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Aspirin

This factsheet is intended to help those affected by atrial fibrillation understand the medication aspirin, with a brief introduction to how it works, dosing and side effects.

Introduction

Evidence of the use of willow bark as a remedy has been found as long ago as the Sumerian civilisation in 3000BC. In its basic form as salicylate (coming from salix, the Latin name for Willow) it irritates the stomach. This natural medicine became of more practical use to a physician when the compound was modified in the 1890s to form acetyl salicylic acid (ASA) which reduced the stomach irritation. Named as aspirin by the Bayer pharmaceutical company it has been widely used for over 100 years.

How does it work?

Aspirin works by blocking the action of prostaglandins and thromboxanes (locally active hormones) in the small sticky platelet cells which are initially responsible for binding blood together to form clots and scabs. Aspirin reduces how effectively these cells bind together and thus reduces blood clot formation.

Prostaglandins are locally produced hormones that have many functions in the body including the transmission of pain, regulating blood flow, controlling the process of inflammation, and also work on the thermostat in the brain stem to affect temperature. It is because of this action on the prostaglandin hormones that aspirin can also be used as an analgesic (painkiller), anti-inflammatory and as an antipyretic (temperature reducing) medication.

Clinical Use

Anti-thrombotic: The most common use of aspirin when taken on medical advice is as a medication to reduce the risk of clot formation. This is used in patients who have suffered strokes, heart attacks and circulation problems to reduce the risk of clots forming in the arteries and blocking them, as this causes further problems. In this setting it is used at a low dose for the long term.

Aspirin for AF: Aspirin for a long time was thought to reduce AF-related strokes. Increasingly specialists have questioned the value in this role and research has shown that aspirin is not as effective as an anticoagulant, such as warfarin at preventing an AF-related stroke and therefore Aspirin is no longer recommended as therapy for AF. Currently approved anticoagulants for use in non-valvular AF includes warfarin, dabigatran, rivaroxaban, apixaban and edoxaban, which dramatically reduce the risk of an AF-related stroke.

For further information see the AF Association booklet Preventing AF-related stroke: anticoagulation.

Side effects and problems

Bruising: Since aspirin affects the way that the sticky platelet cells work, with long term use it can cause bruising from minor accidents/injuries may result in prolonged bleeding if cut or scratched.

Indigestion: Aspirin can cause indigestion and in some cases stomach ulcers and bleeding from the stomach lining. This may necessitate further investigation or the additional prescription of stomach protecting medication.

Tinnitus: The symptom of ringing in the ears (tinnitus) is not normally an issue when aspirin is prescribed in low doses (as in prevention for strokes and heart attacks). If this symptom develops while taking aspirin, it is advisable to consult your doctor.

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