THE AFIB REPORT

Your Premier Information Resource for Lone Atrial Fibrillation!

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Our bulletin board (LAF Forum) is now 10 years old! If you have not yet visited this invaluable resource I highly recommend that you do so. The bulletin board is a unique repository of the real life experiences of lone afibbers and contains hundreds of ideas for coping with afib. The total number of postings on the existing 8 bulletin boards (all easily searchable) now exceeds 150,000. So, if you have a question, or experience something unusual in your "afib career" I invite you to participate. It is very likely that a fellow afibber has been there "and done that" and can provide some guidance. There are many very knowledgeable posters sharing their ongoing experiences in dealing with "the beast". You can find our current bulletin board at http://www.afibbers.org/bulletin.htm

In this issue, we add to the growing pool of evidence that vigorous, long duration exercise, especially jogging, increases the risk of developing AF. New research questions the value of the daily aspirin ritual; anemia is a serious risk among older afibbers; PVI ablation is cost-effective when compared to continual use of antiarrhythmics; and early cardioversion is important if experiencing afib or flutter following an ablation. Also, the highlights of the first report concerning the long-term (5 years) "durability" of PVI procedures are presented. Last, but certainly not least, we have the fascinating story of how a long-term subscriber and bulletin board contributor, Sharon Glass, overcame a nasty case of Helicobacter pylori infection without the use of antibiotics.

Finally, if you need to restock your supplements, please remember that by ordering through my on-line vitamin store you will be helping to defray the cost of maintaining the web site and bulletin board. You can find the store at http://www.afibbers.org/vitamins.htm - your continuing support is truly appreciated.

Wishing you lots of NSR,

Hans

Highlights

Jogging increases risk of atrial fibrillation

BOSTON, MASSACHUSETTS. Although there is ample evidence that habitual exercise is healthy and reduces the risk of cardiovascular disease, hypertension and diabetes, and can help normalize lipid (cholesterol) levels, there is growing evidence that too vigorous exercise performed for extended periods of time can increase the risk of developing atrial fibrillation (AF), especially lone AF. Researchers at Harvard Medical School and Brigham and Women's Hospital now report that regular jogging may be particularly detrimental as far as the development of AF is concerned.

Their study included 16,921 male physicians who were enrolled in the Physicians' Health Study in 1982 when they were between the ages of 40 and 84 years. Three and nine years after enrolment, the participants were asked if they regularly engaged in an exercise program vigorous enough to work up a sweat. The majority (62.6%) answered yes and 12.6% reported that they engaged in vigorous exercise 5-7 days a week. The frequency of vigorous exercise was directly associated with alcohol intake, fish consumption, and the use of multivitamin, vitamin C and vitamin E supplements.

It is interesting that more than 90% of exercisers reported consuming fish at least once a week, 35% regularly took multivitamins, and 25% supplemented with vitamin C. Non-exercisers, on the other hand, tended to be older, overweight, and smokers. They also had a significantly higher prevalence of diabetes and hypertension.

The physicians participating in the study were asked at 15, 17, 18 and 19 years after enrolment if they had ever been diagnosed with AF – about 10% answered yes. Based on the exercise data obtained 3 years following enrolment, the researchers concluded that men under the age of 50 years who exercised vigorously 5-7 days a week had a substantially higher risk than non-exercisers of developing AF when corrected for all confounding variables. Further analysis of the data showed that regular jogging was associated with a 53% increased risk of AF in all age groups with those jogging in excess of 4 miles a day having the greater risk. No overall association was found between regular cycling, swimming or racquet sports and the development of AF.

The researchers speculate that frequent, vigorous exercise may cause AF through several possible mechanisms including enlargement of the left atrium, development of left ventricular hypertrophy, left ventricular dilation, and an increase in parasympathetic (vagal) tone. They point out that jogging results in greater enhancement of the parasympathetic nervous system than does other types of exercise. They also suggest that the fact that aging tends to decrease parasympathetic activity may account for the finding that older men are less likely to develop AF as a result of vigorous exercise. They conclude that frequent, vigorous exercise is associated with an increased risk of developing AF in young men (under the age of 50 years) and joggers.

Aizer, A, et al. Relation of vigorous exercise to risk of atrial fibrillation. **American Journal of Cardiology**, *Vol. 103, 2009, pp. 1572-77*

Editor's comment: This report adds to an already impressive body of literature concluding that, while regular, moderate exercise is healthy and materially helps in preventing many serious disease conditions, overdoing the exercise, especially by engaging in frequent, long-distance jogging sessions significantly increases the risk of developing afib, particularly in men below the age of 50 years.

