PROPOSED VEGETABLE DRUG DELETIONS.*

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INTRODUCTORY.

In the preface to the second edition of "Useful Drugs,"[1] we find the following statements:

"It has long been recognized that the multiplicity of drugs and preparations of drugs presented to the attention of the medical profession is an evil. Leaving out of account the articles described in the N. F. and the vast number described in dispensatories and similar unofficial compilations, the number of drugs and preparations described in the Pharmacopoeia alone is far too large for intelligent practical use. *Of even greater importance is the well-known fact that a considerable proportion of Pharmacopoeial drugs and preparations are superfluous or worthless.* Repeated attempts to eliminate such articles from the Pharmacopoeia have failed because they have uniformly encountered the objection that articles or preparations are used by some physicians and, therefore, should be recognized and authoritatively defined."

In accordance with the general trend of medical progress less and less attention and space in the medical school curriculum are being given to those drugs and preparations that are looked upon by medical authorities as being of minor importance, questionable utility, and doubtful reliability. Some of the latest editions of standard, recognized textbooks have gone further by absolutely omitting the greater proportion of such agents. Most of us will doubtless agree that the host of substances, good, bad and indifferent, that were introduced to us in the college of pharmacy courses in Materia Medica, Pharmacognosy, etc., because of their very number, materially affected our interest in the subjects and led to considerable confusion and discouragement. This has been true not only in the college of pharmacy but also in the medical college. A movement to restrict the instruction in Materia Medica in the medical schools and the examinations in Materia Medica by State Medical Examining Boards to the more important drugs was initiated by the Council on Medical Education of the American Medical Association and the Confederation of State Examining and Licensing Boards. After numerous conferences with the State Examining Boards, professors of Materia Medica, deans of medical schools, and other members of the medical and pharmaceutical professions, the Council on Pharmacy and Chemistry of the A. M. A., following a thorough and careful sifting process, published "A Handbook of Useful Drugs," which is now being used as the basis of instruction in practically every Department of Pharmacology of the medical schools, and is also being used by the large majority of State Medical Examining Boards as the basis of examinations in "Materia Medica and Therapeutics." The first edition appeared in 1913 and ushered in a long, looked for and thoroughly welcome change in the scope of teaching in this particular branch of medical science. Although practically every medical school and the large majority of State Medical Examining Boards are heartily coöperating in this work, it is doubtless a fact that the larger number of our schools of pharmacy are still clinging, for some reason or other, to the old method of trying to cram the pharmacy student full of information concerning

*Read by title, Scientific Section, A. Ph. A., City of Washington meeting, 1920, hence, no discussion.

[1] Press of the American Medical Association, Chicago.

every known member of the Materia Medica regardless of its usefulness or uselessness in the treatment of disease, regardless of whether or not it is being used by the medical profession.

Why waste valuable time and energy on Pyrethrum, Mezereum, Xanthoxylum, Matricaria, etc., of the U. S. P., and Asclepias, Papaveris Fructus, Trifolium, Verbena, Echinacea, and a host of others of the N. F.? Why assist, by including these substances among the drugs taken up in the courses of the pharmacy school, in attempts to retain or to introduce such substances into the U. S. P.? Why encourage movements to introduce as many substances as possible, including so-called "household remedies," insect powders, and other substances infrequently used as medicines, foods, reagents, etc., simply to have official and legal standards for the same? By taking part in such movements, intentionally or unintentionally, one assists in promoting still further departure from the original idea of the Pharmacopoeia. A Pharmacopoeia, we are taught, is a book which defines and standardizes *certain* drugs and preparations, and whose aim is to establish definiteness for a *selected number of those substances extensively used and recognized as possessing real worth in the treatment of disease by the physician.* The U. S. Pharmacopoeia was founded by the medical profession, and was at first an *exclusive physician's Pharmacopoeia.* Since 1840, however, the revisions have come more and more under the control of the pharmacist, and the work is gradually becoming a manufacturer's book of specifications and standards, and less and less of a guide to the medicinal agents *prescribed by the medical profession.*

Why defend the presence in or the introduction into the Pharmacopoeia of substances which have been proven to be of no real value in the treatment of disease by saying that they are used by *some* physicians and, therefore, should be recognized? The real worth, the absolute value of a substance as a medical agent should be proved, such proof recognized, and the real practical value further proved by *extensive* use before it is admitted to the U. S. P., and all substances now in the Pharmacopoeia that do not meet these requirements should be deleted. Put them in the N. F. or elsewhere if you please, but get them out of the U. S. P. and keep them out. The writer ventures to state that unless the requirements for admission to the N. F. are made somewhat more stringent, this valuable work will gradually become the dumping ground for discarded members of the Materia Medica and slowly lose its prestige.

