

THE AFIB REPORT

Your Premier Information Resource for Lone Atrial Fibrillation!

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Editorial

Welcome to the fifth issue of The AFIB Report. In this issue we continue with our reporting of the survey results and begin dealing with the nitty gritty of living with LAF. Enjoy!

*Yours in health,
Hans Larsen*

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Survey Results – Part II

Most survey participants have a vivid memory of their first LAF episode. The most common trigger of that first one was emotional or work-related stress (26%) closely followed by physical overexertion at 24%. Caffeine, alcohol, and ice-cold drinks were next at 10%, 6% and 8% respectively. Other less common triggers were severe illness or a viral infection (experienced by 6% of respondents), dehydration (4%), and rest (4%). Digestive periods, coughing and burping, pharmaceutical drugs, surgery, electromagnetic radiation, and toxic chemicals round off the list of initial triggers with 2% (1 respondent) each.

The triggers of subsequent episodes follow in the footsteps of the first one. The overwhelming favorite for the title of most important trigger is emotional or work-related stress. A full 50% of all respondents listed stress as a trigger. Physical overexertion was next at 24% closely followed by alcohol (including wine) and rest at 22% each. The digestive period following a heavy meal was

a trigger for 18%, caffeine was mentioned by 16%, and an ice-cold drink by 12%. Ten per cent reported that MSG (monosodium glutamate) was a trigger for them and 6% said that lying on the left side would set off an episode. Aspartame (NutraSweet) was mentioned as a trigger by two respondents (4%) as was chocolate, coughing and burping, and flying (at high altitudes). Three men over 30 years of age (6%) felt that their episodes were cyclical in nature and not related to any specific trigger. Other triggers mentioned were aged cheese, sugar, food additives, acid indigestion, a hot bath, NyQuil (a cold remedy), electromagnetic radiation, toxic chemicals, hypoglycemia, high blood pressure, and changes in weather patterns. Please note that the percentages do not add up to 100 because many respondents listed more than one trigger.

The triggers uncovered in the LAF survey are similar to those found by James Driscoll in his on-line survey (<http://www.dialsolutions.com/af/database/stats.html>). In James' survey based on 105 entries stress again was the clear "winner" followed by alcohol, caffeine, exercises, fatigue, and rest and resting after exercise. Cold drinks, MSG, chocolate, bending over or lying on the left side were other important triggers.

It is clear that the triggers for LAF are many and varied and highly specific to each individual except for excessive emotional and physical stress which is pretty well universal.

The frequency and duration of individual episodes varied considerably among survey participants. The average number of episodes over the past 12 months was 27 (30 for men over 30 years, 6 for men under 30, and 21 for women). The range was 0 to 200 episodes and 5 out of the 50 respondents had chronic LAF.

The average number of episodes for the past 6 months was 16 (18 for men over 30 years, 2 for men under 30, and 11 for women) with a range of 0 to 125. The episodes lasted an average of 30 hours (35 hours for men over 30, 14 hours for men under 30, and 13 hours for women) with a range of a couple of minutes to over 500 hours.

The average total time spent in fibrillation over the past 6 months worked out to 172 hours (203 hours for men over 30, 29 hours for men under 30, and 71 hours for women). The average length of the longest episode was 387 hours (455 hours for men over 30, 16 hours for men under 30, and 187 hours for women). All told the average time spent in fibrillation over the past 180 days (ignoring chronic LAF) worked out to about 4% or about 1 day (24 hours) per month. The range varied widely from 0 to 17%.

The most "popular" time for an episode to start was between 6 PM and midnight (38% of all episodes) followed by the period between midnight and 8 AM (32%). Episodes were rare in the morning (8 AM to noon) at 13% and a little more common between noon and 6 PM at 17%. This would indicate that about 32% of all episodes are of a purely vagal nature, 13% are probably purely adrenergic, and the remaining 55% could be either adrenergic or vagal. They are most likely vagal if they occur after lying down or during a digestive period.