Five-year follow-up on PVI procedures

SAN DIEGO, CALIFORNIA. Most afibbers who have undergone a successful pulmonary vein isolation (PVI) procedure for atrial fibrillation sometimes wonder if the cure is truly permanent or "the beast" will eventually return. It is only about 10 years ago that Professor Michel Haissaguerre and colleagues at the Hopital Cardiologique du Haut Leveque in Bordeaux discovered that the vast majority of paroxysmal afib episodes originate in the pulmonary veins and that isolating the veins electrically from the left atrium can eliminate AF. Thus, very little data is actually available as to the long-term results of a successful PVI.

Electrophysiologists at the University of California (San Diego) now partially fill in this gap in our knowledge by reporting 5-year follow-up results for 71 paroxysmal, symptomatic afibbers (average age of 60 years with 79% being male) who underwent a segmental antrum PVI procedure (Natale protocol) between January 1, 2002 and August 31, 2003. Only 10% of the patients had structural heart disease, so 90% would be classified as lone afibbers, although 37% did have hypertension.

The PVIs were performed using an 8-mm non-irrigated ablation catheter guided by ICE (intracardiac echocardiography) and fluoroscopy with some later procedures also using electroanatomical (NavX) guidance. The goal was to fully isolate all pulmonary veins, but in 33 patients (46%) the right lower PV could not be fully isolated.

The patients were followed for a minimum of 5 years with clinical visits 1, 3, 6 and 12 months post-ablation and then at 6- to 12-month intervals. All clinic visits included a 12-lead electrocardiogram and patient input regarding recurrence of symptomatic episodes. At the 1-year follow-up 61 patients (86%) were free from symptomatic afib and off all antiarrhythmics. After 2 years, 79% were still in normal sinus rhythm, but at the 5-year check-up only 56% remained free of symptomatic afib. The 31 study participants (44%) whose PVI had failed within the 5 years underwent one or more repeat ablations of which 58% were successful.

Thus, at the end of 5 years, after an average of 1.6 procedures, 82% of the original 71 participants were

in normal sinus rhythm without the use of antiarrhythmics. However, the mean duration of follow-up for the 31 patients who underwent one or more follow-up procedures was only 13 months. The researchers observed that all repeat ablations involved re-isolating parts of the lesion rings around the pulmonary veins where electrical conduction had been re-established between the veins and the left atrium. They also noted that patients with hypertension were significantly more likely to need a re-ablation than were those with normal blood pressure.

Sawhney, N, et al. Five-year outcomes after segmental pulmonary vein isolation for paroxysmal atrial fibrillation. **American Journal of Cardiology**, *Vol. 104, 2009, pp. 366-72*

Editor's comment: It is discouraging to see that there is only about a 56% chance that a single PVI will keep one in NSR for 5 years or more. However, in considering this results a little closer, it should be kept in mind that all the PVI failures involved re-establishment of electrical connection between the pulmonary veins and the left atrium. Whether or not such reconnection occurs is very closely tied in with operator skill in ensuring transmurality of the lesion; in other words, making the lesion deep enough to prevent conduction, but not so deep that the heart wall is penetrated (cardiac tamponade). It is also likely that an irrigated catheter would produce longer-lasting lesions. So overall, it would seem that the number of ablatees who can expect to remain afib-free for 5 years or longer is bound to increase significantly as operator skills and techniques improve.

Antiarrhythmics vs. ablation – A cost comparison

NEWMARKET, ONTARIO, CANADA. The debate over whether catheter ablation or ongoing treatment with antiarrhythmic drugs (AADs) should be first-line treatment for symptomatic atrial fibrillation (AF) is still continuing. Several clinical trials have now concluded that catheter ablation is significantly more effective in re-establishing and maintaining sinus rhythm than is treatment with AADs. The Canadian RAAFT study found that 63% of patients with symptomatic, paroxysmal AF treated with catheter ablation experienced no afib recurrence during the first year following their procedure. This compares to only 13% of patients on AADs experiencing no episodes during their first year on the drugs (mainly flecainide and propafenone).

