held constant if nervousness, apprehension, or weakness increase, or if paroxysmal slow activity appears in the EEG. If convulsions of overt psychosis ensue then a large dose of the barbiturate should be given parenterally. Since the changes in the brain induced by prolonged exposure to barbiturate are diffuse and not focal in nature, diphenylhydantoin (Dilantin) is if no value in stopping the convulsions.

Baker[7] has shown that there are no tissue changes in the nervous systems of dogs on high barbiturate doses for up to four months. Various pathologic lesions, primarily vascular congestion and petechiae, have been described in the human cortex, olivary bodies, thalamus and globus pallidus, but in all cases hypoxia has complicated the picture. Recovery from the barbiturate withdrawal syndrome is usually complete both clinically and by psychometric testing and this was the case with this patient.

SUMMARY

A barbiturate abstinence syndrome consisting of hyperpyrexia, tachycardia, tachypnea, hypertension, nausea and vomiting, agitation, weakness and two grand mal seizures is described in a patient who had received up to 3.6 g. of sodium amobarbital per day over a 25 day period for treatment of severe tetanus.

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CORRESPONDENCE

Blood/Gas Partition Coefficient of Divinyl Ether

To the Editor.—Several current articles concerned with the uptake and distribution of anesthetic agents have made note that the blood/gas partition coefficient of divinyl ether was unknown. I have recently determined this value using the technique of Larson *et al.*[*] Determinations were made in quadruplicate with pooled ACD bank blood (HCT 38–44). Aliquots of divinyl ether (0.2 ml.) were injected into flasks of known volume containing blood. After agitation and equilibration with blood at 37° C. resulting gas concentrations were read on the halothane infrared analyzer. Values were calculated from the gas laws. A blood/gas partition coefficient of 2.8 ± 0.2 was determined.

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[*] Larson, C. P., Jr., Eger, E. I., II, and Severinghaus, J. W.: Solubility of halothane in blood and tissue homogenates, ANESTHESIOLOGY 23: 349, 1962.