

THE LNC NEWSLETTER

PRESENTED BY:

Medical-Legal Interface

Understanding Diabetes

Pattie Patterson RN, LNCC, CLCP

September 2004

Volume 3, Issue 12

Inside this issue:

VTE: Prevention and Timely Treatment Factors in Malpractice Claims	2
Buns of Steel, Boobs of What, Titanium, You Say!	3
Why not to use Doctors to Determine Life Expectancies	5

Diabetes mellitus is a condition characterized by high levels of blood glucose resulting from defects in insulin production, insulin action, or both. Diabetes can be associated with serious complications and premature death, but people with diabetes can take steps to control the disease and lower the risk of complications. Diabetes is becoming more common in the United States. From 1980 through 2002, the number of Americans with diabetes more than doubled (from 5.8 million to 13.3 million).

Types of diabetes

Type I diabetes was previously called insulin-dependent diabetes mellitus (IDDM) or juvenile-onset diabetes. Type I diabetes develops when the body's immune system destroys pancreatic beta cells, the only cells in the body that make the hormone insulin that regulates blood glucose. This form of diabetes usually strikes children and young adults, although disease onset can occur at any age. Type I diabetes may account for 5% to 10% of all diagnosed cases of diabetes. Risk factors for type I diabetes may include autoimmune, genetic, and environmental factors. As the names indicates,

people with Type I diabetes must receive insulin in order to survive.

Type II diabetes was previously called non-insulin-dependent diabetes mellitus (NIDDM) or adult-onset diabetes. Type II diabetes may account for about 90% to 95% of all diagnosed cases of diabetes. It usually begins as insulin resistance, a disorder in which the cells do not use insulin properly. As the need for insulin rises, the pancreas gradually loses its ability to produce insulin. Type II diabetes is associated with older age, obesity, family history of diabetes, history of gestational diabetes, impaired glucose metabolism, physical inactivity, and race/ethnicity. African Americans, Hispanic/Latino Americans, American Indians, and some Asian Americans and Native Hawaiians or Other Pacific Islanders are at particularly high risk for type II diabetes. Type II diabetes is increasingly being diagnosed in children and adolescents. Some of these people can be controlled with a proper diet and exercise regime, while others take an oral hypoglycemic agent. Some end up having to take insulin while still others may have to take not only

Cont on p 3

There Are No Quick (Correct) Answers

Robert Morrison, RN BSN

It is a question that I have been asked many times, "Can you give me a quick opinion so I can decide whether or not to take this case?" For the attorney it seems simple enough. They have a basic understanding of the claim and the background supplied by the new (potential) client. It may be a malpractice claim, or maybe a personal injury case. Whatever the circumstances, the attorney wants to get a quick review to see if the claim is even worth spending any time or money to pursue. Unfortunately, there isn't a way to give an accurate response to that question without a careful review of the data.

The legal nurse consultant, of course, is not the one that makes the ultimate decision on the new case. That requires a skilled, experienced legal mind to evaluate. The job of the LNC is to accurately and completely summarize and explain the medical facts and implications based on the objective information at hand. That means that the LNC must first review the medical documentation, not just the patient/client's statements. While clients may mean well, they cannot provide an objective, unbiased account of the events in question. They are a part of the story, and have a personal interest in the outcome. They also do not know everything the providers knew or documented, or have the background to properly interpret them. In order to properly inform the attorney of the facts, the LNC needs to know the three general time periods in the client's life-before, during, and after. "Before" refers to the client's health

status and baseline information at the time of the event, be it a personal injury or a malpractice. This allows the LNC to explore any possible factors that influenced the client's outcome other than the events in question. Simply stating that the client was "healthy" at the time of the events, or that they had no medical problems, isn't sufficient. One's health is too complex to be summed up in such a way.