A group of researchers led by Drs. Yaariv Khaykin and Atul Verma of the Southlake Regional Health Center now report on the relative cost effectiveness of the two approaches. They used the following costs ($ Canadian) for the ablation and drugs (these are the fees actually paid to the hospitals and doctors by the provincial ministries of health on behalf of patients covered by the Canadian Health Care Plan):

Ablation*	$ 8,607
Cardioversion	$ 1,674
Overnight stay on a telemetry unit	$ 596
Anticoagulation	$ 132/month
Flecainide	$ 90/month
Propafenone	$ 93/month
Amiodarone	$ 39/month
Sotalol	$ 39/month
Beta-blocker	$ 10/month
Calcium channel blocker	$ 28/month

* This includes an overnight hospital stay, a TEE prior to ablation, catheter cost and cost of a 4-hour use of electrophysiology laboratory as well as physician fees, cost of 2 CT scans, a loop event recorder and a 24-hour Holter monitor (one before discharge, and one at 3, 6 and 12 months each).

During the first year of follow-up (from ablation or initiation of drug therapy) only 9% of ablated patients were re-admitted to hospital versus 54% of patients on AADs. Similarly, 63% of ablated patients (no repeat ablations allowed during first year) remained in sinus rhythm during the first year compared to only 13% in the AAD group. The total initial treatment cost was $10,465 for ablation patients versus $2,556 for patients randomized to AADs.

During the first year follow-up incremental costs were $2,358 in the ablation group versus $3,497 in the AAD group.

During the 2nd year repeat ablations were allowed for those in the ablation group and those in the AAD group who had not been helped by drugs were also allowed to undergo an ablation. This brought the incremental cost in the 2nd year to $2,480 per original ablation patient versus $8,339 per original AAD patient. At the end of the 2nd year total expenditure for patients starting out with an ablation was $15,303 versus $14,392 for those starting out with AADs.

The researchers conclude that radiofrequency ablation in patients with symptomatic, paroxysmal AF is cost neutral 2 years following the initial procedure compared to treatment with antiarrhythmic drugs.
Khaykin, Y, et al. Cost comparison of ablation versus antiarrhythmic drugs as first-line therapy for atrial fibrillation. **Journal of Cardiovascular Electrophysiology**, *Vol. 20, January 2009, pp. 7-12*

Editor's comment: Although not considered in this particular study, it is also clear that the quality of life among members of the ablation group would have been substantially superior to that experienced in the AAD group during the 2-year follow-up. Indeed, this study provides convincing evidence that undergoing an ablation early in one's afib "career" is a win/win situation provided that the procedure is performed by a highly skilled and experienced EP, and that natural therapies (supplementation, diet changes) have failed to keep afib under control.

Anemia and atrial fibrillation

ST. LOUIS, MISSOURI. Anemia involves a lack of red blood cells (erythrocytes), or may be associated with a hemoglobin deficiency. A patient is classified as anemic if their hematocrit (packed red blood cell) level is below the normal range of 38-50% of total blood volume. In the USA it is estimated that 12% of people between the ages of 75 and 84 years, and 25% of people over the age of 85 years are anemic. Anemia is associated with increased mortality among patients with heart failure, chronic angina, and cancer. Researchers at the St. Louis School of Medicine now report that anemia also increases mortality and hospitalizations among elderly patients with atrial fibrillation (AF).

Their study involved 13,067 Medicare beneficiaries hospitalized with AF. Average age of the patients was 80 years and 58% were women. The group probably contained very few lone afibbers and no attempt was made to see if the conclusions of the study applied to them. More than half (57%) of the patients had heart failure, 37% had suffered a prior heart attack, 29% had a history of stroke or transient ischemic attacks (TIAs) while 25% had diabetes.

During a 12-month period, 3665 (28%) of the patients died. After adjusting for all likely confounders the researchers observed that male afibbers with a hematocrit level of 45-49.9% had the lowest mortality and that men with a hematocrit level of less than 25% had twice the risk of dying than did men at the optimum level. The optimum hematocrit level for women was 40-44.9% and the risk of dying increased by 41% for a hematocrit level of less than 25%.

Also during the 12-month observation period 8364 study participants were re-admitted to hospital. After adjusting for likely confounding variables the researchers found that those with a hematocrit level in the 25-29.9% range had a 28% increased risk of re-hospitalization when compared to those in the 40-44.9% range.

