

**Your Premier Information Resource for Lone Atrial Fibrillation
Publisher: Hans R. Larsen MSc ChE**

<http://www.afibbers.org>

VIRTUAL LAF CONFERENCE

Proceedings of 60th Session
July 10th 2007 – August 13th 2007

SUBJECT: Left Atrial Flutter and Other Post-Procedure Arrhythmias

Over the last three years P.V.I ablation has increased both in terms of success rate and as a preferred way of remaining in N.S.R. Hopefully a successful ablation is a cure although it is hard to come to a conclusion as the data is still young.

P.V.I ablation is still in its infancy and the post ablation ride is undetermined and many strange heart irregularities can occur, however some degree of stability is generally reached after a 3-month period.

I had my second P.V.I ablation 3 months ago, which unlike the first, produced two periods of flutter. The first episode was one week after the ablation and lasted for 7 days, the second lasting one month. I was concerned as little information, be it factual or anecdotal, could be found on this common complication after P.V.I. Ablation is becoming more common place, therefore it follows that there will be an increase in the number of people experiencing flutter/tachycardia.

From Hans' "The AFIB Report # 65 - Ablation Survey

"The second most common adverse event was the development of post-procedural left atrial tachycardia/flutter. This complication arose in 44 of 358 procedures (12%). The left atrial tachycardia/flutter resolved on its own in about 40% of cases, but 6 (14%) ablatees underwent another ablation to deal with it.

Post-procedure right atrial flutter was reported by 22 ablatees (6%) and 8 (36%) subsequently underwent an ablation to eliminate it. In the remaining 64% the right atrial flutter was temporary and resolved itself prior to completion of the survey.

NOTE: One hundred and fourteen (32%) of all ablation procedures included a right atrial flutter ablation as a precautionary measure. This approach prevented post-procedural right atrial flutter in 93% of cases."

As a consequence I would appreciate any experiences or theories concerning post ablation flutter/tachycardia. As this Forum is mainly concerned with lone atrial fibrillation I have listed some discussion threads within this context.

1. Number and duration of occurrences of flutter/tachycardia post ablation.
2. Incidence of flutter/tachycardia as a precursor to AF and before N.S.R., pre and post ablation.
3. Occurrences of flutter/tachycardia as opposed to AF post ablation. Is flutter/tachycardia more likely after a second ablation?
4. Were there any triggers for flutter/tachycardia as in AF?
5. Was the flutter/tachycardia spontaneous or were there any precursor events e.g. P.A.C.s
6. Did drugs or supplements terminate flutter/tachycardia? What was the heart rate whilst in flutter/tachycardia and

what rate control drugs were used?

7. Are different P.V.I. procedures more likely to produce flutter/tachycardia events?

8. The outcome and success rate of P.V.I ablation in relationship to occurrence of flutter/tachycardia in the first 3 months post ablation.

9. Is the flutter/tachycardia predominantly left or right hand side?

10. Is left atrial flutter ablation recovery similar to AF where hopefully the episodes decrease over time?

11. Was the flutter/tachycardia documented on an ECG/Holter?

12. Did drugs or supplements (especially potassium, magnesium and taurine) help prevent flutter/tachycardia episodes?

Thanks for your input,

Chris

After 2 atrial fibrillation ablations I ended up with atrial flutter in the left atrial. It started the day after the ablation lasted for 6 hours. It repeated itself every month, duration from 6 hrs or more. Have been cardioverted 6 times during the last 10 months.

A week ago my EP did a left atrial ablation, he was unable to reach the SPOT with his current equipment due to they angle. However he did 52 burns around the spot. Feeling fine for the last week - so far in NSR.

There is hope, after my EP told me they are installing new equipment called STEREOTAXIS. This way he will be able to get to the spot since this new system is more flexible. Until next year I will have to wait to see what will develop from my last ablation.

PS. My hr was around 120bpm during the flutter. I take 40 mg of sotalol twice daily. During flutter I take 2 125 mcg of digoxin and get my hr down to 100 bpm

Thanks to those posts here I'm well informed.

Kees

Atrial flutter with some afib mixed in developed after my ablation for afib in June 2005.

It occurs almost always when I am lying down at night while sleeping. I don't know whether atrial stretching, brain waves during sleep or GERD or all of the above are causing it.

