Iranian Traditional Targeted Drug Delivery

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Abstract:
In past few decades, targeted drug delivery has become one of the most important issues in pharmaceutical systems. Targeted therapy is used to decrease drugs' adverse effects and to increase their efficacy. Targeted drug delivery by decreasing drug dose and increasing drug concentration in its site of action plays a major role in drug development. In traditional Iranian medicine there are lots of methods that were claimed to have drug delivering role.

In this study, the authors aimed to investigate traditional medicine systems for drug delivery as an overview. Searching in Canon of Medicine, Qarabadin-i Kabir, Qarabadin-i Salehi, Tohfat al-Mo'menin, and Exir-e A'zam, we made a database on the systems that were used in traditional medicine for drug delivery. The authors searched articles in PUBMED and Medline databases to realize whether the claimed methods have any explanation or application in modern medicine.

Both, in topical and oral routes of administration, there found many methods of targeted drug delivery. For example, warming up the place and applying essence-containing compounds were mentioned for topical use. Physicians used saffron, black pepper, and vinegar for cardiac, renal, and splenic drug delivery, respectively. Furthermore, co-administration of liver drugs by fennel would boost up their efficacy.

Although the traditional documents indicate high level of efficacy for drug targeting methods, but they have not been evaluated yet for their molecular mechanism or effectiveness. Relevance between the effect and drug blood concentration or receptor-targeting basis of administration is remained unknown. And this underlines the necessity for further scientific researches in the field.

Keyword: Targeted drug delivery, Saffron, Traditional targeted therapy, Traditional Iranian Medicine