PLANTS IN CARDIOLOGY

Fagarine
In 1932 G Stuckert was the first to isolate a new alkaloid, fagarine, from the Argentinian plant Fagara coco (Rutaceae); and with A Sartori he showed that it had a depressant action on the myocardium of rabbits. Further work at the University of Cordoba by Moisset de Espanes and others showed that fagarine raised the threshold for atrial and ventricular fibrillation in response to faradic stimulation, and that it decreased the incidence of ventricular fibrillation after coronary ligation in dogs. In all these experiments it was more effective than quinidine. Then A Taquini tried its effect in six patients with atrial flutter or fibrillation who were resistant to quinidine. In all of them intramuscular fagarine restored sinus rhythm within 30 minutes (Science 1945;102:69-70). In 1948 David Scherf showed that fagarine reliably reverted atrial fibrillation induced by aconitine in dogs (Proceedings of the Society for Experimental Biology and Medicine 1948;67:59-60).

The genus Fagara has been merged with Zanthoxylum and the name of the original F coco (Gill.) Engl. is now Z coco Gill ex Hook and Arn. The illustration is of a closely related species. The South African plant Z capensis, a "fever tree", is used medicinally.

The family Rutaceae is widespread, especially in the tropics, and it includes Pilocarpus microphyllus, the source of pilocarpine. Citrus fruits belong to this family. Rutaceae is the fourth family of plants described in Plants in Cardiology with antiarrhythmic properties—quinidine, procaine, and lignocaine all being derived from other families. It would be interesting to know whether fagarine is still under investigation.

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