

An analysis of the 411 drugs mentioned as possible etiological agents revealed that a relatively small number of chemicals were associated with the great majority of cases. The 14 most important agents are tabulated in Figures 1, 2, and 3 and are divided into 3 groups; i.e., those drugs or chemicals used alone, those used in association with other drugs or chemicals not known to be toxic, or those used in association with drugs or chemicals known to be potentially toxic.

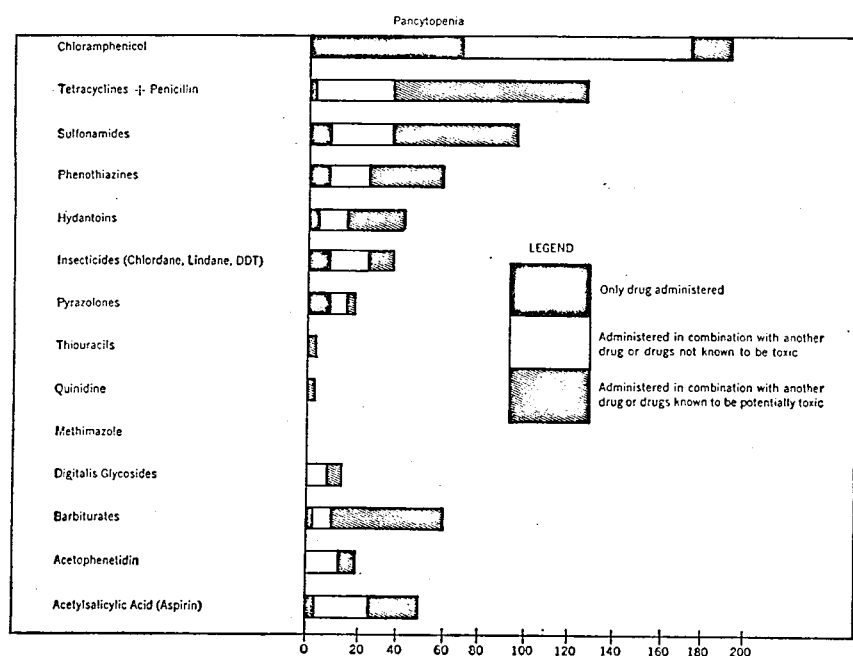


Fig. 1.—Drugs commonly associated with development of pancytopenia.

Figure 1 emphasizes the dominant role of chloramphenicol in the etiology of drug-induced pancytopenias. Not only had chloramphenicol been administered to 200 patients who subsequently developed pancytopenia, but, in one-third of these, it was the only drug given. The tetracyclines and penicillin were associated also with a large number of cases but in only 3 instances were they administered alone. Other commonly used drugs, such as, acetylsalicylic acid (Aspirin), acetophenetidin (Phenacetin), and barbiturates, were found to be associated with a considerable number of cases of pancytopenia but very rarely were they the only drug given. These findings suggest a chance association rather than an etiological relationship; this is supported by the fact that the relative frequency with which these commonly used drugs were associated with pancytopenia, leukopenia, and thrombocytopenia is about the same as the relative frequency with which these diseases occur.

The following drugs all have been associated with a significant number of cases of pancytopenia: sulfonamide such as sulfisoxazole (Gantrisin), diuretics such as acetazolamide (Diamox), hypoglycemic agents such as chlorpropamide (Diabinese), phenothiazines such as chlorpromazine (Thorazine) and promazine (Sparine), hydantoin such as diphenylhydantoin (Dilantin) and methylphenyl-ethyl hydantoin (Mesantoin), and pyrazolones such as aminopyrine (Amidopyrine), dipyrone, and phenylbutazone (Butazolidin). However, in order to gain a valid impression of the potential toxicity of these drugs, it is necessary to know the extent of their annual consumption by humans. Unfortunately, such data are not readily available, and one must rely on estimates.