Half of all participants did not know how to abort an episode. Others have had some limited success in stopping an episode before it takes hold, but there certainly does not seem to be any one surefire way of aborting one. Following are some of the comments received on this subject:

- Sometimes deep breathing appears to avoid onset.
- On two occasions I may have shortened the episode by drinking a teaspoon of Epsom salt in a glass of water.
- I think maybe taking atenolol may be helping abort episodes.
- I try to calm down and very carefully clear my throat and get the tickling feeling out of my throat and I seem to recover. I also drink water and take a small Ativan (tranquillizer).
- Valsalva and I/V magnesium infusion following by vigorous exercise.
- Walking, changing position in bed to the right side has worked sometimes.
- I lie down and listen to calming music. I have a special CD that works, but only after my heart beats crazy for a few hours. It doesn't work right away after an episode begins.
- Sometimes with ectopic beats I do a Valsalva type maneuver and the odd beats go away.
- Sometimes getting up and moving works if I have been lying down and feel premature beats coming.
- I am not on a regular administration of any anti-arrhythmic drugs, but I sometimes take sotalol (40-80 mg) when I feel an episode coming on. Since my pulmonary vein ablation on 12/1/00 I have been increasingly fibrillation-free. I have had no episodes for 40 days at this writing.
- No reliable way, but sometimes it helps to take 12.5 or 25 mg of atenolol (Tenormin).
- Celery juice (thanks to a posting on your site) seems to stave episodes sometimes, but not every time.
- I can some times delay the onset if I raise my heart beat (by running up a flight of stairs when I have the first ectopic beats) but I'll be in AF within an hour or so.
- Once the episode starts I have found that exercise 24 hrs later ends it; this does not work if the attack was precipitated by exercise.
- I used to be able to stop an episode with extra CoQ10, L-carnitine and Mg.

- During the day, standing up immediately and moving around. Sometimes in doing this, I will burp, which relieves pressure, which aborts the episode.
- Yes, beta-blocker verapamil.
- Rapid beats stopped by using the Valsalva maneuver.
- I take a quick bite out of a 10 mg propranolol tablet that is always in my pocket, and let it dissolve under my tongue. It seems very effective, almost always works.
- I was a chronic afibber and the only thing that helped me was to take a Xanax because I used to get anxiety and panic attacks along with the afib that didn't help the afib.
- Rest and breathe slowly and deliberately.
- Yes, I do some deep breathing (yoga) exercises focusing particularly on the exhaling, really squeezing the midriff.
- Burping and compressing have worked quite often for me.
- Sit down, loosen clothing, start deep breathing/biofeedback, take an aspirin and I usually convert in 15-20 minutes.

That's it for part II of the results. Stay tuned for more!

Dealing with LAF

You have experienced your first atrial fibrillation episode. Yes, episode is a less threatening description, but the first time you feel your heart beating wildly and totally out of control it certainly seems more like an attack. Anyway, you survived, as you surely will, your first bout with atrial fibrillation. You probably went to an emergency clinic and saw a cardiologist or electrophysiologist. After a battery of tests you were diagnosed with lone (primary, paroxysmal) atrial fibrillation. More than likely, the doctor told you that LAF is a nuisance, but "it is not going to kill you". You now have four choices to make:

1. Accept your condition and learn to live with it;
2. Get your doctor to prescribe you a drug that may or may not help and most assuredly will have serious side effects;
3. Undergo heart surgery (ablation or maze procedure) to deal with the symptoms of what is basically a nervous system disorder;
4. Do your own research and find the ways of preventing episodes that work for you.

Whatever you decide, do not – ABSOLUTELY NOT – accept a prescription for digoxin (Lanoxin, digitalis). This drug has been proven to worsen LAF and may make it chronic. Actually, if your doctor prescribes it for you look for another physician – your present one is obviously not up-to-date!