The approach of the U. S. P. Convention with that part of the program devoted to the subject of deletions prompted the writer to attempt to secure the opinions of the members of the medical profession in the City of Atlanta concerning one phase of this important work—Vegetable Drug Deletions. Accordingly a list of 121 U. S. P. vegetable drugs (excluding "active principles" like the alkaloids, glucosides, etc.), was compiled and mailed to the entire medical profession of Atlanta with the request that each man study the list and then strike out those drugs that he believed it would be wise to drop from the U. S. P., giving, in each case, very, very briefly his reasons for such recommendation. It is hoped that others may carry out a similar study of the vegetable drugs in other sections, and also that the chemicals of the U. S. P. may be taken up in the same fashion. A study of the prescription files of the retail pharmacists of Atlanta was also begun in order to determine what substances are actually being prescribed by the medical

profession of this city. The data, although incomplete, is nevertheless too bulky to digest and to condense in time for this meeting. It will, therefore, be completed at a later date and used as the basis of another paper. The State of Georgia has a population of about 3,000,000, with a total of about 3,442 physicians. The City of Atlanta has a population of approximately 300,000 and a total of 513 physicians. The medical schools of practically every section of the country are represented by these men. Of the 513 physicians, 387 responded to the letter sent them. Therefore, the results of the communication represent the opinions of something over 75 percent of the medical profession of Atlanta.

DATA SECURED.

The replies show that the only U. S. P. vegetable drugs concerning which there is absolute unanimity of opinion are:

1. Aloes	2. Asafetida	3. Aspidium
4. Balsam of Peru	5. Balsam of Tolu	6. Belladona Leaves
7. Belladonna Root[1]	8. Capsicum	9. Cascara Sagrada
10. Cinchona	11. Digitalis	12. Ergot
13. Gentian	14. Glycyrrhiza	15. Hydrastis
16. Hyoscyamus	17. Ipecac	18. Jalap
19. Linseed	20. Lobelia	21. Nux Vomica
22. Opium	23. Physostigma	24. Pilocarpus
25. Podophyllum	26. Rhubarb	27. Senna
28. Black Mustard	29. Veratrum Viride	30. Ginger

Not one of the 387 who replied recommended the deletion of any of these 30 drugs listed above.

The following table gives the list of drugs along with the percentage of the 387 Atlanta physicians that advised deletion in each case. The foregoing thirty drugs are omitted from the list.

	Percent.		Percent.		Percent.
Acacia	10	*Colocynth*	8	Scammony Root	*63*
Agar-Agar	12	Coriander	*60*	Senega	19
Sweet Almond	45	*Elaterin*	13	White Mustard	10
Anise	29	*Eucalyptus*	8	Staphisagria	40
Aspidosperma	*52*	Frangula	*60*	*Cardamom Seed*	28
Sweet Orange Peel	*20*	*Gambir*	*60*	Chondrus	*63*
Buchu	23	Pomegranate	24	Cimicifuga	37
Calumba	*50*	Guaiac	13	*Cinnamon*	13
Aconite	11	Humulus	*52*	*Colchicum Seed*	8
Althaea	*73*	Lemon Peel	25	*Copaiba*	13
Starch	10	Malt	23	Cubeb	24
Arnica	34	Matricaria	*70*	Eriodictyon	*63*
Bitter Orange Peel	40	Spearmint	23	Fennel	42
Benzoin	10	Musk	*60*	Nutgall	24
Gamboge	25	Myrrh	10	Gelsemium	10
Camphor	2	Pepo	37	Grindelia	26
Cannabis	*52*	Pepper	10	Guarana	*55*
Caraway	*50*	*Wild Cherry*	8	Kino	*55*
Clove	18	Quassia	23	Lactucarium	*68*
Chrysarobin	13	*Red Rose*	*61*	Lycopodium	23
Red Cinchona	13	Sanguinaria	*50*	Manna	*60*
Colchicum Corm	26	Sarsaparilla	40	*Peppermint*	10

[1] Several suggested that the leaves alone would do.

	Percent.		Percent.		Percent.
Mezereum	*76*	*Squill*	8	*Strophanthus*	10
Nutmeg	26	Serpentaria	*50*	Sumbul	*61*
Parsley Fruit	*60*	Spigelia	37	*Tragacanth*	20
Tar	10	Stillingia	32	Elm	*50*
Pyrethrum	*63*	*Stramonium*	8	*Valerian*	16
Rosin	30	Storax	*55*	Viburnum Prunifolium	37
Sabal	*50*	Taraxacum	32	Xanthoxylum	*61*
Red Saunders	*63*	Triticum	42		
Sassafras	*61*	Uva Ursi	37		

NOTE.—Drugs printed in Italics are found in "Useful Drugs." Percentages printed in Italics include 50 percent and above.

