

13562 COMPETITIVE PROBLEMS IN THE DRUG INDUSTRY

Study of coronary artery lesions

The coronary artery sections were taken at nine predetermined sites in the main coronary artery (Figure G.6.) and were sectioned on the freezing (CO₂) microtome and stained with Oil Red O for fat. The other nine adjoining sections that were obtained from the same sites were embedded in paraffin and stained by hematoxylin and eosin and Gomori trichrome aldehyde fuchsin. They revealed a very unexpected and disturbing trend; coronary artery lesions in the three main coronary arteries were almost two times more frequent and almost exactly three times more severe in the tolbutamide-treated animals than in the control animals in relation to the amount of lipid deposited in the intima and media (Table G.6.).* The intimal proliferation noted in the coronary arteries of the tolbutamide tested animals was also somewhat more severe than in the controls but this difference was not statistically significant. Figure G.7. presents photomicrographs of average types of coronary lesions stained for lipids in paired animals. Lower and higher magnification in the same lesions shows the intimal proliferation and lipid deposition in sections of the two types of monkeys. Moderate intimal proliferation and lipid deposition in the intimas and innermost media can be seen in animals treated with tolbutamide.

Pancreatic islet evaluation

The pancreatic islets of those animals were carefully examined by means of two stains, the Gomori trichrome-aldehyde-fuchsin stain and the Gomori chrome alum hematoxylin stain. These histological preparations were made from three Bouin's fixed complete cross sections of the pancreas, taken from its tail, body and head.

*The detailed microscopic evaluations for these coronary lesions as done independently by each pathologist are presented pair-by-pair in Appendix IV.