. As the serum magnesium levels rise, the body in turn raises the serum calcium levels to counter act the rise in magnesium levels. This is how you can see serum calcium levels rise on administration of magnesium.

Again, calcium helps muscles contract and magnesium helps muscle relax. This is how the pumping action of the heart works, as the heart is a muscular organ, and needs both calcium

and magnesium. If calcium is in excess, the heart stays contracted and does not relax properly to complete the pumping cycle. This results in low left ventricular ejection fraction (LVEF) and poor cardiac efficiency. Low pumping action of the heart also results in inefficient working of the kidneys.

Blessings,
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