At first, I didn't get aflutter if I lay on my right side all night long. If I rolled over in my sleep, it would begin. But in the past month any position while lying down will set it off. As a result I am seriously sleep deprived.

I am on Warfarin, but no other drugs so far because anti-arrhythmics (Norpace) and beta-blockers did not agree with me before.

I am debating whether to begin taking Tikosyn, which Natale prescribes for aflutter, but hesitate because syncope is one of the known side effects. I had episodes of fainting "out of the blue" and from no known cause from March to November of last year. It was very, very frightening because it came without any warning signs. I am in "between a rock and a hard place," which seems to be the plight of so many afibbers. Risk of a stroke is high with the constant aflutter every night and yet the possibility of syncope while on Tikosyn, which might control the aflutter, is daunting.

Has anyone had syncope from taking Tikosyn?

I am scheduled for a flutter ablation with Natale on Nov. 20, 2007.

Carol

Chris - when I attended the CCF Summit on AF back in October 05, flutter after ablation was mentioned a few times. One comment was that flutter was present during afib and the afib was just masking or covering up the flutter. So once the afib was gone, the flutter remained.

The other comment as I recall was that flutter often resulted from incomplete burns or lesions.

Jackie

Carol,

Before trying Tikosyn I would try a glass of PACTamer + 200 mg Magnesium glycinate (chelated magnesium) + 2000 mg of taurine about 1/2 hour before bedtime. It just might work :~)

Hans

I have had afib/flutter almost continuously for the last 7 years, 24-7. It started out as being diagnosed as right side flutter, so I had an ablation, and about a week later what I thought was the same arrhythmia started up again, but was diagnosed as afib. My EP said that was quite common, that once the flutter had been dealt with, afib would replace it (really it was there all the time). Since then I've had 4 ablations for the afib, but with very little success. Occasionally (one day every 2 weeks?) I wake up in NSR, and it may last out the day. Recently the diagnosis has changed to atypical flutter (right side), which may have started after one of my last ablations. The battle continues.

I haven't found any drugs to really be helpful with either afib or flutter. I am currently on flecainide, which doesn't seem to do much to convert me, but does control my rate quite well. Supplements have been of no help, and in fact may have slightly aggravated the situation, so after giving them a good controlled try, I discontinued them.

Doug S.

Hi Chris, I'd experienced some flutter on both flecainide and propafenone so had a right-sided flutter ablation along with my first PVI Feb 2005.

I experienced what the doctors thought was left sided flutter after my first ablation, here's an example of my heart switching from AF to flutter and back to AF... http://james.dialsolutions.com/public/AF_flutter_AF.gif

I always found flutter more intolerable than AF possibly because of the high, pounding rates. Thankfully they were relatively infrequent and short. Even after my first ablation AF remained the dominant arrhythmia. Without an ECG distinguishing between tachycardia and flutter can be a bit of a problem so it's hard to say for sure what my mix was. (I've always thought flutter was more like a jack hammer going off in my chest but am not sure if this evaluation holds up to scientific scrutiny :)

I did have pretty constant tachycardia for quite a while post ablation (Feb 2006) but no AF or flutter and as time went on the rate slowly came down (rate is currently 60bpm as I type this). I believe tachycardia is extremely common post ablation and may even be an indicator of a successful procedure (Hans has reported on this in the past). It would be nice to know the resting heart rates of all those people who have had late recurrence AF - I've always wondered if short term tachycardia post ablation is at least in part responsible for short term success. (though I'm happy to report I'm still in NSR!)

I had segmental PVIs - I'm not sure whether this makes any difference to the likelihood of left sided flutter. I'm sure it's pretty complicated but as long as the scar is long enough for a rotor to spin around then flutter is achievable - so my gut feeling is that the minimum length of a scar is much more critical than the maximum length (so I'd be amazed if flutter wasn't also an issue for those who have had circumferential ablations).

James D

I've seen various comments about flutter where people say they self-convert from flutter.

I had flutter once lasting over a week that ended by cardioversion at the Cleveland Clinic. The doctors there told me that flutter will not convert on its own. Yet, people say they have.

Any comments? Maybe they didn't have flutter?

