

## Editorial note

### Rational Use of Drugs and Traditional Herbal Medicine

During the last two decades, the use of traditional herbal medicine (THM) has increased remarkably. Many people believe that the role of THM should be enhanced in the future by integrating them in the formal health care services in the hospitals, primary health care centers, and private clinics. The reason for this is that THM are safe and effective as they are inherited from our ancestors who have used them for hundreds or thousands of years. In addition they are more affordable as compared to the modern medicine. Some people also think that today THM should have been taught for undergraduates in the medical schools. The idea to combine the use of THM and modern medicine in the formal health care services is interesting to discuss because the use of medicine in the formal health care services are closely associated with rational drug use. The following discussion will explore the possibility to include THM in the implementation of rational drug use.

As mentioned above, some interesting reasons that favor the use of THM is that they are safe and effective because they have been used for very long time by our ancestors. To certain extent this assumption is acceptable but it is not entirely correct. If a drug is given to a patient to cure an ailing condition (e.g. diarrhea or fever) and improvement occurs, this does not necessarily mean that there is a causal relationship between drug administration and the subsidence of the disease. Many kinds of illnesses are self limiting and subside spontaneously within a short period of time. With regards of safety issue it is difficult to understand the belief that the THM is effective but free of side effects. If a drug has therapeutic effects it must also have side effects because side effects are the extension of therapeutic effects. In other words, we can also say that any therapeutic agent, whether it's a modern drug or a herbal medicine, which totally lacks any side effects indicates that it is a placebo. In THM, the term side effect itself is often confusing because without good research methodology it is often difficult to determine whether an adverse event is related with the disease or to the THM.

The rational use of drugs requires that patients receive medications appropriate to their clinical needs, in doses that meet their own individual requirements for an adequate period of time, and at the lowest cost to them and to the community (WHO Conference of Expert, Nairobi 1985). This can only be implemented if we know the correct indications, the correct dose and

the appropriate duration of treatment. Furthermore, the information on the nature of side effects related to a drug is of paramount important because it is essential not only for the safe use of the agent, but also for assessing the risk and benefit of using the medicine. In modern medicine, all these important data are derived from the systematic clinical trials from phases 1 to 4. These clinical trials use vigorous study designs and even meta analysis. Good Clinical Practice standards are also applied to assure that the data obtained are accurate and reliable. THM, in general, lack this mechanism to generate the data required for rational drug use. The indications, the dose, and the duration of treatment are not well defined and not based on scientific evidence. The side effects are not well described. The active ingredients contained in the THM are not known and likely to vary considerably from batch to batch because the raw materials also vary. The cost of THM is not always affordable. Some of them are extremely expensive, this is particularly true for certain Chinese THM. Considering all these thoughts, it is very unlikely that the THM can be accepted in the context of rational drug use.

THM, however, have a certain place in the health care system. The majority of health problems commonly encountered in the daily life are minor illnesses and self-limiting. This appears to be an appropriate place for the use of THM. The author is of the opinion that if THM is used in their traditional way, there is nothing wrong, except if significant problems related with safety issue are encountered. Our society consists of heterogeneous people with different lifestyles. Each individual has the right to choose the style of medication they think would work the best to maintain their health. Integrating the THM in the modern drugs, however, may create a very serious problem for the modern medicines because the safety and efficacy are severely compromised due to lack of scientific evidence.

Rational drug use also requires that the prescriber has sufficient competence to use it. During the formal medical education, all the medical students are systematically trained for years to treat their patients with the modern medicines in accordance to the scientific principles. For example, they know that they should never treat tuberculosis with a single agent, or they also know that after long treatment with a corticosteroid, the drug should not be withdrawn abruptly. They are, however, not educated to use the

THM in its best way. This is attributed to two reasons. The first one is that good prescribing on THM is not included in the medical curriculum. The second is that the scientific information on this issue is not available.

The wish to increase the use the THM is indeed a very positive idea. Some of the important modern medicines we use today are derived from the THM, for examples ephedrine, atropine, morphine, digitalis, artesunate, quinine, ergot alkaloids, vinca alkaloid, and many others. This means by applying a systematic screening process, some of the THM may have the potential to be developed to clinically useful medicines. The next step is development of phytopharmaca, followed by preclinical and subsequently clinical trials (i.e., randomized clinical trials). How about if there is no sponsor interested in developing them to modern medicine? Obviously this will not cause any negative impact to the use of the THM because they can be still used in their traditional way. The ultimate aim of the rational drug use is patients' safety and this should be placed in the highest position. Once this principle is compromised, for whatever the reason is, the basic tenet of rational drug treatment is undermined.

As the conclusion, we can briefly say that the essence of rational drug use is safe and effective use of drugs. Until now, the globally accepted way to prove safety

and efficacy of drugs is through the implementation of high quality clinical trials. Data from animal study and historical experience from our ancestor could provide a significant clue that some herbal medicines may have certain therapeutic effects, but this not a scientific evidence. If we are really interested in promoting the use of THM into the domain of rational drug use, then we have to proof their safety and efficacy through good clinical trials. Some people may say that will not be feasible because of the huge cost of the trial. This opinion needs critical consideration because for a very long time the producers of THM have enjoyed profits by selling their products. Now it is the time to show their seriousness in improving the status of their products through the scientific way. All doctors are ethically bound to their obligation to give safe and effective medications to their patients This is consistent with the citation of the Hippocratic Oath which says "I will prescribe regimens for the good of my patients according to my ability and my judgment and never do harm to anyone"..

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## ERRATUM

We apologize to the authors of the article titled **Meconium periorchitis: an unusual cause of newborn scrotal mass** for the technical error in writing the affiliation of the authors.

Correction:

Pamela Damaledo affiliation : Department of Anatomical Pathology, Faculty of Medicine University of Indonesia, Jakarta, Indonesia