

51 F 0006

10/27/99

Protocol 1

1. A total of 45 column "E" guinea pigs were utilized in this study.
2. Painful procedure: Guinea pigs receive a convulsive dose of nerve agent which is thought (but not documented) to cause some pain and/or distress due to the intense physical activity caused by the seizure. There is a potential for the pain and/or distress to be relieved to some extent by the administration of one of the test drugs that successfully terminates the seizure.
3. Justification: Anesthetics and analgesics are known to have profound effects on brain function that can interact with the drugs of interest (Marshall and Wollman, 1985), the synthesis and release of brain neurotransmitters (Beleslin and Polak, 1965; Ngai *et al.*, 1978; Hanin, 1978), and/or the toxicity of the nerve agent (Clement, 1984) and thus complicate interpretation of the results. This is especially so since the purpose of the study is to model the pharmacological intervention a human nerve agent casualty would receive.
4. No federal regulations mandate this procedure.

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Protocol 2

1. A total of 9 column "E" guinea pigs were utilized in this study.
2. Painful procedure: The guinea pigs receive a dose of soman which results in seizure activity. Seizure activity may or may not be associated with motor convulsions, and if present, these convulsions will most likely bring about some degree of pain or discomfort. However, it has been suggested that animals are unresponsive during seizure activity and may not be aware of pain or distress. Thus, the worst case scenario is assumed.
3. Justification: To meet the objectives of this project, in terms of relevance to actual field conditions, it is critical that anticonvulsant drugs be evaluated in a model in which seizure activity is ongoing. The presence of anesthetics or analgesics will confound the data making it impossible to distinguish analgesic/anesthetic-induced perturbation from real differences. Thus, the administration of anesthetics or analgesics for this particular study will be counterproductive to the overall goals of the project.
4. No federal regulations mandate this procedure.