If you have decided on option 1 you probably would not be reading this. Option 2 has been covered in past issues of The AFIB Report and option 3 will be covered in a future issue. In this issue we will concentrate on helping you with option 4.

First Steps

The very first thing you should do is to keep a journal of your episodes. It does not have to be elaborate, just the date and time when the episode began, its duration, and what you feel might have been the trigger. Keep in mind that an episode starting early in the morning could have been triggered by a stressful event the day before or a cup of coffee before bedtime. The journal becomes essential when it comes to determining the nature of your LAF (adrenergic or vagal) and possible trigger factors.

Next you should eliminate the possibility of medical problems other than heart-related ones that are already known to be non-existent. Thyrotoxicosis or hyperthyroidism (an overactive thyroid gland), pheochromocytoma (a tumor on the adrenal gland) and hypoglycemia come immediately to mind. Thyrotoxicosis and pheochromocytoma both require a surgical solution, but you can take care of hypoglycemia yourself.

Triggers and Lifestyle Choices

The obvious next step is to determine your triggers and eliminate them if this is what you decide to do. That's right – "If this is what YOU decide to do"! Eliminating triggers may involve a serious trade-off between your lifestyle and the discomfort caused by an episode. In my own case, I know that a cup of coffee or a sip of wine will set off an episode so I have decided to eliminate alcoholic beverages and caffeine from my life. I enjoy a glass of wine or a good cup of coffee just as much as the next person, but weighed against the almost near certainty of a bout of LAF lasting a couple of days followed by a week of feeling pretty lousy, I decided to forego the pleasure. Other triggers such as aspartame and monosodium glutamate (MSG) are a lot easier to go without. So ultimately it is a trade-off between giving up certain things or living with the consequences.

The big trigger is emotional and job-related stress. The best approach to this one is to slow down a little and try to take a more relaxed approach to life. Yoga, qi gong, tai chi, deep breathing and other relaxation exercises can also be extremely helpful. Twenty-three per cent of the survey participants do one or more of these exercises and 90% have found them beneficial. Meditation is another good approach. Twenty-one per cent of respondents practice meditation on a regular basis and 80% find it beneficial.

Magnesium Deficiency

Once you have your triggers under control you should consider supplements, herbal remedies and diet changes. The first supplement to consider, apart from a daily high-potency vitamin pill, is magnesium. As discussed in earlier issues of The AFIB Report magnesium is extremely important in ensuring a steady heart beat and overall heart health(1-7). Magnesium and potassium calms the heart and oppose the action of sodium and calcium which excites it. About 99% of the body's magnesium is found in tissues and bones and the heart tissue is particularly rich in this vital mineral. Only 1% of the body's magnesium stores is found in the blood so a regular blood test is a very poor indicator of your magnesium status. Ideally you would measure the magnesium level in your heart tissue to see if you are deficient, but this is not terribly practical. Fortunately, researchers at the Cedar-Sinai Medical Center in Los Angeles have discovered that there is a direct correlation between heart tissue magnesium level and the concentration found in epithelial cells scraped from under the tongue or from between the gums and the upper and lower lips(8). Trace Elements Inc. (www.traceelements.com) can do the magnesium testing and can also recommend a physician in your area who can do the cell scraping. Thirteen per cent of the respondents have had their intracellular magnesium levels measured and 83% of them were deficient.

