

Flo Owned a Beauty Shop ...

By Jose Bufill

Flo owned a beauty shop in a small town about an hour from my hospital. She loved what she did, so she was very good at it: much admired by her clients and esteemed by their grateful husbands. Her place was the town's social hub, and Flo's figurative finger was firmly fixed on the pulse of all its comings and goings. So when she complained of feeling really tired all the time, her family doc listened. Sure enough, her blood counts - red cells and white cells - were way too low. Her anemia probably explained her fatigue. Or did it?

I thought I had her problem figured out by her second visit. The initial battery of tests showed that her vitamin B12 level was just a few points below normal. That should do it. Years before her current symptoms, Flo had most of her stomach removed when massive bleeding from an ulcer could not be stopped with medicines alone. Long hours doing hair had taken their toll on her back, and many months ingesting anti-inflammatory medicines had scorched the lining of her stomach. Afterward, she swore she would never touch "pain pills" again. And Flo meant what she said.

Since proper absorption of vitamin B12 requires an intact stomach, everything seemed to fit neatly in place. I reassured her and started B12 injections. Needless to say, I was surprised when 8 weeks later neither her blood counts nor her symptoms had improved at all. She agreed to a bone marrow biopsy. She wanted to get better and back to work.

Sure enough, the bone marrow seemed to provide the answer. Her blood cells were not maturing properly. There were "sideroblasts" in the marrow: immature red cells with a dark brown halo of iron-rich particles arrayed around the nucleus. By all accounts, Flo had - in shoptalk - a "refractory anemia with ringed sideroblasts," a form of myelodysplasia. I reassured her and started erythropoietin shots and pyridoxine pills. She didn't miss a dose.

When she returned after another eight weeks on treatment, she was no longer anemic but the low white cells persisted and now she was exhausted. She also began to notice numbness in her hands and feet. She couldn't grip those brushes and curling irons very well any more. Something was wrong. So I did what any self-respecting medical professional would do. I consulted Dr. Google.

A search for "sideroblastic anemia and neuropathy" offered a clue: an article - published a few months before her referral - describing low blood counts and nerve damage in three patients with a zinc-induced copper deficiency. Could Flo be a fourth case?

Sure enough, her plasma zinc levels were off the chart and her copper levels were in the basement. A couple of years before I met her, Flo admitted she had started taking a popular local health tonic containing zinc. She immediately stopped it and we started oral copper

replacement. Within a month, her blood counts and copper levels returned to normal, but her neurological symptoms worsened rapidly. She now could walk only with difficulty and had to stop working. An MRI showed a localized area of inflammation – myelitis - in her upper spinal cord.

Despite stopping her tonic, her zinc levels remained high. How could this be? We began a new search looking for alternate sources of excess zinc, and fortunately, for this we had plenty of help. Flo's friends contacted local health authorities. Zinc levels in the water supply were checked. A zinc expert with a PhD was brought in from New Jersey for a grand rounds talk. Food product labels were meticulously inspected for zinc content. "Think zinc" computer printouts began to appear taped to the windows of neighboring businesses. Yet almost a year later, Flo continued on copper replacement because her zinc levels would not drop. She had to stop working, but her network of friends did not.

A breakthrough finally came from Lola, one of the platoon of sympathetic zinc warriors Flo had inspired. Lola happened to be Flo's sister and a resident of Las Vegas. While Lola surfed the internet on a random Saturday evening, a side-bar ad popped up on her screen. Dr. Google's perspicacity: the ad – from the offices of a California personal injury law firm - announced a class-action lawsuit for people harmed by zinc. They wanted affected patients to call them and offered restitution! Zinc! That toxic trace element – the lawyers insisted - came not from tainted water, not from health tonics or vitamin overindulgence, not from oysters or breakfast cereals... The zinc came from denture paste! And the giant corporations fabricating the stuff needed to pay up! Sure enough, for a full eighteen years, Flo had been using one of the popular denture adhesives named in the suit at least several times a day, concerned that her discount, ill-fitting dentures might drop and plop onto the lap of one of her clients while clipping, curling and conversing on the latest...

Flo asked to have her records sent to California. We learned she was among the most methodically studied patients diagnosed with zinc-induced copper deficiency from denture paste. The records we provided, we learned, were crucial to the outcome of the lawsuit. We had repeatedly documented elevated zinc levels over time, persisting as her symptoms progressed and despite interventions to eliminate zinc exposure. We also documented how quickly her zinc levels dropped after stopping her denture paste. Hers was "the case" that decisively tipped the scales on favor of the plaintiffs.

I never learned how much Flo was awarded. I do know how much she lost. She passed away years ago of an unrelated illness and never returned to the beauty shop. And she never shed her walker.

But now, when I am asked to see a patient with an unusual anemia, I remember Flo and how she helped me grow as a physician. I now check patients for the presence of dentures and ask about use of adhesives. Doing so, I've stumbled on another three or four patients with symptomatic copper deficiencies from zinc-enhanced denture paste. I've also seen shiny "ZINC FREE" labels on Fix-o-Dent and PolyGrip boxes at local drug stores from time to time. When I do I say a prayer for Flo.

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