Pharmacokinetics of Sulfonamides Revisited

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Tom B. Vree, Yechiel A. Hekster,
in collaboration with
Emiel F.S. Termond; Marian W. Tijhuis; Jacques F.M. Nouws and
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Tom B. Vree, Yechiel A. Hekster, Emiel F.S. Termond,
Marian W. Tijhuis
Department of Clinical Pharmacy, Sint Radboud Hospital,
University of Nijmegen, Nijmegen, The Netherlands

Jacques F.M. Nouws
Meat Inspection Service, Nijmegen, The Netherlands

Gerrie Dorrestein
Department of Special Animal Diseases, Veterinary Faculty,
University of Utrecht, Utrecht, The Netherlands

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Drug Dosage
The authors and the publisher have exerted every effort to ensure that drug selection and dosage set forth in this text are in accord with current recommendations and practice at the time of publication. However, in view of ongoing research, changes in government regulations, and the constant flow of information relating to drug therapy and drug reactions, the reader is urged to check the package insert for each drug for any change in indications and dosage and for added warnings and precautions. This is particularly important when the recommended agent is a new and/or infrequently employed drug.

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Just a question.

Just a simple question about the plasma level value of sulfamethoxazole in intensive care patients was asked 7 years ago by Dr. Roelof van Dalen.

None of us realized the importance of this question as we blindly followed our ignorance in not knowing all the details about the sulfonamides; however, we sensed that something was missing. From that moment on, we followed our path, looking at the world, led on by our preoccupation with the sulfonamides. De Silva's statement, that nothing is more productive than ignorance itself, was always in the foremost of our minds. First we looked for ourselves, and we could then appreciate the beauty of the research that had been done in the 1940s. If the HPLC method for following sulfonamide data had then existed, this book would have been written 40 years earlier.
For example, consider the realization that in addition to N-acetylation of sulfonamides, hydroxylation also occurs. J. V. Scudi and R. T. Williams (1940–1946) had the correct feeling that hydroxysulfonamides were present and demonstrated their existence using a state of chemistry with which we are not able to duplicate their results. This ‘nineteenth century’ chemistry revealed most of the basic principles of chemistry and scientific thinking; today, we can only refine or modify these fundamental concepts. It is ironic that our present-day hydroxysulfonamides were synthesized in the dog and separated by thick layer chromatography, nineteenth century techniques and then measured by HPLC, a totally modern technique of the present decade.

This marriage between old and new techniques along with the reappraisal and appreciation of what had been done four decades ago has made us aware that nothing is surprising, nothing will change: sulfonamides and their metabolic pathways have existed since times immemorial, but man and mankind just had to discover the brilliance in their creation. Every man has to discover this brilliance in his own way, accept it, and then incorporate it into his own life. In the tradition of science, education brings us all along the fixed stations of knowledge. It also reveals that what we thought we have invented or realized has been conceived by others 10, 20, 40, 400, or even 4,000 years before. Each time a person encounters a certain question or state of mind, he can, in his ignorance, add something unique to the solutions already existing. Therefore, ignorance can be the best disposition when looking at a problem.

With the long list of references, we pay tribute to all the work carried out on the sulfonamides, and hope that every researcher receives his fair share of recognition. Such a list also discloses the history of the search for knowledge on this subject. As we try to reconcile our ideas and findings with those already published, we repeatedly refer to the work that has preceded ours. At this point we can now read, understand and weigh the value of approximately 800 references, dealing with the pharmacokinetics of sulfonamides.

We hope that the reader will have the feeling that we have added something unique to the many other ‘unique’ solutions previously proposed. We admire, in particular, the work recorded in the older literature and the way in which solutions were created and presented.

Nijmegen, May 1, 1984 Tom B. Vree
Yechiel A. Hekster