

Chronic Skin Rash

Patient Symptoms: A 77-year old patient presented with Type II Diabetes, high blood pressure, high cholesterol and a chronic skin rash. At the time of the initial visit, she weighed 223 lbs at 5'7" (having lost 15 lbs in the past year) and her blood pressure was 140/68.

- Recurring Skin Rash
- Type II Diabetes
- High Blood Pressure
- High Cholesterol Values
- Overweight

10-07-08 Currently the patient takes 5 medications for high blood pressure, fluid retention and a heart murmur and 15 different supplements. She has been diagnosed with Diabetes, but does not take any medication for this issue and uses "diet control" to keep her glucose in check. She suffers from frequent urinary tract infections. Two months prior, the patient had a bout with e-coli and was hospitalized. At the hospital she contracted a MRSA infection and shortly after a fungal infection on her under arms, breast, stomach and groin. She used several antibiotics, creams, medications and homeopathic remedies, yet the fungal infection did not get better. A dermatologist told her to "keep it dry and powdered". The patient claims to have grown up in a holistic environment and states, "I do NOT drink alcohol, pop or smoke. Very seldom do I use prepared or canned foods nor buy fast food. I eat out only once or twice a year and use chicken, fish or tofu with plenty of fruits and vegetables. I limit my starch intake and do water aerobics and swim 3-4 times per week."

Results of Initial Blood Test:

Legend: ■ Warning ■ High Risk ■ Critical ★ Optimal 😊 Improvement 😞 Worse 🚫 No Improvement							
Test Description	Current Rating	10/10/2008	Prior	Delta	Healthy	Clinical	Units
Glucose	131.00	High			80.00 - 95.00	65.00 - 99.00	mg/dL
Hemoglobin A1C (Gly-Hgh)	6.30	high			4.80 - 5.60	4.60 - 6.40	%
Total Cholesterol	231.00	High			140.00 - 170.00	100.00 - 199.00	mg/dL
Triglyceride	183.00	High			50.00 - 125.00	0.00 - 149.00	mg/dL
HDL Cholesterol	53.00	★			39.00 - 120.00	36.00 - 140.00	mg/dL
VLDL Cholesterol	37.00	high			5.00 - 20.00	4.00 - 40.00	mg/dL
LDL Cholesterol	141.00	High			50.00 - 75.00	6.00 - 99.00	mg/dL
Total Cholesterol / HDL Ratio	4.40	high			0.00 - 4.00	0.00 - 5.00	ratio
CRP C-Reactive Protein	5.20	High			0.00 - 1.50	0.00 - 4.90	mg/L
White Blood Count	6.70	★			5.00 - 8.00	4.00 - 10.50	k/cumm
Red Blood Count	4.31	low			4.50 - 5.50	4.10 - 5.60	m/cumm
Hemoglobin	13.10	low			13.30 - 15.20	11.50 - 17.00	gm/dL
Hematocrit	39.40	low			39.50 - 47.00	34.00 - 50.00	%
MCV	91.00	★			85.00 - 97.00	80.00 - 98.00	cu.m
MCH	30.40	★			28.10 - 32.00	27.00 - 34.00	pg
MCHC	33.20	★			33.00 - 34.00	32.00 - 36.00	%
RDW	15.50	High			11.10 - 14.50	11.00 - 15.00	%
Platelets	261.00	high			175.00 - 250.00	140.00 - 415.00	k/cumm
ESR-Erythrocyte Sed Rate, Westergren	9.00	high			0.00 - 6.00	0.00 - 20.00	mm/HR
Vitamin D 25-Hydroxy	21.90	Very Low			50.00 - 90.00	32.00 - 100.00	NG/ML

10-22-08 By looking at the test results there are a few problems which all tie together. Firstly, the glucose and hemoglobin A1C clearly show that the patient's diabetes is not adequately diet controlled. The ESR and CRP are all a little high which indicates nonspecific inflammation likely due to the fungal infection. The vitamin D levels are very low and there are also signs of hyperlipidemia (too much fat in the blood) as seen with the cholesterol, triglycerides LDL and VLDL cholesterol. Diabetes and inflammation can be tied to hyperlipidemia along with poor diet, excess weight and lack of exercise. Low vitamin D levels are also known to increase insulin resistance which can further complicate her ability to control the diabetes. Getting this patient supplemented with vitamin D3 and altering her diet to include low glucose foods will help with the diabetes and excess weight. Also specific supplements for the inflammation like ginger and tumeric should help reduce the ESR and CRP.