They conclude that anemia is an independent predictor of all-cause mortality and re-hospitalization among elderly patients hospitalized with atrial fibrillation and suggest that clinical trials are needed to determine if correcting anemia (iron supplementation?) is effective and safe in patients with AF.
Sharma, S, et al. Anemia: an independent predictor of death and hospitalizations among elderly patients with atrial fibrillation. **American Heart Journal**, *Vol. 157, June 2009, pp. 1057-63*

Editor's comment: Although the findings of this study are unlikely to apply to the average lone afibber, it nevertheless points out the importance of maintaining an adequate hematocrit level, especially as one ages. Although Geritol (an iron tonic) used to be very popular among older people years ago, it has fallen out of favor based on medical advice that older people should avoid iron supplements. Will this advice ultimately turn out to

be as "ill-advised" as the advice to avoid sun exposure? NOTE: People who suffer from hemochromatosis (iron overload) should not supplement with iron or vitamin C unless specifically advised to do so by their physician.

I do have one major problem with this study that links low hematocrit levels in afibbers to increased mortality. How did the researchers account for the effect of warfarin and aspirin usage (over 80% of all study participants were on one of these two drugs)? While aspirin and warfarin would likely have been beneficial for those with prior heart attack and stroke, both cause significant micro-bleeding which would certainly be a highly plausible cause for the high prevalence of anemia observed in the study.

Importance of early cardioversion

ANN ARBOR, MICHIGAN. Early recurrence of atrial arrhythmia (atrial fibrillation or atrial flutter) after a pulmonary vein isolation (PVI) procedure is not uncommon and may be experienced by 30-50% of patients. However, such early recurrence does not necessarily equate to long-term failure of the procedure.

Drs. Fred Morady and Hakan Oral and colleagues at the University of Michigan now report that the prompt use of electrical cardioversion in ablatees who develop persistent arrhythmia (AF or flutter lasting more than 24 hours) following an ablation may help reverse remodeling and materially reduce the need for a follow-up ablation. Their trial included 215 paroxysmal and 169 persistent afibbers who underwent a segmental PVI with additional lesions as required. Among these 384 patients 24% experienced a persistent arrhythmia (80% AF and 20% flutter). The arrhythmia occurred within 24 hours in 6%, within the first week in 37%, within the first month in 66%, and within the first 3 months in 88% of cases. All patients with persistent arrhythmias were treated with electrical cardioversion and in 52% of cases with antiarrhythmic drugs as well. Cardioversion was performed within 1 week in 34% of cases, within 1 month in 49%, and within 3 months in 75%. Sixteen months after the cardioversion 27% of the patients were in normal sinus rhythm without the use of antiarrhythmic drugs.

The University of Michigan researchers made the rather astounding discovery that patients who had been cardioverted within 30 days of their persistent arrhythmia occurring were 22 times more likely to be in sinus rhythm than were those who had been converted later. Put in another way, 50% of patients who had been cardioverted promptly, i.e. within 30 days were in sinus rhythm 16 months later as compared to only 4% in the group whose cardioversion was delayed by more than a month. This association held true for both patients with post-ablation persistent AF and post-ablation atrial flutter.

The researchers suggest that early restoration of sinus rhythm is likely to prevent progressive atrial electroanatomical remodeling and thus facilitate long-term maintenance of sinus rhythm.

Baman, TS, et al. Time to cardioversion of recurrent atrial arrhythmias after catheter ablation of atrial fibrillation and long-term clinical outcome. **Journal of Cardiovascular Electrophysiology**, *2009 [Epub ahead of print]*

Editor's comment: This is clearly an enormously important finding and underscores the need to undergo cardioversion as early as possible if persistent AF or flutter develops after a PVI.

New research questions value of daily aspirin

OXFORD, UNITED KINGDOM. While there is conclusive evidence that taking aspirin daily reduces the incidence of heart attack, stroke and vascular death among people with existing heart disease or a prior stroke (**secondary prevention**), there is no convincing evidence that the daily aspirin "ritual" reduces the risk of heart attack and stroke in people without cardiovascular disease (**primary prevention**). A group of researchers at Oxford University now conclude that aspirin is of questionable value in primary prevention since the risk reduction it confers is small and, to a large extent, is counterbalanced by an increase in hemorrhagic stroke and internal bleeding.

Their study of the results of 6 primary prevention trials found that the yearly incidence of serious vascular events (heart attack, stroke, or vascular

death) among 95,000 participants with low risk for cardiovascular disease was 0.54%/year. Among participants who took aspirin daily, the incidence was 0.51%/year as compared to 0.57%/year among those who did not. On the other hand, 0.10%/year of participants on aspirin experienced a major gastrointestinal or intracranial bleed as compared to only 0.07% doing so among non-aspirin users. Of particular interest is the finding that taking aspirin on a daily basis did not reduce the risk of an ischemic or hemorrhagic stroke in participants at low average risk for cardiovascular disease.

