



HEALTH

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Diabetic retinopathy: a complication of diabetes

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If the regular course of events had been left to unfold on their own, forty-one year old Marlene Albury would be blind today. Instead, quick thinking by her doctors and a breakthrough eye surgery are to thank for Marlene now having vision in both of her eyes.

Thirty-two years ago, at the age of eight, Marlene was diagnosed with juvenile (type1) diabetes, but it was just last year that recurring hemorrhaging in both eyes prompted her to visit an ophthalmologist in Nassau. He told her to "wait it out" and that she would get better. But she didn't get better.

As the hemorrhaging continued to develop in both of her eyes, diminishing her vision, Marlene realised that she could wait no longer. If left untreated, she feared she would lose her vision completely. The turning point for Marlene came when she sneezed one day and suddenly lost the vision in her right eye. At the time she barely had vision in her left eye, so she was essentially left legally blind by a simple sneeze.

After learning of Dr Geoffrey Sweeting, an ophthalmologist at the Nassau Sight Centre, Marlene visited him and was quickly diagnosed with diabetic retinopathy. Dr Sweeting advised her to see a retinal specialist overseas since her condition could not be helped by the laser therapy that his office could provide.

By the time Marlene saw Dr Sweeting, her vision had gone from bad to worse. She had 20/200 vision in her right eye and in her left eye she couldn't see the big E on the reading chart - all of which meant that she was unable to see faces clearly, she couldn't drive, or read a newspaper, and she couldn't work. Marlene had become completely dependent on others to guide her around.

"She noticed that she was losing her sight and we confirmed it," Dr Sweeting told *Tribune Health* of Marlene's condition.

"...In most cases, if caught early enough, the laser arrests the diabetic changes, but a lot of times in the Bahamas we get these changes very late because people procrastinate and because of that they will need more than laser to correct it."



DR MARK MICHELS

Diabetic retinopathy is a complication of diabetes, and a leading cause of acquired blindness among people under the age of 65. It occurs when diabetes damages the tiny blood vessels inside the retina, the light-sensitive tissue at the back of the eye. High blood sugar levels weaken blood vessels in the eye's retina, causing them to leak blood or fluid. This causes the retina to swell and can lead to vision loss and blindness.

The great majority of this blindness can be prevented with proper yearly examinations by ophthalmologists. In the United States alone, diabetic retinopathy affects up to 24,000 new people per year where the potential for permanent blindness strongly exists. Early intervention is essential, especially if a patient has already been diagnosed with diabetes.

Dr Sweeting said that in Marlene's case, the retinopathy was progressing rapidly which prompted him to recommend Dr Mark Michels, a well respected Floridian retinal specialist, for surgery to try and recover some of the sight that Marlene had lost.

Dr Michels, of Retina Care Specialists in Palm Beach, Florida, calls Marlene's journey, "an inspiring story". Over the course of eight months, he was able to help her realise the recovery she had been looking for.

"We saw her and decided we could fix her and offered her surgery in the better right eye first because it had the most potential.

"We took her to the operating room and removed all the blood which spilled out when she sneezed, we cauterized the blood vessels that were leaking, and we reattached the retina that had been detached from all the bleeding.

"Eventually, a little less than a year later, she is now at drivers licence vision in right eye, and had surgery done on

her left eye in June and she regained useful vision in that eye," Dr Michels told *Tribune Health*.

Marlene's success story, Dr Michels believes, is an exciting one because often times people with diabetes give up hope. They allow themselves to go blind and fail to get the attention they need.

"It's a common problem, not just with Bahamians. As the population ages - as they get more obese - the larger population is getting diabetes.

"It is exciting to be able to share with readers the benefits of technology available to make people see again," he added.

So after several surgeries and having to rely on both her parents to care for her while in Florida, Marlene was recently able to return to the Bahamas wearing glasses.

Regular check-ups

Discussing the impact that diabetes has on vision in general and what some of the other eye-related conditions are that can result from uncontrolled diabetes, Dr Michels said that diabetes can contribute to cataract formation, and a very difficult type of glaucoma. The impact on a person's life in general is that it can take away their independence, he said.

For almost a year Marlene struggled with her vision. When she came into Dr Michel's office she had to be led by her mother and father. "That's how an adult woman was led around. It had a pretty significant impact not only on her vision, but her whole life. She was employed as a legal secretary, but couldn't do it and literally had to be led by hand."

