

About Procoralan® (ivabradine)*

– Background –

Procoralan (ivabradine) was discovered and developed by scientists working at the Servier research laboratories in the early 1990s. Procoralan was first approved for clinical use in 2005 by the European regulatory authorities (EMA).

What is Procoralan?

Procoralan is the first selective and specific inhibitor of the sinus node I_f current¹⁻³, which is the pacemaker of the heart. It is an efficient and exclusive pure heart rate lowering agent.

How does Procoralan work?

Procoralan acts specifically on the sinoatrial node and lowers heart rate by selectively inhibiting the I_f pacemaker current, without affecting other cardiac ionic currents. It is the first agent to provide effective pure heart rate reduction while maintaining cardiac contraction and relaxation as well as blood pressure.

By specifically reducing the heart rate, Procoralan reduces the heart's oxygen demand. The advantage of Procoralan is that it also maximises the supply of oxygen when the body most needs it.⁴ This is possible because Procoralan permits coronary vasodilatation during exercise and also greatly increases diastolic time, as compared with beta blockers.^{4,5}

Procoralan provides baseline-dependent heart rate reduction

Procoralan reduces heart rate more in patients who have a higher resting heart rate and less in patients with a lower resting heart rate.⁶ Thus, the chances of having sinus bradycardia are less with Procoralan.

Clinical benefits documented in the largest development programme in stable angina

Randomised trials have demonstrated the anti-anginal and anti-ischemic efficacy of Procoralan when compared with placebo⁷ and other anti-anginal's such as beta blockers⁸ and calcium channel blockers.⁹ Procoralan improved exercise test parameters in all studies which means that clinically,

it was able to relieve ischaemia. When comparing Procoralan with a beta blocker, the improvement in exercise capacity for each beat of heart rate reduction was twice higher for Procoralan.¹⁰ In practice, this means that patients treated with Procoralan have a better adaptation to exercise, while also gaining the full benefits of heart rate reduction. In patients already receiving beta blockers, the addition of Procoralan significantly improves the exercise duration.¹¹ Important new findings from the BEAUTIFUL study show that Procoralan reduces heart attacks by 42% in angina patients, as well as the need for coronary revascularisation.¹² In CAD patients with heart rate above 70 bpm, Procoralan has shown to reduce the risk of myocardial infarction and coronary revascularisation.¹³

Procoralan has also demonstrated excellent tolerance and a good safety profile in all the clinical studies and can be safely co-administrated with most routinely used cardiovascular drugs.

An ongoing large-scale clinical trial SHIFT is studying the benefits of Procoralan in terms of reduction in cardiovascular events in patients with heart failure.

** Depending on the country, ivabradine is available as Procoralan[®], Coralan[®], Coraxan[®], or Corlantor[®]*

References

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