There was no indication that the small reduction in vascular events observed among aspirin users was related to age, gender, smoking history, blood pressure, cholesterol level, body mass index, history of diabetes, or predicted risk of coronary heart disease. In particular, there was no significant trend in the proportional effects of aspirin in people at very low, low, moderate, and high estimated risk of heart disease.

Evaluation of the results of 16 secondary prevention trials revealed that daily aspirin consumption reduced the risk of a serious vascular event from 8.2%/year to 6.7%/year with a statistically non-significant increase in the risk of hemorrhagic stroke and major extracranial bleeds.

The Oxford researchers conclude that their observations "do not seem to justify general guidelines advocating the routine use of aspirin in all apparently healthy individuals above a moderate level of risk of coronary heart disease."

Baigent, C, et al. Aspirin in the primary and secondary prevention of vascular disease. **The Lancet**, *Vol. 373, May 30, 2009, pp. 1849-60*

Paroxysmal to permanent AF – is it inevitable?

KANSAS CITY, KANSAS. Atrial fibrillation (AF) usually starts out as being intermittent in nature (paroxysmal) with episodes being self-terminating, fairly short, and relatively infrequent. However, as electrical and structural remodeling takes place episodes tend to last longer and become more frequent ("afib begets afib"). Eventually, episodes may become persistent, i.e. lasting more than 7 days and requiring cardioversion to establish normal sinus rhythm (NSR). Finally, the condition may become permanent, i.e. the patient is in afib 24/7 and cannot be brought back to NSR via cardioversion. Sometimes the AF is asymptomatic and is only picked up by chance via a routine electrocardiogram, in which case, it is not unusual to find the patient has likely been in permanent AF for many years. A group of researchers at the University of Kansas Hospitals has just published a study aimed at determining the variables affecting the progression of paroxysmal AF to persistent or permanent.

Their study involved 437 patients who were diagnosed with paroxysmal AF during the period 1999 to 2007 and followed until April 2009. The average age of the patients was 68 years (57% male). Almost 70% had hypertension, 24% had cardiomyopathy (disease of the heart muscle), 15% had suffered a previous stroke, and the average left ventricular ejection fraction was fairly low at 52%. About 75% of the study group were taking beta-blockers, 55% were taking ACE inhibitors or ARBs (angiotensin II receptor blockers), 54% were taking antiarrhythmics, and 55% were on statin drugs. Thus, the study group was in no way characteristic of lone afibbers and no attempt was made to separate out the conclusion between lone afibbers and those afibbers with underlying heart disease. Nevertheless, the findings of the Kansas researchers are of considerable interest.

Of the 437 study participants, 295 (68%) were still experiencing paroxysmal afib after an average follow-up of 8 years. A total of 111 patients (25%) had progressed to persistent afib, and the remaining 33 patients (7%) were in permanent afib after an average follow-up of 5 years. Please note that 11 of the persistent afibbers later progressed to permanent, so the final percentages at the end of follow-up were paroxysmal 68%, persistent 23%, and permanent 9%.

There was no indication that being on antiarrhythmics, beta-blockers, ACE inhibitors, ARBs or statin drugs influence the time to progression. However, an enlarged left atrium and valvular heart disease were strong predictors of progression to permanent AF with an enlarged left atrium increasing risk of progression by a factor of 2.4 and valvular heart disease by a factor of 3. Patients who remained in paroxysmal AF had an average left atrial diameter of 4.1 cm vs. 4.7 cm in those who proceeded to permanent AF. The main risk factors for progression to persistent were an

elevated body mass index and cardiomyopathy. Age was not a risk factor for progression to permanent.

The researchers conclude that early treatment of valvular disease and cardiomyopathy may reduce the risk of progression as may weight reduction (if overweight or obese) and catheter ablation while still in the paroxysmal stage.

Pillarisetti, J, et al. Evolution of paroxysmal atrial fibrillation to persistent or permanent atrial fibrillation: predictors of progression. **Journal of Atrial Fibrillation**, *Vol. 1, No. 7, June 2009, pp. 388-94*

Editor's comment: It is comforting to have confirmation that the majority of paroxysmal afibbers do not progress to persistent or permanent afib, at least over an 8-year period. I would expect that any progression would be substantially slower among lone afibbers with normal weight and left atrial diameter who, by definition, do not have the two major risk factors for progression – valvular heart disease and cardiomyopathy.

