Correspondence

The Editorial Board will be pleased to receive and consider for publication correspondence containing information of interest to physicians or commenting on issues of the day. Letters ordinarily should not exceed 600 words, and must be typewritten, double-spaced and submitted in duplicate (the original typescript and one copy). Authors will be given an opportunity to review any substantial editing or abridgement before publication.

The 1933 Chicago Outbreak of Amebiasis

TO THE EDITOR: In the March 1986 issue, Dr Walter Ward has misinterpreted the findings in the Chicago outbreak of amebiasis of 1933.[1] The classic investigation to which he refers[2] evaluated the epidemic, which from June to November 1933, during the Chicago World's Fair, affected 1,409 persons and caused 98 deaths. About 1,050 cases occurred in guests and employees of two adjacent hotels and an additional 137 in persons who had visited one or both of these hotels for meals or beverages. All possible modes of spread were considered. The source of infection was found to be cross-connecting sewage and water pipes and leakage from an overhead sewer pipe into a cooled drinking-water tank in water systems partially shared by the two hotels. The investigative committee concluded that contaminated fruits and vegetables brought to the hotel played no part in the epidemic and that food directly contaminated by carriers among the food handlers "had little if any part in the development of the infection."[2] Thus, Dr Dassey's statement that "there is no report in the literature known to me of *Entamoeba histolytica* being spread by contaminated food"[3] still stands.

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2. Epidemic Amebic Dysentery: The Chicago Outbreak of 1933. Natl Inst Health Bull 1936 Mar; 166
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Magnetic Resonance Imaging and Intravenous Infusion Devices

TO THE EDITOR: I read with interest the technical exchange between Dr Crass and Ms Engler in the February issue[1,2] regarding the Engler and Engler study involving the effects of magnetic resonance imaging on intravenous infusion devices.[3] Ms Engler states that the intent of her study was to investigate the possibility that magnetic field interaction with intravenous (IV) devices might result in inaccurate fluid delivery to the patient. Dr Crass, representing IMED Corporation, responded to the original study by attempting to dispute the reported findings but perhaps strayed from the issues actually pertinent to the discussion.

As an observer of this exchange, I have a few pertinent points that should be considered to establish the clinical relevance of Ms Engler's findings and Dr Crass's response.

1. Ms Engler clearly established a statistically significant change in volumetric delivery accuracy of the IMED 927 device in the presence of magnetic resonance imaging.

2. The clinical significance of this finding must be reasonably questioned in view of the data obtained and the comparison performed.

I suggest that the Engler study perhaps proved what it intended to prove—that is, that magnetic resonance imaging can affect the operation of an intravenous device. As a manufacturer of such devices, Quest Medical is certainly interested in these findings and how they may in turn relate to other medical instrumentation marketed today. On the other hand, the stated conclusion that a 1% to 4% range of error "poses definite clinical implications for a critically ill patient . . ." seems to be an exaggerated result, particularly in the context that a drop counting pump (IVAC 530; ± 2% *drop rate accuracy*) was directly compared to a volumetric pump (IMED 927; ± 2% volumetric accuracy). Furthermore, the multitude of variables which constitute the true measure of accuracy for any intravenous device are apparently ignored for the purpose of the referenced study.

It is clear to me that Ms Engler's response implies superior performance of a drop counting instrument to a volumetric pump in the presence of a magnetic field. This, in fact, could not be further from the truth based on the results of the Engler and Engler study. It is well documented, as stated in Dr Crass's rebuttal, that volumetric delivery can vary 20% to 30% with drop counting instrumentation, depending on fluid viscosity, flow rate, temperature, in-line restrictions and other variables.

The purpose of my response to this exchange is to assure that the results of the study performed are confined to the scope of the results obtained. Only in this way can the true significance of the findings be applied to the clinical environment in which these products are used.

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3. Engler MB, Engler MM: The effects of magnetic resonance imaging on intravenous devices (Clinical Investigation). West J Med 1985 Sep; 143:329-332