ACTIONS AND USES

Chloramphenicol sodium succinate is similar to the parent compound in action, uses, and adverse reactions, and thus it has the same indications for use (see the Introductory Statement). However, because of its high aqueous solubility, it may be preferred for parenteral administration when oral therapy is not feasible, when it is important to achieve a high blood level quickly, or when higher blood concentrations are required than can be conveniently attained by oral administration. This ester is the preferred parenteral dosage form for pediatric use.

The sodium succinate derivative has no antibacterial activity in vitro; its effectiveness in vivo depends upon the liberation of the parent compound.

Concentrations of the drug in the cerebrospinal fluid average about one half of those in the serum; inflammation of the meninges does not appear to increase the rate of diffusion. After administration of chloramphenicol sodium succinate, the unchanged ester, free chloramphenicol, and metabolites of the latter appear in the urine.

ADVERSE REACTIONS

Chloramphenicol sodium succinate may produce the same adverse reactions as the parent compound (see the introductory statement on chloramphenicol). In particular, it should be borne in mind that the latter may cause aplastic anemia, thrombocytopenic purpura, and agranulocytosis, and that it has produced hypersensitivity and neurotoxic reactions.

A bitter taste, which occurs 15 to 20 seconds after injection and persists for 2 to 3 minutes, is experienced by patients receiving chloramphenicol sodium succinate intravenously.

Intramuscular injection of the sodium succinate ester is apparently less irritating than is injection of the base, although moderate local pain at the site of injection occurs in a substantial proportion of patients; a significant inflammatory reaction seems to occur only after repeated injections. Intravenous administration is also well tolerated.

PRECAUTIONS

Chloramphenicol sodium succinate should be used with the same precautions applicable to the parent compound. All patients receiving this form of the drug should have periodic hematologic studies and should be carefully observed for clinical manifestations of the blood dyscrasias that have been associated with the administration of chloramphenicol.

Dosage recommendations in premature or newborn infants should not be exceeded, and assay of blood concentration is advisable.

Chloramphenicol sodium succinate should not be used in trivial infections or in infections in which the causative organism has not been demonstrated to be susceptible to its effect.

DOSAGE AND PREPARATIONS

Routes of Administration.—Intramuscular, intravenous, subcutaneous.

Dosage.—Chloramphenicol sodium succinate is prepared for use by dissolving the powder in water for injection or other suitable aqueous diluents. A 10% solution is prepared for intravenous administration and the total dose is injected over a period of one minute or is added to a larger volume of fluid and infused slowly. A 25% to 40% solution is used for deep intramuscular injection, and a 10% solution is injected subcutaneously or added to fluids for subcutaneous clysis.

The dosage of chloramphenicol sodium succinate should be adjusted on the basis of the severity of the infection, response, and tolerance. If doses higher than the following are used for severe infections, they should be reduced after clinical improvement is noted.

The usual dose for *adults* and *children* is 50 mg. per kilogram (23 mg./lb.) of body weight given in divided doses every six or eight hours. *Premature infants* are given 25 mg./kg. (12 mg./lb.) daily in divided doses, usually at 12-hour intervals, either intramuscularly or intravenously. *Full-term newborn infants up to two weeks of age* are given 25 mg./kg. daily in divided doses every four to six hours by the intramuscular or intravenous route. Generally, in *infants over two weeks of age*, a daily dose of 50 mg./kg. is required to produce effective blood levels. However, even when using these general guides to infant dosage, chloram-