From the table it will be seen that 50 percent or more of the Atlanta physicians favor deleting the following drugs:

1. Althaea (73%)
2. Aspidosperma (52%)
3. Calumba (50%)
4. Cannabis (52%)
5. Caraway (50%)
6. Chondrus (63%)
7. Coriander (60%)
8. Eriodictyon (63%)
9. Frangula (60%)
10. Gambier (60%)
11. Guarana (55%)
12. Humulus (52%)
13. Kino (55%)
14. Lactucarium (68%)
15. Manna (60%)
16. Matricaria (70%)
17. Mezereum (76%)
18. Musk (60%)
19. Parsley Fruit (60%)
20. Pyrethrum (63%)
21. *Red Rose* (61%)
22. Sabal (50%)
23. Sanguinaria (50%)
24. Red Saunders (63%)
25. Sassafras (61%)
26. Scammony Root (63%)
27. Serpentaria (50%)
28. Storax (55%)
29. Sumbul (61%)
30. Elm (50%)
31. Xanthoxylum (61%)

Here, then, are 31 vegetable drugs that from 50 to 76% of a representative body of physicians advise deleting from the U. S. P. Among the brief reasons given are "inert," "useless," "limited utility," "obsolete," "worthless," "never used," "questionable value," "no advantages over other U. S. P. drugs of similar activity," "preparations unreliable and not uniform." It is interesting to note that of the 31 drugs, but one (Red Rose) is found in "Useful Drugs." It is also of interest to note that, with the exception of Red Rose, the percentage of physicians advising the deletions of other "Useful Drugs" was very low, Camphor being lowest with but 2% favoring its deletion, and Cardamom next highest to Red Rose with 28%. The remaining ones run close to 10%.

There is not a single drug in the above list of 31 proposed for deletion by 50% or more of the Atlanta men that possesses any medicinal actions or virtues which demand its presence in the U. S. P. and recognition as an important medicinal agent. There is not a single member of this list possessing any useful physiological action that is not also possessed by one or more of the remaining members of the U. S. P. There is not a member of this group possessing any particular redeeming virtues that demand its recognition; therefore, why retain them?

COMMENTS AND CONCLUSIONS.

In making the few comments and drawing the conclusions which follow, the writer has tried to keep in mind the original and supposedly present objects of the Pharmacopoeia, and trusts his readers will consider them from the same standpoint. No attempt will be made to comment on all of the drugs proposed for deletion, attention being given only to those about which there is a fair degree of

unanimity of opinion, along with a comment or two concerning a few drugs the writer believes should be included in the list of 31 drugs referred to above.

It was rather surprising that a greater number did not advise deleting:

1. *Aconite,* the use of which is constantly diminishing, because the dangers attending its depressant action on the heart make it a rather undesirable agent to be used as a cardiac depressant. Only 11% advocated its deletion.

2. *Squill,* a drug rather carelessly used as an expectorant in numerous "stock and cough remedies," as well as in prescriptions. It has physiological actions that very closely resemble those of Digitalis, although it is true that the emetic action is more pronounced. However, since we have other nauseating expectorants, like Ipecac for example, with less undesirable side actions, it seems unwise to use Squill which affects the heart so powerfully. The writer is confident that the deletion of Squill will mean a loss to nobody. But 8% advised its deletion, although prescription files shows that it is gradually falling into disuse.

3. Pepo, a drug once used as an anthelmintic, but which has been proved to be absolutely worthless. Thirty-seven percent advised its deletion.

4. Gelsemium, a drug looked upon by practically all authorities as a peripheral depressant of no great medicinal importance. Only 10% advocated its deletion from the U. S. P.

Very briefly then, the 31 drugs listed on page 770 as worthy of being deleted from the U. S. P. might well be dropped in the Tenth Decennial Revision for the reasons here stated.

In addition to these 31, it is the writer's firm belief that the following might also be dropped since they too possess no redeeming properties or virtues that entitle them to consideration as *important, extensively used, valuable, therapeutic agents: Aconite* (11%), Agar-Agar (12%), Arnica (34%), Buchu (23%), Sweet Almond (45%), Cimicifuga (37%), Gamboge (25%), Fennel (42%), Gelsemium (10%), Grindelia (26%), Guaiac (13%), Tar (10%), Quassia (23%), Pepo (37%), Sarsaparilla (40%), Spigelia (37%), Stillingia (32%), Pepper (10%), Taraxacum (37%), Triticum (37%), Viburnum Prunifolium (37%), and Uva Ursi (37%).

It may also be desirable in the cases of the aromatic oil drugs, like Anise, Orange Peel, Caraway, Clove, Cinnamon, Coriander, Eucalyptus, Lemon Peel, Peppermint, Spearmint, Nutmeg, etc., to delete the crude drugs and retain the volatile oils, since these are the constituents really desired and actually employed in prescription work.

A further study of this subject in other sections will most likely disclose the fact that there is general unanimity of opinion concerning the drugs included in the list of 31 above, recommended by Atlanta physicians as worthy candidates for dismissal, and possibly also add several more drugs to the deletion list.

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