

Effects of Cleistanthins A and B on Blood Pressure and Electrocardiogram in Wistar Rats

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We have studied the effects of cleistanthin A and cleistanthin B, phytoconstituents isolated from the leaves of *Cleistanthus collinus* Roxb. (Euphorbiaceae), on blood pressure, electrocardiogram, and barium chloride-induced arrhythmia in Wistar rats. The two compounds were isolated by column chromatography and their identity was confirmed spectroscopically. A healthy, male Wistar rat was used to record the invasive blood pressure and electrocardiograph. The antiarrhythmic effects of cleistanthins A and B were studied using the barium chloride model. Both cleistanthin A and cleistanthin B showed a dose-dependent hypotensive effect. Both compounds reduced the mean blood pressure significantly although the dose required for the effect was higher in the case of cleistanthin B. In the electrocardiogram, cleistanthins A and B significantly altered the electrical activity of the heart, the changes were transient and of no further consequence. Intravenous injection of 64 μg or more of cleistanthins A and B caused a sudden respiratory depression without affecting the electrocardiogram. Cleistanthins A and B did not display any antiarrhythmic effect against barium chloride-induced arrhythmia. In conclusion, both cleistanthin A and cleistanthin B exert a hypotensive effect and have no antiarrhythmic effect against barium chloride-induced arrhythmia in Wistar rats.

Key words: Cleistanthins A and B, Blood Pressure, Electrocardiogram