Verdi to the rescue of vagal afibbers?

MILAN, ITALY. Mayer waves are oscillations of arterial pressure occurring spontaneously at a frequency (about 0.1 Hz or 6 cycles/minute) lower than that of normal respiration observed in humans. It is possible to generate Mayer waves by certain breathing techniques and some afibbers have found doing so useful in controlling their afib. Now a group of researchers from the Universities of Milan, Oxford and Pavia reports that Mayer waves can also be generated and entrained in the autonomic nervous system by listening to certain types of music.

Their study involved 24 young, healthy subjects (25 years of age) 12 of whom were musicians and 12 who were non-musician controls. The study participants were exposed to various pieces of music – adagio from Beethoven's *Ninth Symphony*, "Nessun dorma" from Puccini's *Turandot*, a Bach cantata, "Va pensiero" from *Nabucco*, and "Libiam nei lieti calici" from *La Traviata*. During exposure to the music, blood pressure, respiration, heart rate and mid-cerebral artery flow velocity were measured.

The researchers found that almost every music crescendo induced increases in blood pressure and heart rate (adrenergic responses). These correlations were greatest during Puccini's "Nessun dorma". Listening to the Bach cantata, on the other hand, induced a profound feeling of relaxation. The researchers conclude that specific music phrases (frequently at a rhythm of 6 cycles/minute in famous arias by Verdi) can synchronize inherent cardiovascular rhythm, thus modulating cardiovascular control. They point out that several other techniques such as yoga, prayers, and poetry recitation have the capacity for generating Mayer waves as well.

Bernardi, L, et al. Dynamic interactions between musical, cardiovascular, and cerebral rhythms in humans. **Circulation**, *Vol. 119, June 30, 2009, pp. 3171-80*

Editor's comment: Inasmuch as certain types of music such as the crescendos found in arias by Verdi can increase heart rate and sympathetic response, is it possible that listening to such music at bedtime may be beneficial to vagal afibbers, while adrenergic afibbers may find listening to a Bach cantata while under stress to be helpful?

Factors predicting success of circumferential PVI

GHENT, BELGIUM. The success rate for a single pulmonary vein isolation procedure carried out at a top-rated center now ranges between 70% and 90% in the case of healthy, paroxysmal afibbers. Researchers at University Hospital Ghent recently carried out a study to determine if there were any specific pre-procedure variables that could predict, more specifically, whether a PVI would be successful.

Their study involved 100 patients (average age of 54 years), 85% of whom were lone afibbers with paroxysmal (80%), or short-standing persistent (20%) afib. The patients had an average of 4 symptomatic episodes a week and had been diagnosed an average of 6.2 years ago. They had unsuccessfully tried an average of 2.6 antiarrhythmic drugs each. All participants underwent a circumferential PVI (CARTO-guided) procedure while in sinus rhythm. They remained on

antiarrhythmics (sotalol or flecainide) and warfarin for at least 3 months following the procedure.

After an average follow-up of 28 months (15 – 59 months) Holter monitoring was performed. At this time, 71% of patients were free of afib without the use of antiarrhythmic drugs, while 5% experienced recurring asymptomatic episodes. An early occurrence (during the first month following the procedure) was not necessarily an indication of failure since 17 out of 25 patients (68%) experiencing recurrence were afib-free at the end of follow-up. The researchers found no evidence that age and gender influenced the outcome of the procedure; however, they did notice that patients who were ablated early in their "afib career" experienced a substantially better outcome (92% success if ablated within 1 year of diagnosis) than did those who waited. The researchers also found that a smaller left atrial volume (measured by 3D CARTO geometry) was associated with a substantially greater success. Thus, patients with a LA volume less than 80 mL had a success rate of 88% at end of follow-up, while those whose procedures failed had an average LA volume of 106 mL.

De Potter, T, et al. Predictors of success after a first circumferential pulmonary vein isolation for atrial fibrillation. **Journal of Atrial Fibrillation**, *Vol. 1, No. 6, April 2009, pp. 311-20*

Editor's comment: The above findings provide strong evidence that undergoing an ablation soon after diagnosis materially improves the chance of success. However, a decision to "jump right in" must be weighed against the currently unknown long-term effects of PVIs in general.