Magnesium Supplementation

There is considerable medical evidence that a magnesium infusion can prevent or stop arrhythmias(1,5-7). At least 10% of the survey participants found weekly or monthly magnesium infusions useful in preventing episodes. The evidence supporting the use of oral magnesium supplements as a means of correcting a deficiency is sparser. The Cedars-Sinai researchers reported a 10% increase in intracellular magnesium levels after six months of supplementation with 365 mg/day of elemental magnesium(8). There is also lots of anecdotal evidence of the benefits to afibbers of supplementing with magnesium. Magnesium aspartate, gluconate or citrate are probably the best choices as the cheaper and more common magnesium compounds (magnesium oxide and magnesium carbonate) are poorly absorbed. Magnesium absorption tends to decrease as body stores are replenished so there is little chance of overdosing; nevertheless, patients with end-stage renal disease should not supplement with magnesium(9). Magnesium requires vitamin D for optimum absorption so it is important to get adequate unprotected sun exposure daily or to take a vitamin D-3 supplement daily when using oral replenishment of magnesium(9).

So the bottom line as far as magnesium is concerned is:

- Consider having your intracellular tissue level of magnesium determined and if deficient correct it;
- Talk to your doctor or naturopath about having weekly or monthly magnesium infusions for a while to see if this will decrease the frequency and severity of your episodes;
- Take an oral magnesium supplement. I have settled on three capsules of magnesium/potassium aspartate that provides me with 300 mg of elemental magnesium and 300 mg of elemental potassium on a daily basis.

AFIB News

Circadian variation in LAF episodes. A team of Canadian cardiologists has discovered that there is a distinct pattern to the occurrence of atrial fibrillation episodes. Their study which involved 67 patients (58% with LAF) concluded that the frequency of episodes peaks at around 4 AM (4 AM to 5 AM) and around 4 PM (3 PM to 7 PM) and is at its lowest at around 10 AM. The peaks are more pronounced in the case of episodes of relatively short duration and are eliminated by beta-blockers and amiodarone. It is clear from the data that amiodarone actually increases the overall frequency of episodes. Editor's Note: The peak times of 4 AM and 4 PM are of particular significance when viewed in the light of Traditional Chinese Medicine. At 4 AM the *Lung* is at its peak and the *Bladder* at its lowest. At 4 PM the *Bladder* is at its peak and the *Lung* at its lowest. Coincidence? Perhaps. A clue? Maybe. Any TCM practitioners out there who would care to comment?

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Isometric exercise may stop AF episodes Italian researchers have discovered that isometric exercise may help terminate an atrial fibrillation episode. In the course of evaluating the effectiveness of ibutilide for cardioversion they discovered that the drug worked significantly better if the patients used a handgrip during the drug infusion. The patients squeezed the handgrip as hard as they could for 15 seconds using their dominant hand. The researchers correlated the restoration of sinus rhythm with an increase in mean atrial cycle length (CS). CS increased 40% with ibutilide alone and 57% when the ibutilide infusion was combined with the handgrip exercise. The handgrip exercise on its own increased CS by 21%. Editor's Note: Using the handgrip definitely resulted in a more ordered heartbeat judging from the electrograms accompanying the article. It also increased the heart rate and blood pressure. Worth a try!

American Journal of Cardiology, Vol. 87, March 15, 2001, pp. 798-801

Parasympathetic nervous system and insulin. It is generally assumed that insulin secretion is triggered by eating and regulated primarily by the absorbed nutrients from the meal. Researchers at the University of Cincinnati now question this assumption. In an experiment involving rhesus monkeys (Macaques) they clearly established the fact that the parasympathetic nervous system plays a major, if not dominant, role in postprandial (after a meal) insulin release. So what does this mean to an afibber? It could explain why LAF episodes often happen after a meal. If the parasympathetic system is activated in order to cause insulin production to occur it is possible that this higher level of activation could be instrumental in initiating an episode. So restricting the intake of carbohydrates in the evening meal may be worth trying if your episodes tend to occur after supper.

Journal of Clinical Endocrinology & Metabolism, Vol. 86, March 2001, pp. 1253-59

That's it for this May issue of The AFIB Report. In the next issue we will carry on with the reporting of survey results, discuss the connection between dental amalgams and LAF, and provide some good advice on dealing with hypoglycemia. If time and space permits we may also tackle the GERD (gastro esophageal reflux disease) connection.

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