Everyone has specific medical issues that affect their state of well-being, and these will affect how they respond to an injury, or a specific medical treatment or procedure. This has implications when assessing liability for the client's current status. In a malpractice claim it is imperative that the attorney understand what the treating physician did and did not know at the time of the event. Maybe there were things that they could not have known, or perhaps there were things that they would have known if they had acted properly. What the provider knew, and when, plays a big role in determining liability. In a personal injury claim, the client's health status may have had a major impact on how well they were able to recover from the injury, or how badly they were impaired. "During" refers to the events that led to the injury or damage. This may be a car accident or other type of trauma, or perhaps it refers to a medical procedure that allegedly resulted in the client's current status. For this to be properly analyzed the LNC must have all of the records generated

Cont on p. 4

VTE: Prevention and Timely Treatment Factors in Malpractice Claims

Maggie Driscoll BSN RN CCRN CLNC

Incidence:

VTE or venous thromboembolism disease includes both pulmonary embolic disease and deep vein thrombosis (DVT). A deep vein thrombosis is a blood clot or thrombosis in a deep vein that typically affects the veins in the lower leg and the thigh, but can manifest in other areas of the body. This thrombus may interfere with circulation of the area, and it may break off and travel through the blood stream (embolize). The embolus thus created can lodge in the brain, lungs, heart, or other area, causing severe organ damage and/or death.

According to www.dvt.org each year, 600,000 patients will experience venous thromboembolism (a blood clot that travels through the blood stream). Each year, it's estimated that 50,000 to as many as 200,000 patients will die from blood clots that obstruct blood flow to their lungs (pulmonary embolism). In more than 90 percent of cases of pulmonary embolism (PE), the thrombosis originates in the deep veins of the legs.

Clot formation:

A German pathologist named Rudolph Virchow identified three factors responsible for the formation of venous blood clots. These factors, now known as Virchow's triad, are venous stasis, vessel wall damage, and hypercoagulability.

Venous stasis: When blood return in the legs is impaired, blood pools in the lower extremities, increasing the chances of clot formation.

Vessel wall damage: An injury to the vessel wall triggers the release of a substance that causes platelets to collect at the injured site and initiate the clotting mechanism.

Hypercoagulability: The increased tendency for blood to clot. Pregnancy, excessive bleeding, trauma, burns, shock or an inherited clotting deficiency can cause an alteration in blood clotting mechanisms.

Risk Factors:

Once formed, the fate of a blood clot depends on the persistence of factors involved in its formation. Many will spontaneously dissolve or will be reduced in size, but others may extend and embolize (travel through the blood stream), putting a patient at risk for serious cardio-pulmonary compromise and death.

Risks for developing a DVT

include:

1. increasing age
2. prolonged sitting, **bedrest or immobilization**
3. **recent surgery** or trauma, fractures (especially hip, pelvis, leg)
4. previous VTE
5. obesity
6. childbirth within the last 6 months
7. medications such as estrogen and birth control pills
8. polycythemia vera
9. malignant tumor, cancer and its treatment
10. inherited or acquired hypercoagulability (changes in the levels of blood clotting factors making the blood more likely to clot)
11. varicose veins
12. cardiac dysfunction
13. high cholesterol
14. indwelling central venous catheters

Symptoms:

Symptoms of DVT can include pain or tenderness in one leg only, sudden swelling in the leg, enlargement of the superficial veins, reddish-blue discoloration of the skin, and warm skin. However, not all patients with DVT are symptomatic. Some patients with DVT will present only with fever, usually less than 38.3 F, without the signs of infection.

The most common physical findings of PE include tachypnea (fast respiratory rate), chest pain, difficulty breathing and anxiety. The patient may also develop a cough, expectorate bloody sputum, and demonstrate an increased heart rate.

Unfortunately, death is sometimes the first sign of venous thromboembolism (VTE).

