

## **Distribution of cholinesterase activity in the population of Trinidad**

### **Abstract:**

The relation between the level or the quality of serum cholinesterase and susceptibility to succinylcholine-induced apnea is significant because the abnormality resides in a low affinity variant rather than in a quantitative deficiency. A population study was undertaken in Trinidad to determine the pattern of the cholinesterase phenotype, using quantitative biochemical tests and the dibucaine number. Of 1290 subjects, 567 were African, 418 were Indian, 237 were of mixed lineage, and 68 belonged to the minority races. The dibucaine number did not differ between races or sexes. Of the population, 98.5% had normal enzyme characteristics. Indians had the highest values for the dibucaine number and the enzyme activity. Cholinesterase was significantly higher in African and mixed males. The homozygous atypical gene was not detected, but the frequency of the heterozygous "atypical" variant was highest in the minority races and lowest in Africans. Two sisters of Indian descent demonstrated the presence of the silent gene.