01-13-09 After just three months of care, the patient's test results showed marked improvement with glucose control, significantly reduced cholesterol levels, optimal vitamin D levels and decreased inflammatory markers. She also had better energy and stamina. Her blood pressure now typically runs under 100/70. It was suggested she discuss reducing her medications with her physician. The fungal infection has not gone away but has not gotten any worse.

Results of 2nd Blood Test:

Legend: Warning High Risk Critical ★ Optimal 😊 Improvement ☹️ Worse ⊘ No Improvement							
Test Description	Current Rating 01/13/2009		Prior 10/10/2008	Delta	Healthy	Clinical	Units
Glucose	118.00	High	131.00	😊	80.00 - 95.00	65.00 - 99.00	mg/dL
Hemoglobin A1C (Gly-Hgh)	6.00	high	6.30	😊	4.80 - 5.60	4.60 - 6.40	%
Total Cholesterol	188.00	high	231.00	😊	140.00 - 170.00	100.00 - 199.00	mg/dL
Triglyceride	95.00	★	183.00	😊	50.00 - 125.00	0.00 - 149.00	mg/dL
HDL Cholesterol	63.00	★	53.00		39.00 - 120.00	36.00 - 140.00	mg/dL
VLDL Cholesterol	19.00	★	37.00	😊	5.00 - 20.00	4.00 - 40.00	mg/dL
LDL Cholesterol	106.00	High	141.00	😊	50.00 - 75.00	6.00 - 99.00	mg/dL
Total Cholesterol / HDL Ratio	3.00	★	4.40	😊	0.00 - 4.00	0.00 - 5.00	ratio
CRP C-Reactive Protein	5.10	High	5.20	😊	0.00 - 1.50	0.00 - 4.90	mg/L
White Blood Count	7.50	★	6.70		5.00 - 8.00	4.00 - 10.50	k/cumm
Red Blood Count	4.48	low	4.31	😊	4.50 - 5.50	4.10 - 5.60	m/cumm
Hemoglobin	13.70	★	13.10	😊	13.30 - 15.20	11.50 - 17.00	gm/dL
Hematocrit	40.10	★	39.40	😊	39.50 - 47.00	34.00 - 50.00	%
MCV	89.00	★	91.00		85.00 - 97.00	80.00 - 98.00	cu.m
MCH	30.60	★	30.40		28.10 - 32.00	27.00 - 34.00	pg
MCHC	34.30	high	33.20	☹️	33.00 - 34.00	32.00 - 36.00	%
RDW	14.70	high	15.50	😊	11.10 - 14.50	11.00 - 15.00	%
Platelets	269.00	high	261.00	☹️	175.00 - 250.00	140.00 - 415.00	k/cumm
ESR-Erythrocyte Sed Rate, Westergren	7.00	high	9.00	😊	0.00 - 6.00	0.00 - 20.00	mm/HR
Vitamin D 25-Hydroxy	60.80	★	21.90	😊	50.00 - 90.00	32.00 - 100.00	NG/ML

08-12-09 Six months after the last blood test and the patient's symptoms are worse. She is having problems with skin rashes and infections, has had several recent urinary tract infections. Her glucose levels and inflammatory markers are higher. After talking to the patient it was found that she was eating too much FRUIT! She consumed one quart of blueberries, a pound of cherries and at least 2 other fruits (apple, peach, etc.) a day. That's like eating 25 teaspoons of sugar per day! She loved the taste of fruit and hoped the antioxidants in the berries would help her fungal infection. It was suggested the patient stop eating all fruit for four days and within a very short time, the infection lessened and for the first time in years it appeared to be improving!