As far as rhythm, rate and comfort goes, the flutter I was in for that week was much more comfortable than afib. The rate was low and the rhythm, much more steady. No chaotic flopping around. I could function. I even worked out on the treadmill and with free weights to see if I could get it to convert. The ER docs looked at me like I was crazy when I told them that.

They tried to convert chemically with two different drugs and when that didn't work, I stupidly agreed to having them stop the heart (chemically) and restart to see if that would work and it did not. Fortunately, I survived.

The cardioversion held and I didn't ever go into flutter again.

Jackie

Hello James D., the old ignoramus here again. Can you or somebody explain the difference between tachycardia and flutter?

PeggyM

Hi Peggy, in sinus tachycardia every beat your atria makes your ventricles beat. (a simple definition is any rate > 100 bpm is tachycardia)

In flutter, although your atria is beating, not every signal gets through. (usually your atria is beating too fast for the AV node to pass every signal down to the ventricles)

So, for example, although my watch output above shows my ventricles going at 147 bpm it's likely my atria were going at 294 bpm (2:1 flutter) it's this rapid but strong pounding of the atria that makes fast flutter unpleasant.

2:1 3:1 and 4:1 flutter are all quite common. (so you could have 3:1 flutter with atria at 240 bpm and the ventricles going at 80 bpm)

Just to complicate matters there is a rhythm known as 1:1 flutter which I suppose you can view as very fast tachycardia (except it's unlikely the sinus node is driving the atria). I can vouch that when your ventricles push 280+bpm things get VERY unpleasant!

The easy way is to think of AFib as your atria quivering and AFlutter as your atria beating but faster than the ventricles. Strictly speaking, tachycardia is any beat above 100bpm but I think we're really talking about sinus tachycardia in this thread (i.e. fast normal sinus rhythm)

James D

Hi Jackie, as far as I understand it it's pretty common to go from AFlutter to AFib and vice versa (particularly on some of the antiarrhythmics, though in the example I posted I was only on a beta-blocker). I'm pretty sure flutter can self-convert to NSR too.

I've read many accounts from both view points about how uncomfortable flutter is compared to AF - just one of those things that varies between individuals I guess.

--

James D

The device is called Stereotaxis System for Magnetic Navigation or NIOB. With traditional ablation equipment the physician is manipulating wires within tubes (sheaths) to place the ablation tip on the spot that should be burned. You cannot bend the catheter tubing to a steep angle as there will be a little play between the inner wire and the outer tubing if you try to bend too much. With the NIOBE system it is a magnetic field that controls the tip of the catheter and it can be placed at any angle. Watch the two videos on this page for a better understanding.

<http://www.stereotaxis.com/Products-Technology/Magnetic-Navigation/>

Gunnar

Even with the Stereotaxis equipment, ablation may not be successful.

I have been corresponding with a person who had a second ablation with assurances that the Stereotaxis was the end-all, be-all to a successful ablation and it failed. While they say this equipment is much more user-friendly and makes the need for knowledge and skill less critical than with PVI or PVAI, it would seem that it isn't fool proof and that experience and skill along with improved equipment is still important. That's just one instance, but when you are the 'one', it becomes very important.

Jackie

There will always be some that do not succeed, but Natale and computer assisted equipment must be a fantastic combination. Another view is that we do not want these fantastic physicians to fade away due to radiation or back injuries from the lead aprons.

Gunnar

My experience of I.a. flutter/tach post NHS ablation has been pretty miserable.

Spontaneous episodes without any precursor happened within 24 hrs of ablation (by which time I was at home). Episodes lasted anything between 10 mins and several days. My view is that it was extremely uncomfortable compared to AF, at least initially.

Pre ablation I was 120 hrs/month in AF with the odd flutter as well.

Post ablation I was clocking up an episode rate of I.a. flutter/tach 500 hrs/month, decreasing to 300 hrs/month after three months, based on a 3 week rolling average (I recommend this to even out your statistics, if keeping records. Weekly statistics can be hugely erratic and difficult to find a trend).

Unfortunately after 3 months, episode length gradually increased until now I am in I.a. flutter/tach about 90% of the time. Atenolol does bring the heart rate down to around 130bpm but every day feels like I am wading through mud. Everything is such an effort. I tried Diltiazem but that accentuated a pause in my rhythm to 6 seconds. Not recommended! My local hospital was keen to fit a pacemaker to correct this. I gracefully declined their kind offer..... Flecainide, which I have always taken, does seem to bring the rate down a little, though I wonder if it is still useful from a conversion to NSR point of view. Sometimes I stop taking it and convert anyway, although I would not say it is a catalyst to the flutter in my case.