Diagnosis:

When a patient's risk factors, history, and physical signs and symptoms indicate possible VTE, obtaining appropriate diagnostic studies is urgent. Preliminary tests that may be ordered for suspected VTE include:

1. Chest X-ray to rule out similar conditions
2. Electrocardiogram to rule out cardiac dysfunction
3. Ventilation perfusion scan
4. Ultrasonography of lower extremities to detect DVT

5. Echocardiogram, which will reveal right ventricular pressure overload
6. D-dimer assay, which is useful for screening but non-specific for PE
7. Magnetic resonance imaging and angiography (MRI/MRA)
8. Helical CT angiography
9. Contrast-enhanced electron beam tomography
10. Pulmonary angiogram, the gold standard for diagnosing PE.

Prophylaxis:

It has been estimated that the use of appropriate DVT prophylaxis can reduce the incidence of DVT during the postoperative period by two-thirds and will prevent death from pulmonary embolism in 1 patient out of every 200 major operations.

Next month we will discuss prevention and treatment of venous thromboembolism as well as issues related to malpractice claims.

Buns of Steel, Boobs of What, Titanium, You Say!

Jan Aken RN IBCLC

"Want a sculpted body? Here is a little something out of the German literature. Keep your eyes and ears open. This will undoubtedly be the source of jokes—and lawsuits.

Going to the gym to work out and pumping iron is the in thing for both men and women. Today more and more women are working the gluteus muscles to achieve those "buns of steel." Jokes abound about exercising, so before we get serious, enjoy the following:

The Buns of steel joke will begin something like this; a hefty woman walks through the metal detector in the airport and the alarms sound. The TSA agent begins to use a wand to check for the source of metal that is setting off the alarm. The woman not be deterred by the TSA agent doing his job, causally states; oh that must be my buns of steel setting off the alarms! Not!

Now laying all jokes aside, in the near future a TSA agent may actually hear a woman say when the metal detector sounds; oh, it must be my titanium breasts sounding the alarm!

Cont on p 3

Understanding Diabetes

Continued from page 1

not only the oral medications, but insulin as well.

Gestational diabetes is a form of glucose intolerance that is diagnosed in some women during pregnancy. Gestational diabetes occurs more frequently among African Americans, Hispanic/Latino Americans, and American Indians. It is also more common among obese women and women with a family history of diabetes. During pregnancy, gestational diabetes requires treatment to normalize maternal blood glucose levels to avoid complications in the infant. After pregnancy, 5% to 10% of women with gestational diabetes are found to have type II diabetes. Women who have had gestational diabetes have a 20% to 50% chance of developing diabetes in the next 5-10 years.

Other specific types of diabetes result from specific genetic conditions (such as maturity-onset diabetes of youth), surgery, drugs, malnutrition, infections, and other illnesses. Such types of diabetes may account for 1% to 5% of all diagnosed cases of diabetes.

Prediabetes is known medically as impaired glucose tolerance and currently affecting some 16 million American adults. It occurs when blood sugar (glucose) levels are higher than normal, but still not at the 126 mg/dL or higher level that qualifies for a bona fide diabetes diagnosis. Under the new criteria, a normal blood sugar level is now 99 or lower, down from 109. The new guidelines, made by a team of leading diabetes specialists, will better help doctors identify at-risk patients, those previously approaching prediabetes levels but not officially with this condition, so timely interventions can be made.

Fight Prediabetes with Diet, Exercise

According to the American Diabetes Association, some studies show that most people with prediabetes go on to develop type II diabetes within 10 years unless they make lifestyle changes; diet and exercise; to reduce the risk of diabetes.

Uncontrolled blood sugar from type II diabetes significantly increases the risk of having a heart attack or stroke as well as developing kidney failure, blindness, or blocked blood vessels in the legs that can lead to amputations. Type II diabetes is most commonly, though not exclusively, diagnosed in overweight

adults.

It's very clear that even small elevations in blood glucose levels can mean diabetes II, so now is the time to act, so the sooner it is found, the better. People whose blood sugar levels are over 100 mg/dL are at substantial risk for developing diabetes in the not-too-distant future if something is not done to change that risk. The risk is probably evident in blood sugars at 100 rather than higher levels. Things such as lifestyle intervention, diet and exercise can substantially change that risk.

