Prevalence of Toxoplasmosis Among a Sample of Pregnant Women in Risafa, Baghdad

To the Editor:

Toxoplasma organisms usually are acquired by ingestion and transplacental transmission, if toxoplasmosis occurs in the mother during pregnancy.[1,2] In developed countries, the ingestion of undercooked meat is common and probably important in the transmission of toxoplasmosis.[1] In contrast, in developing countries, personal habits and exposure to cat feces are important in toxoplasmosis transmission. This situation occurs in Baghdad; higher frequencies of toxoplasmosis are noted more in warmer and more humid climates,

We undertook a small study to check the prevalence of toxoplasmosis among pregnant women who were seen for a routine medical check at the Mother & Child Care Center in Risafa, Baghdad. Our sample was 486 pregnant women who visited the care center.

The women's sera were sent to the Central Public Health Laboratory in Baghdad, where the indirect hemagglutination (IHA) test (Bio-Merrieux, Lyon, France) was performed. The IHA test employs formalin-preserved whole parasites and detects IgG. It is accurate, simple to perform, inexpensive and excellent for screening pregnant women.

Seventy-eight of the 486 (16%) pregnant women showed a positive toxoplasmosis IHA test. This is contrasted to pregnant women in Basel, Switzerland, where 2.8% tested positive for toxoplasmosis.[3] The high prevalence rate of acute or persistant infection with *Toxoplasma* organisms in Baghdad (16%) compared with Base1 (2.8%) correlates proportionally with the high numbers of nondomesticated cats in and near Baghdad cities.

In order to tackle the disease, it will be necessary to take proper measures to reduce the number of and contact with cats in and near cities. This should lower the pollution of the environment (water) with cat feces, a source of *Toxoplasma* cysts.[2]

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Sterilization Container Systems

To the Editor:

As one of Ms Peggy Ryan's coworkers on the Association for Advancement of Medical Instrumentation's (AAMI) working group engaged in the development of *Good Hospital Practice: Guidelines for the Selection and Use of Reusable Rigid Sterilization Container Systems* (proposed),[1] I was naturally interested in the Product Commentary in the November issue (1989; 10:525-526).

Basically, there are two matters I would like to address that Ms Ryan discusses: the barrier effectiveness of the filters; and the economics of the systems.

One of the major advantages cited in support of the use of these containers is that compared to the traditional packaging methods, they reduce the possibility of their contents becoming contaminated after sterilization. However, because many of these containers use a filter medium of some sort, the maintenance of sterility is contingent upon the barrier capability of that filter.

In enumerating the information to be provided by the manufacturer to the user, Ms Ryan included the "barrier effectiveness of the filters." Although no one could dispute the fact that the manufacturer should be expected

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to be able to provide that information, the question is, what methodology is the manufacturer to use in documenting that capability?

Having been a member of AAMI's Committee on Aseptic Barrier Materials, Ms Ryan knows that after seven years of attempting to reach consensus on a test method, the group abandoned the undertaking.[2] Not only were wrappers not a matter of concern, but they were deliberately excluded from consideration.

Nevertheless, reason tells us that some provision must be made for permeability in these filters so as to permit the entrance and withdrawal of the sterilizing agent. By the same token, the filter must not be readily penetrable by potential contaminating invaders so as to provide "an adequate barrier to microorganisms or their vehicles."[3] The result is the paradox of permeability and penetrability.*

Granting the fact that the air vents in the containers are designed to provide a tortuous path to any and all contaminants, the level of protection to the contents is only as good as its most penetrable point. This is particularly important when one considers the principle that the maintenance of sterility is event-related and not time-related.[3]

In support of the economics of the rigid container systems, Ms Ryan amortized the cost of the container in its first year of use, and concluded that the only cost incurred in the second year is that of the filters. This would be true if, of course, the container's components did not have to be repaired or replaced for any reason during that two-year period. However, inasmuch as this may not prove to be the case, it might be advisable to apprise readers of that possiblity.

It is not my intent to say that rigid containers are not an improvement over traditional packaging or wrapping techniques, or that their use cannot be justified on a cost/benefit ratio.

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Peggy Ryan, RN, was asked to respond to this letter.

I appreciate Dr. Belkin's continuing concerns for the costs of current and competitive sterilization packaging systems. As we both are aware, healthcare facilities that conduct a cost analysis of any reusable packaging system-either containers or fabrics-must include the costs of routine and preventative maintenance and all replacement factors relating to individual components of the system. These costs will vary from one facility to another depending upon the care and handling of these reusable products during processing and use.

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