I am told that I.a. flutter/tach is an encouraging sign, since it is said to be an indication of successful PVI. My 2nd ablation is set for 30 July at Barts in London with Dr. Schilling himself, I am pleased to report.

Hope this info helps to build the big picture!

Rob P.

As my AF more often than not terminated via flutter even before I started on anti-arrhythmics, then Flutter must self terminate. Can one tell apart from ECG, the difference between left Atrial flutter and right origin flutter??.

It also seems to me that flutter is far more difficult to control than AF. There appears only that well known drugs that

slow heart rate (beta-blockers) have overall benefit however the efficacy of strong drugs of all Vaughan Williams class that terminate AF is very hit and miss. Why aren't there more specific Flutter drugs or is the chaos too difficult to subdue.

Chris

Jackie,

I always self convert from flutter, which is almost always nocturnal. It usually stops when I get up or sit up in bed. Valsalva works well for me, too.

Carol

P. S. Flutter is much more tolerable for me than afib ever was. I always had such awful pounding with afib. Also, although it is fast, the flutter is at least regular in beat.

However, it wakes me up out of sound sleep and keeps me awake until I can stop it by holding my breath, etc. But then, it usually starts right up again when I fall back to sleep.

I had my PVI ablation August 2005 and spent most of the first two weeks in the hospital because of flutter possibly due to a tamponade. Amiodarone became the drug of choice and short runs of flutter were a problem for the next four months. After that things settled down and have been good since. No afib since the procedure.

Barb

When Hans first mentioned this conference room topic, he said way back in July that "post-ablation flutter and inappropriate sinus tachycardia" might well be the topics. The latter part, inappropriate sinus tachycardia, has not been mentioned. I've been hoping!!

I am truly an N of 1 on this forum, because I seem to be the only one who has had this outcome. To repeat what most of you know, after a July '06 ablation by Natale, I came out (after Tikosyn induction and one quick cardioversion) into nsr and atrial tach (but not flutter, according to Natale). That atrial tach, over a period of six months, slowed from 120-140 to consistently below 100, and was thus no longer a tachycardia, and it became clear on the ECG that it was a sinus rhythm, consistent P waves, faster than the other sinus rhythm (usually about 60 plus or minus) that I had been in since the ablation. So I live now with two sinus rhythms that "change places" under no predictable circumstances of food, activity, sleep/wake, etc. I can only tell which I am in by taking my pulse. Occasionally I feel some palpitations and that usually indicates a transition is underway - those can come at any time, and the transitions usually occur every couple of days, but sometimes even more than once a day. My exercise tolerance is a little better in the faster of the two, and pulse rate goes up some in both with exercise, but more when I am in the faster sinus. (I'm 67 with an artificial hip, good weight, but my 'exercise' is stair climbing, and lots and lots of walking.

Natale, I think very wisely, decided against trying to find the second sinus pacemaker because it was likely close to the 'normal' pacemaker cells, and he was afraid he would damage both. So I live pretty comfortably with 25 mg atenolol per day (to make sure the faster sinus stays below 100), and, for now, coumadin, though he says in a few months when we are absolutely sure what is going on he will recommend coming off the coumadin. In other words, a year post-ablation my "healing" -- or at least change -- continues.

If anyone has ever been a "two sinus rhythm" person, or knows such a person, please let me know. I'd truly love to have someone else to talk with directly about my seemingly unique situation (on this forum, though Natale says he has had others).

I continue to read and post when I think I may have something helpful to say. The forum has been so helpful to me day in day out for over four years now, all I can do is try to pay back a little. Thank you Hans and everyone.

Kagey

THE AFIB REPORT is published 10 times a year by:
Hans R. Larsen MSc ChE, 1320 Point Street, Victoria, BC, Canada, V8S 1A5
E-mail: editor@afibbers.org World Wide Web: <http://www.afibbers.org>

Copyright 2007 by Hans R. Larsen

THE AFIB REPORT does not provide medical advice. Do not attempt self-diagnosis or self-medication based on our reports.
Please consult your healthcare provider if you are interested in following up on the information presented.