A study by the Diabetes Prevention Program on 3,000 people with prediabetes found that patients who began exercising about 30 minutes a day and lost 5% to 7% of their body weight (about 10 to 12 pounds in someone weighing 200 pounds) lowered their risk of developing type II diabetes by 58% compared with a group of patients who did not exercise.

All of his study participants were overweight and the benefits of exercise in reducing their diabetes risk was likely because of the resulting weight loss. The more weight they lost, the greater was the reduction in risk. While being overweight is a prime risk factor in both prediabetes and type II diabetes, even those within their recommended body weights can reduce diabetes risk with regular exercise,

A fasting blood sugar test, in which blood is drawn and evaluated in a lab following a fast of 10-12 hours, is advised yearly for people with risk factors for diabetes. These risk factors include:

- **Family history.** If a parent or sibling in your family has diabetes, your risk of developing diabetes increases.
- **Race or ethnic background.** The risk of diabetes is greater in Hispanics, blacks, Native Americans, and Asians.
- **Being overweight.** If you are 20% or more over your optimal body weight, you increase your risk of developing diabetes.
- **Hypertension.** High blood pressure increases the risk of developing diabetes.
- **Abnormal cholesterol levels.** Having HDL "good" cholesterol levels under 45 mg/dL for men and 55 mg/dL for women, and/or a triglyceride level over 150 mg/dL increases your risk.
- **Age.** Your risk of developing diabetes increases progressively as you get older.
- **Alcohol Use.** Years of heavy alcohol

drinking increases your risk of developing diabetes.

- **Smoking.** According to one study, smoking from 16 to 25 cigarettes a day increases your risk for type 2 diabetes to three times that of a nonsmoker.
- **History of gestational diabetes** (developing diabetes during pregnancy) or of delivering a baby over nine pounds can increase your risk.

Buns of Steel, Boobs of What, Titanium, You Say!

Continued from page 2

So let us seriously look at the titanium breasts implant.

The rationale for surgical breast implants may be one many. One of the reasons may be the desire to lift the saggy breast. In addition, this procedure called a Mastopexy. Mastopexy is cosmetic surgery not unlike the face-lift but this is done to lift the sagging breast tissue. This operation involves removing excess skin and breast tissue along with elevating the nipple.

A medical doctor in Germany invented a titanium breast implant. Dr. Ziya Saylan implants the fine mesh titanium during mastopexy operation. As a result, the sagging breasts are uplifted with the titanium mesh and appear perky and firm.

The two more common types of breast implants in the United States are saline and the silicone implants. The FDA put a moratorium justified or not on silicone implants. The saline implant is readily available and is now in the near future the one most used.

Before I move forward, I want to take a step back and comment on the hullabaloo over silicone implants about 15- 20 years ago. Because of the clamor from women with injures real or not, they wanted to receive compensation for their injuries. So lawsuits were filed and filed and filed as many women jumped on the bandwagon. You see it was thought the leaking silicone, the contractures, and the illness were caused by the silicone. Cont on p 4

There Are No Quick (Correct) Answers

Continued from page 1

during the client's treatment. There are usually multiple sources of such records—hospitals, Fire Department/Rescue reports, police reports, doctors, nurses, diagnostic services, and perhaps insurance companies. The attorney must send a request for records to all of the parties involved in order to obtain a complete set. Unfortunately, even if the providers are located in the same hospital or building, their records may be stored in different facilities. This means that the LNC's initial review may generate a list of missing records even though the attorney thinks they have received them all. Since the client is claiming damages as a result of this event, all aspects of the event must become known.

"After" refers to the time period from immediately after the significant event until the present. Though the attorney and their client may not understand why this information is important to the LNC, it is vital to any claims of causation and assignment of damages. Most of the malpractice claims we have reviewed have

not resulted in action by the attorney. Most often this is because the analysis finds that the provider acted properly given the situation and the information available to them at the time. In other cases it is due to the fact that either there were no identifiable damages as a result of the event, or that any damages were self-limiting and have resolved. A careful review of the data may also show many mitigating issues that cloud the question of liability or causation. The LNC would rather tell the attorney all of the potential problems up front than have them be discovered during trial, when it is disastrous for the attorney.