My *H.pylori* Journey

Sharon Glass
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I am a 68-year-old female who has battled afib for 3 years. I found considerable relief by carefully analyzing my diet and adjusting it to provide all the nutrients I need. However, I have always been plagued with digestive problems and in November 2008 these problems came to a head.

During my research I found I had 4 of the 8 symptoms for H.pylori and/or an ulcer. H. pylori is a bacterium that inhabits various areas of the stomach and duodenum (first section of the small intestine). It causes a chronic low-level inflammation of the stomach lining and is strongly linked to the development of duodenal and gastric ulcers and stomach cancer. I learned that H. pylori is the only bacteria that can survive in the acidic environment of the stomach and also causes gastritis. A person infected with H. pylori has a two to six-fold increased risk of developing mucosa-associated lymphoid tissue (MALT) lymphoma, and gastric cancer compared with those uninfected.

I had too many symptoms to not consider the possibility that I had this bacteria or something worse like an ulcer or even cancer. I made an appointment with the doctor. I told him what I thought and he looked up H.pylori on his computer. Agreeing that I had too many symptoms to ignore, he ordered the blood test. It came back positive for the bacteria. He said the recommended treatment was two strong antibiotics (large doses) and a strong antacid for two weeks. I told him I couldn't take antibiotics as I had horrible stomach issues with them and I didn't need anything else that would interfere with my stomach. I asked him if there were any other treatments, he said not that he knew of. He stressed that I needed to take the drastic treatment, as this was one of the worst bacteria's a person can get in their system and if I hadn't already developed an ulcer I probably would. He said the worse scenario was possible stomach cancer if it were left unattended.

I went home that day with fear but more than that I was determined I would find an answer. I e-mailed Jackie (what would I do without Jackie). We started working on research together. I learned so much, even found some forums where H.pylori was the discussion topic. Through those forums I found that many people had taken the treatment program of antibiotics and antacids only to find it didn't work and they just got sicker, some ended up in the hospital only to be put on stronger drugs. The cure rate for H.pylori with the medical treatments was very low. I learned that some medical experts believed the H.pylori had become resistant to the recommended antibiotics.

I used a product from Allergy Research Group - *Mastica Chios Gum Mastic, Hypoallergenic, 120 vegetarian capsules,* 1000 mg per serving and I did two a day = 2000 mg. I also used *Natrol, BioBeads, Probiotic Acidophilus Complex, 90 Beads*. I believe strongly taking them together was what helped me most, along with eating healthily. If a person eats junk food I don't think the supplements have what they need to work because the body is fighting too many toxins to focus on the H.pylori. Both products can be ordered through Hans' vitamin store at http://www.afibbers.org/vitamins/vitamin15.htm

Mastic Gum is a supplement that is made from a *resinous material obtained from the Pistacia lentiscus tree which is grown on the island of Chios in Greece. It is traditionally used as a health food in Greece.* I learned that a recent study to the "New England Journal of Medicine" supports mastic's contribution to gastrointestinal health. I read mostly good reports about the supplement and that some people had been able to kill the bacteria with it. I finally told my family members including my sons and my sisters and brother about the doctors confirmed diagnosis and what he had recommended and what I had decided to do. Out of concern my family pushed me to take the antibiotics, I knew I couldn't and hated seeing the obvious disappointment and concern in their faces and voices when I told them, but knew I had to do what was best for me and my body.
I started taking the Mastic Gum capsules on Monday April 6. I took 1000 mg every twelve hours consistently along with a good probiotic and lots of water. I had read that the bacteria did not like broccoli so I ate it once or twice a day for the full 60-day treatment with the Mastic Gum. I love broccoli so eating it that often was no problem. My philosophy was that if the bug hated broccoli, then the more the better! I later learned there is actually a supplement made out of broccoli that I could have taken, but then I would have missed the good taste of the vegetable.

I tolerated the supplement well and within a week, my food was no longer being flushed through my system. Two weeks later the pain in my stomach had lessened. It had been so bad that eating food made me double over in pain, now I could eat without the extreme pain. I was still diligent in eating my "afib tolerant" foods as I sure didn't want to deal with that and H.pylori.

One month into the treatment I woke up with a horrible metallic taste in my mouth. Nothing I did seemed to make it go away, I felt as if I had sucked on a metal Popsicle. Concerned that I had developed a reaction to the supplement, I researched "metallic taste in mouth". I found that often antibiotics would cause this taste when bacteria die and the body flushes it out through the tongue. I called a friend who is our local natural health person and asked him if he thought the Mastic Gum might work the same way if it was killing the bacteria. He said, "Absolutely, sounds like the bug is dying." I was excited to say the least, and glad I was taking a good probiotic so the supplement didn't kill off the good bacteria too. I didn't want to shout from the roof top that the bug was dead until I had a confirmed stool test, but I sure felt like it.

