

## Flecainide

### Introduction

Flecainide is an anti-arrhythmic (rhythm improving) medication, which was developed by the same company (3M) that gave us Scotch Tape and Post-it notes. It belongs to the class 1c group in the Vaughan-Williams anti-arrhythmic drug classification. It has many uses for the correction of rhythm disorders of the heart.

### How does it work?

Flecainide works through impairing sodium movement through channels in the cell membrane of heart muscle tissue. Through this action it slows the electrical conduction of heart cells. This mainly effects the main conduction systems connecting the atria (upper chambers) and the ventricles (lower pumping chambers). This action is more pronounced at faster heart rates. It is due to this increasing efficiency of action with increasing speed that gives Flecainide its value in tachy-arrhythmias (fast, abnormal rhythms of the heart).

### Clinical Use

**Anti-arrhythmic:** The main use of Flecainide is for the treatment of rapid abnormal rhythms of the heart. This is usually when these rhythms are paroxysmal (come and go). The medication is given to reduce the rate of the heart beat during these rhythms.

**Pill-in-the-Pocket Cardioversion:** People who suffer from Paroxysmal Atrial Fibrillation may be given Flecainide to take only when they feel their heart change its rhythm from

the normal sinus rhythm to abnormal Atrial Fibrillation, (see the AFA fact sheets on 'Pill-in-the-Pocket', 'Cardioversion' and 'Medical Cardioversion').

### Side Effects and Problems

**Cardiac Arrhythmia Suppression Trial:** This study was designed to investigate whether medications such as Flecainide could be given to patients who had suffered a heart attack and improve their survival. In 1989 the part of the study looking at Flecainide was stopped as it appeared that taking the medication reduced rather than improved survival rates. It was subsequently shown that Flecainide tends to aggravate rather than suppress rhythm disturbances if the heart is not fully supplied with blood.

Some concerns about the use of Flecainide in patients with coronary disease, stem from this study. If your specialist decides to use Flecainide as a treatment for your arrhythmia it will be because (s)he does not think you are suffering from heart failure (weakened pumping of the heart) or significant hardening of the coronary arteries which could put you at risk of heart attacks.

**ECG Changes:** Because of the potential risk of drug toxicity, patients who are taking Flecainide should have an ECG recording every 6 months, and while taking Flecainide, you may be informed that the pattern of your ECG has altered. This is to be expected from the mechanism of action of Flecainide. It will slow conduction through the heart and therefore increase the time taken to conduct from the atrium to ventricle (PR interval on the ECG)

and through the ventricles (QRS complex duration on the ECG). These changes generally indicate that the drug is working properly, but if the changes are marked (PR interval prolonged to an interval greater than 250 msec or QRS duration to greater than 160 msec) drug toxicity should be diagnosed.

As stated previously patients who are taking Flecainide should have an ECG recorded every six months. Blood levels can be measured when there is doubt about the correct dose of the drug. When patients are prescribed Flecainide it is important that they also receive either Beta-Blockers or a rate limiting calcium antagonist (Verapamil or Diltiazem) to protect the ventricles from too frequent conduction from an atrial rhythm to the ventricles.

Flecainide usually produces no side effects but has the potential to cause other abnormal heart rhythms and can occasionally produce other transient symptoms such as visual disturbances, light headedness or gastric discomfort. Should you experience any of the side effects, particularly breathlessness, chest pain or worsening of a heart rhythm problem consult your specialist without delay rather than discontinuing the medication yourself.

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