One such case involved an elderly male who had suffered a series of small strokes. One of the problems that resulted was a shut-down of the gastrointestinal tract. As we reviewed several weeks of primary care records it became obvious that the patient's bowel movements had slowed to a halt. The symptoms were documented repeatedly, yet there was no evidence that either the

doctor or the nurses ever reviewed the records from previous visits. If they had then they would have seen the same pattern emerge that we did. The patient eventually saw another doctor who read the primary care reports, diagnosed the bowel impaction and corrected it. The primary care provider had, indeed, failed to diagnose a rather obvious problem related to the patient's strokes. However, after the impaction was treated there was no further problem, and no further damage to the patient.

As you can see, the question of whether or not a new case has any merit is complex, to say the least. We would much prefer to be able to give the attorney a quick, simple answer. It would save everyone time and money, and we would, no doubt, have the world beating a path to our doorstep. However, it is a very complex question. We would rather give the attorney a reasonable and accurate answer, based on fact and scientific principles, than reply with a quick response that may well be incorrect.

Buns of Steel, Boobs of What, Titanium, You Say!

Continued from page 3

implants about 15- 20 years ago. Because of the clamor from women with injuries real or not, they wanted to receive compensation for their injuries. So lawsuits were filed and filed and filed as many women jumped on the bandwagon.. You see it was thought the leaking silicone, the contractures, and the illness were caused by the silicone. Many a clinician disputes this claim. Nevertheless, the women prevailed and were awarded handsomely in many cases. In addition, a few attorneys upgraded their style of living because of the judgments awarded to the plaintiff in these cases.

Now I want to look forward to the problems I envision with titanium mesh implants. Before long women with this type of implants will be visiting their local attorney seeking some hefty payment due to problems from the titanium. The titanium may cause contractures of the breast tissue. Would the titanium mess be strong enough to prevent denting of the implants from

chest injury from blunt force trauma .this of course would lead to breast disfigurement. On the other hand, would there be generalize breast pain from the mesh.

First we don't know if this type of implant will catch on with women clamoring for titanium implants. Second, we do not know if the FDA will approve titanium implants or third if American women will want this type of an implant.

However, if approved, we may have just started down a long and arduous road that I foresee running parallel to that silicone highway route. Personally, I would like to keep buns of steel and breasts of titanium in the joke category and out of the real medicine.

Letter from the Editor

As we begin our fourth year of publication I want to thank all of our writers for their dedication to this newsletter, for without them it would not be possible.

And to all of our loyal readers I hope you enjoy reading it as much as we enjoy writing and researching the articles. Should any of you have a special topic you would like to read about, do not hesitate to let us know and we will try our best to comply with your wishes. Thank you for making us a success!

Pattie Patterson RN, LNCC, CLCP

HERE'S WISHING ONE AND ALL A
SAFE AND HAPPY LABOR DAY!

Why not to use Doctors to Determine Life Expectancies

Sarah McLain RN, CLNC, CLCP

In personal injury cases, courts have traditionally relied on doctors for opinions on plaintiffs' remaining life expectancy. Here I show that such questions are really beyond the expertise of physicians, and that their testimony is readily challenged.

The analogy with life insurance is helpful. When applying for a life insurance policy you are first examined by a doctor, who assesses various risk factors. The results are transferred to the insurance company's actuaries, who use the risk profile to assess your survival prospects. Thus *both medical and statistical/actuarial skills are needed*.

Only a physician is qualified to appraise the individual, and only a statistician or actuary is qualified to turn the appraisal into a life expectancy.

Most physicians readily agree that they are not expert in actuarial issues. Nevertheless, pediatricians are still routinely asked to testify on the life expectancy of children with birth defects, while therapists or other medical specialists are consulted regarding adult accident victims. Their testimony on what are really statistical issues is often unfortunate. The following examples, with some modification, are drawn from actual cases.