By the end of May all symptoms had disappeared, I felt wonderful, no stomach pain, my bowels were back to normal and the persistent muscle pain I had experienced for months was gone. In April I had lost to 103 lbs and my weight was now steady at 105 pounds. I knew that being underweight was not a good thing for my body and I needed to gain more weight. I introduced some usually forbidden carbs into my diet; I needed calories as I wasn't even getting the RDA daily. I ate gluten free pretzels with a good peanut butter every day. I put Olive Oil on everything, even sautéed a banana in it one day which I don't recommend…nasty! I added rice noodles and other non-gluten foods. I anticipated getting pain again and was even prepared to face an episode of afib caused by too many carbs. I was relieved when I had no pain and better than that…no afib. I realized that my heart had been so quiet through all of the ups and downs of this trial. I checked my afib diary and discovered that I had been having afib every two months from March of 2008 until January 27, 2009. It was encouraging at how quiet my heart had been since the 3 hours episode in January.

One of the most important pieces of information that I discovered while researching H.pylori is the below article indicating that H.pylori could be a factor in afib.
Gastric bug link to irregular heart rhythm, atrial fibrillation 16 Jun 2005
http://www.medicalnewstoday.com/medicalnews.php?newsid=26239#

A common stomach bug may also be linked to the development of irregular heart rhythm, also known as atrial fibrillation, suggests a small study in Heart. The bug in question, Helicobacter ***pylori****, causes ulcers, and has*

*also been implicated in the development of stomach cancer and ischaemic heart disease. The researchers base their findings on 59 patients with persistent atrial fibrillation. The patients included those who had no structural heart disease. All the patients were given a battery of tests, including a heart tracing, and levels of C reactive protein, an indicator of systemic inflammation. They were also directly tested for the presence of H **pylori**. The results were compared with those from a group of 45 healthy volunteers in whom the same tests were carried out. Both groups were similar in terms of age and levels of blood fats, although significantly more of the patients with atrial fibrillation were being treated for high blood pressure. The patients with atrial fibrillation were around 20 times as likely to test positive for H **pylori** as the healthy volunteers, and their levels of C reactive protein were around five times as high. Both rates of H **pylori** and C reactive protein levels were also significantly higher among those patients with persistent atrial fibrillation than those with spasmodic episodes of irregular heart rhythm. H **pylori** is a very resilient bacterium and has properties that enable it to escape detection by the immune system, say the authors. And chronic gastritis, caused by persistent H **pylori** infection, may predispose to atrial fibrillation, they suggest.*

For a detailed discussion of this report please see Conference Room Session 42 at http://www.afibbers.org/conference/session42.pdf

To make a long story short I finished the 60-day treatment on June 6th and took a stool sample to the lab on June 16, 2009, two months after taking the Mastic Gum. I felt the bacteria was dead, but reserved stating it until I had confirmation. My doctor went out of town for a week and I went on vacation before the results came back. I got a call when I got back from vacation that the test was back. I didn't want to hear the results over the phone, so I went to the doctor's office. The nurse came out in the waiting room with the results in her hand. She sat down and I felt fear in the pit of my stomach, I thought she would say it is still positive. She said, "Sharon, I have good news, the test was negative." I almost ran around the waiting room, but contained my excitement. She asked, "What did you use?" I said, "A natural supplement called Mastic Gum." I explained what it was and told her I knew the doctor was skeptical about the outcome. She handed me the paper and said, "Well, now you have the proof." I walked out of the office as if I were on air. It was time to shout it from the roof top and I vowed I would tell everyone who will listen that if you have afib and stomach problems, get checked for H.pylori, if it is negative, get checked for Candida.

Am I cured of afib? I will reserve that statement until more time has passed. Will I continue my afib protocol? You bet I will… I'm healthier than I have been in years and have gained back to 111 lbs. My hope is that more research will be done on the connection between afib and H.pylori and that doctors will try something natural instead of making people sicker with strong antibiotics that don't appear to have good results. Maybe my story will help doctors consider other options and if they won't, people will take their health back into their own hands. Like many of us I believe there is a major connection between afib and inflammation and I won't stop telling my story, maybe someone will listen…how about you?

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