For Dr Michels, the take home lesson is that diabetics must pay attention to their disease. They must work hard to keep their diabetes under control so that they don't need an ophthalmologist in the first place. Such extreme lengths, like those needed by Marlene to restore her sight, will not be needed if persons get checked out regularly by primary care physicians like Dr Sweeting.

He said also that if someone seeks care early and all that they require is laser surgery, then maybe they will miss a day or two from work. Undergoing and recovering from surgery however, is likely to take much longer, with the time frame for returning to normal vision possibly stretching to as long as a few months.

Interestingly, Marlene's case isn't the only one that Dr Michels has seen from the Bahamas. He has seen people from New Providence and the Family Islands, including Abaco, Grand Bahama, and Spanish Wells.

He also noted that diabetic patients

should have regular, annual checkups to identify any complications early on which would allow for preventative measures like laser procedures that can ward off or prevent the development of more complications or loss of vision that would then require someone with his advanced expertise to fix.

Echoing that statement, Dr Sweeting said that an annual eye exam which is a dilated exam that gives doctors a more detailed look into the eye, is what is required.

When asked if there are many cases of diabetics who end up losing their eye sight due to diabetic retinopathy, Dr Sweeting gave an emphatic, "absolutely." "In the United States, more people go blind from diabetes than anything else in the working age population, that is from 15 to 65. Now, in the Bahamas, we don't have statistics like that but we assume that it is similar, that more people go blind from diabetes than anything else."

Thankfully for Marlene Albury, hers was a success story. Since returning home on December 1, 2006 with her glasses, Marlene has been inching her way toward recovery. The glasses however, weren't much help when it came to depth perception (like walking down a flight of stairs for example) but in four weeks she got the contact lenses that she had been waiting for and was able to return to her job at a local law firm, pretty much doing everything that she was able to do before she began going blind.

Obviously excited about the success of her surgeries, Marlene said that her goal is now to get back into her regular routine.

"I'm still having some trouble with depth perception, but if I'm walking down stairs I just take my time," she said. "I'm just thankful for being able to see."

On a recent Sunday, after about a year of not being able to drive, Marlene took her car out to a supermarket parking lot to practice. With a few more weeks of practice, she believes that she will be ready to tackle the regular rush hour morning traffic. And that simple act which many people do not even consider, will be a momentous feat for Marlene.

"Like I told my dad, when I got back home on December 1, I just had my car sitting up in front of my apartment. I had the keys, but I just couldn't drive. Soon I'll be able to drive it. So that'll be great," she told *Tribune Health*.

• For more information on surgical procedures for diabetic retinopathy, interested persons can contact Dr Michels at 561.624.0099 or check out his website at www.retinarespecialists.com

Fighting the eye-related disease

DR MICHELS, and his partner Dr Adrian Lavina, have been involved with more than five ongoing clinical trials for drugs that could potentially be used in the fight against diabetic retinopathy and other eye-related diseases.

Two of the more promising drugs are:

- Lucentis (Genentech). Used in patients suffering with macular degeneration, as it turns out, researchers have discovered that the drug also seems to work to dry up leaky blood vessels caused by diabetes and other vascular problems.

Lucentis has been approved by the US-based Federal Drug Administration (FDA) but not approved for diabetes, so doctors that prescribe Lucentis to diabetic patients do so "off-label". The continuing study will allow researchers to gather the statistical data necessary for the FDA to determine the drugs use going forward. Approval by the FDA also means that it can be covered by insurance companies.

- Posurdex (Allergan) is an implantable (painless) drug that lasts for six months that is being looked at for its ability to reduce the swelling in the eyes that comes from diabetes and vein occlusions. In clinical trials that have gone on for about two years, researchers have been trying to find less invasive ways to improve vision in patients with blood vascular issues.

An article published in the prestigious journal *Nature* in December 2006, listed the publications on Lucentis by Dr Michels and others in the *New England Journal of Medicine* in October 2006, as the sixth most important medical development in 2006.

According to Dr Michels it might be possible for Bahamians to participate in some of the ongoing drug studies. He said that if they meet the criteria and are able to travel to the US for follow-up visits, then they may qualify to be included in some of the trials.