Results of 3rd Blood Test:

Legend: ■ Warning ■ High Risk ■ Critical ★ Optimal ⊕ Improvement ⊖ Worse ⊖ No Improvement							
Test Description	Current Rating	Prior	Delta	Healthy	Clinical	Units	
	08/12/2009	01/13/2009					
Glucose	142.00 High	118.00	⊖	80.00 - 95.00	65.00 - 99.00	mg/dL	
Hemoglobin A1C (Gly-Hgh)	6.60 High	6.00	⊖	4.80 - 5.60	4.60 - 6.40	%	
Total Cholesterol	174.00 high	188.00	⊕	140.00 - 170.00	100.00 - 199.00	mg/dL	
Triglyceride	133.00 high	95.00	⊖	50.00 - 125.00	0.00 - 149.00	mg/dL	
HDL Cholesterol	56.00 ★	63.00		39.00 - 120.00	36.00 - 140.00	mg/dL	
VLDL Cholesterol	27.00 high	19.00	⊖	5.00 - 20.00	4.00 - 40.00	mg/dL	
LDL Cholesterol	91.00 high	106.00	⊕	50.00 - 75.00	6.00 - 99.00	mg/dL	
Total Cholesterol / HDL Ratio	3.10 ★	3.00		0.00 - 4.00	0.00 - 5.00	ratio	
CRP C-Reactive Protein	15.10 Very High	5.10	⊖	0.00 - 1.50	0.00 - 4.90	mg/L	
White Blood Count	7.30 ★	7.50		5.00 - 8.00	4.00 - 10.50	k/cumm	
Red Blood Count	4.46 low	4.48	⊖	4.50 - 5.50	4.10 - 5.60	m/cumm	
Hemoglobin	13.60 ★	13.70		13.30 - 15.20	11.50 - 17.00	gm/dL	
Hematocrit	40.40 ★	40.10		39.50 - 47.00	34.00 - 50.00	%	
MCV	91.00 ★	89.00		85.00 - 97.00	80.00 - 98.00	cu.m	
MCH	30.60 ★	30.60		28.10 - 32.00	27.00 - 34.00	pg	
MCHC	33.70 ★	34.30	⊕	33.00 - 34.00	32.00 - 36.00	%	
RDW	14.80 high	14.70	⊖	11.10 - 14.50	11.00 - 15.00	%	
Platelets	273.00 high	269.00	⊖	175.00 - 250.00	140.00 - 415.00	k/cumm	
ESR-Erythrocyte Sed Rate, Westergren	12.00 high	7.00	⊖	0.00 - 6.00	0.00 - 20.00	mm/HR	
Vitamin D 25-Hydroxy	38.70 low	60.80	⊖	50.00 - 90.00	32.00 - 100.00	NG/ML	

Final Results:

When you eat, glucose (sugar) in your food is moved into cells by insulin where it is stored to be used as energy. Type II diabetes causes a problem called insulin resistance where the glucose is not properly stored in your fat, liver, and muscle cells and instead builds up in the blood. The glucose will often exit the body thru the urinary tract or attach to other tissues within the body. When this happens, bacteria quickly multiply in the sugar filled tissues and infections can develop. To fight the infection the body releases hormones called "counter regulatory hormones" which tell the liver to release extra glucose to give you an extra energy boost. These hormones also reduce insulin effectiveness to allow the glucose to stay in the blood stream. It's a viscous cycle as the high level of sugars cause a weakened immune system allowing for increased susceptibility to infection. Diabetics have trouble with insulin and glucose control. Eating foods with higher glycemic indexes places the body under more stress. Cutting out carbohydrates, as well as eating a diet high in protein and vegetables is an easy way to help ease that burden. Sometimes too much of a good thing is a bad thing. Is fruit a healthy food? Yes. Is it a healthy food for everyone? No. Eating lots of high carbohydrate fruits was not only bad for this patient's diabetic condition, but it also likely played a big role with her chronic skin rash.