"As a gerontologist I work with elderly persons. All the persons with cerebral palsy that I examine are at least fifty years old. Therefore I believe that this child with cerebral palsy will probably live to at least 50."

We pass over this in silence.

"I believe that this child will certainly live to age 40, although probably not to age 50."

It is, of course, absurd to say that any child – even one in perfect health – will "certainly" live to any age. Further, the probability that the age at death will fall in a narrow range such as 40–50 is bound to be quite low. The statement seems to confuse the life expectancy, which can often be estimated with some precision, and the actual age at death. The latter can rarely be predicted with any accuracy.

The annual mortality rate for children like the plaintiff is 1%. After 50 years, therefore 50% [= 50 x 1%] of

such children would have died. The median survival time is thus 50 additional years."

There are two mistakes here. First, the math is wrong: in fact, 99% of the current survivors will survive one additional year, and therefore the proportion surviving 50 years is 61% (= .99⁵⁰), not 50%. Second, the analysis ignores the dramatic increase in human mortality with age. As a result it gives wildly unrealistic long-term estimates, predicting, for example, that 37% of the population will survive to age 100.

* * *

Witnesses lacking statistical or actuarial training are frequently unable to define life expectancy, compute it in a simple case, or distinguish it from the median survival time. This may be exposed with a simple illustration. If the witness cannot even explain what a life expectancy is, the testimony will lack credibility.

A physician's opinion will be based either on a reading of the research literature or "on the basis of my clinical experience." In the former approach, the plaintiff is matched to some group of individuals whose survival has been studied and reported. There are, for example, several studies of long-term survival for persons with cerebral palsy, traumatic brain injury, and spinal cord injury. Unfortunately such studies provide at best a crude estimate of life expectancy. The attorney can establish that:

- The studies generally follow a cohort of persons who *initially* were of a given age and in a given condition. If the plaintiff is older and *currently* in this condition, it would be necessary to assume that cohort members surviving to the plaintiff's age are still in that same condition. This assumption may be quite unreasonable, especially for young children who may have fair prospects for improvement.
- Most studies provide survival curves, giving the fraction of persons in the cohort who survive to a given age. This will provide a *median survival time* only if the mortality is so high that 50% of the subjects die within the study period, and it rarely will permit the computation of a *life expectancy*.

- The cohorts studied in literature are necessarily based on coarse classifications of one or two risk factors. Ironically, the clinician's strength – the ability to make fine judgments about numerous patient characteristics – does not come into play.

It must therefore be recognized that published articles provide at best a rough approximation to a given plaintiff's life expectancy. Indeed, some of the articles include a warning to this effect, a point that the opposing attorney may wish to emphasize.

Clinicians who instead rely on their experience for opinions are even more vulnerable. The lack of a solid basis can be revealed with questions such as:

- How many patients closely resembling the plaintiff have you examined? [The answer will be at most a few dozen.]
- Did you follow up on the survival or death of all of these patients? Give the specifics of your procedure. In particular, how did you follow the patients who moved to a different town or even to a different state? How did you ascertain who died? Where and in what form did you keep your records of the children's survival time? Did you periodically reassess their functional levels during the follow up?
- If you have been practicing for 20 years (say), how could you have ever observed a child surviving more than an additional 20 years? Does this lack affect your opinion? Why or why not?
- Are you aware of the literature on statistical methods for estimating survival probabilities? Which methods did you use?

Such questions should make the limitations of the doctor's expertise very clear.

Medical-Legal Interface

Pattie Patterson RN, LNCC CLCP
Legal Nurse Consultant-Certified
Certified Life Care Planner
6501 Galaxie Road
Richmond, Va. 23228

Phone: 804-262-2991

Fax: 804-266-5701

Email: leglnurs@bellatlantic.net

<http://www.medical-legal-interface.com>

*“We get to the heart of your
case.”*

