GRINDELIA ROBUSTA AS A REMEDY IN ASTHMA.*

By T. M. ROCHESTER, M.D.

THE presentation of this subject to the profession has been delayed purposely for some time, and that for two reasons. In the first place, the writer is but a slight believer in the many much-vaunted *new remedies* with which we are at present deluged; and, secondly, he did not wish to be accused of making a great cry over the successful treatment of a few cases. Some months ago, the *Medical Record*, in giving a list of various new drugs, said that Grindelia Robusta had been before the profession for several years, and did probably, therefore, possess some useful properties, although, as there was no literature on the subject, a great deal of ignorance existed as to its real value. The silence of other observers is sufficient excuse, if one were needed, for the writer simply giving his individual experience with the drug.

It is the object of this paper merely to tell what has been done with, and noticed of the action of Grindelia Robusta.

On taking the Chair of Diseases of Heart and Lungs in one of the dispensaries here some two years and a half ago, I naturally met with quite a number of cases of asthma, and having for some months faithfully tried the various approved plans of treatment, which I had used with more or less—usually less—success in private practice, I determined, simply as an experiment, to see what could be done with Grindelia Robusta. It must be remembered that the majority of cases first treated were of long standing, and among a class of people whose hygienic surroundings were, as a rule, bad, and whose occupations, in some instances, were extremely obnoxious to the disease. Notwithstanding this, however, the result of the treatment was more than gratifying. The writer is not one who is much inclined to talk about *cures*, but in no single instance, and that, too, covering a comparatively large experience, has it failed to effect a prompt and decided relief. Up to the present date, including both private and dispensary practice, I have used it in over sixty cases, of which I have made note, and nearly as many more without any record. It has seemed to be of equal efficacy, whether employed for simple spasmodic or for inflammatory asthma. In two cases of cardiac asthma, when combined with the other remedies, it has relieved the dyspnœa as nothing else would. It is useful both during the paroxysm and in the intervals, although it is to be given differently in the two instances. For the former it should be administered in half drachm doses of the fluid extract every fifteen minutes, until the spasm is relieved. At other times it is to be given in fifteen to twenty drop doses, at intervals of from four to six hours, and continued for from a week to ten days, when, except in very obstinate cases, it will have accomplished what was intended, and the patient will experience relief for a period of six or eight months, and in many cases longer. At the approach of another attack the use of the drug for a few days will be found all that is necessary.

My usual dispensary formula for its administration is as follows:

℞.	Potassii bromidi.....	ʒ ss.
	Fl. ext. Grindeliæ Robustæ, } of each....	ʒ j.
	Syr. ipecacuanha, }	
	Aquæ puræ	ʒ ij.
M.	Sig. Teaspoonful every four hours.	

This had better be varied in private practice, as it is decidedly nasty to the taste. In my experience I have rarely had to give more than one bottle of this mixture until after the expiration of the time mentioned above. Grindelia Robusta has also proved of singular benefit in hay asthma. In one case in particular, of this nature, where the patient, a lady, had been a great sufferer from this affection for thirty-eight years, and had tried everything without any relief, it acted like a charm, and I received a note of thanks from her which would have made the fortune of a patent-medicine man.

I have used it now exclusively for all asthmatic affections occurring in my practice for over two years, and have never been disappointed in it. Others may not be so fortunate, as there is a great deal in getting used to any remedy and learning just how to vary its administration and dose for each individual case. The writer's experience, however, is excuse enough for his occupying a portion of your time this evening, and he believes that Grindelia Robusta will prove of very great assistance in a number of what might otherwise have been exceedingly obstinate cases. A number of my friends in the profession have used it and report good success. In one case, in the practice of Dr. McHaughton, where it was given to a child during a paroxysm, although it relieved the dyspnœa, it also seemed to have a decidedly depressant effect. This is the only instance where I have seen or heard of its having this action, and am inclined to think it due in this case to some idiosyncrasy of the patient.

As regards the preparation used, I have always employed the fluid extract, but think that, owing to its unpleasant taste, if there be a solid extract it would be preferable to give it than in pill form. The writer has never, to his knowledge, used the Western preparation of this drug, but finds, on inquiry among his apothecaries, that he has obtained that made by different New York manufacturing druggists.

In conclusion, let me say a few words as to the probable action of Grindelia Robusta. I do *not* believe that it is a specific. My observation of its effects induces me to consider it primarily as an anti-spasmodic, with possibly especial reference to the spasm of the bronchioles. Secondly, it is a stimulant expectorant, and this is probably why, in conjunction with its anti-spasmodic properties, it is so peculiarly useful in inflammatory asthma. Thirdly, it may be regarded, in a certain sense, as a bronchial tonic. Judging from its action, it looks as though it might prove useful in pertussis, but my own experience with it in this affection has not been sufficient to warrant an assertion to that effect. I have used it in a few cases in dispensary practice, and the mothers have told me that the children's paroxysms were not so severe or frequent while taking it, but this is only hearsay evidence.

I have used it, however, with marked benefit, in a great many cases of bronchorrhœa and chronic bronchitis, as an adjuvant to other measures.

It was my intention to have brought up this subject at the time that the treatment of asthma was under discussion by the society, but I was unable to be present at that meeting. The continued use of the drug since that time enables me to speak much more positively as to its efficacy than I could then have done. My experience then would not have warranted more than a suggestion as to its use. At present, however, I feel that I can thoroughly recommend it, as it has proved, in my hands at least, far superior to any of the other remedies or methods of treatment for asthma.

Wishing to make this a fair and impartial statement of the merits or demerits of Grindelia Robusta, so far as its use in any way has come to my knowledge, I will say that I learned yesterday from Dr. S. E. Fuller, since writing the above, that he has tried it in six cases with no apparent benefit except in one case. In this instance, however, the drug acted with marked and decided efficacy. I believe that the doctor has only used it during the paroxysm, which perhaps accounts for his lack of success, as it seems to be more especially useful when given during the intervals, for the purpose of warding off an attack.

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OLEATE OF MERCURY FOR THE HAIR.*

By A. HENRIQUES DE YOUNG, M.D.

I WISH to call your attention in this brief paper to a remedy which I deem a valuable addition to our materia medica; to wit, *oleate of mercury.*

Oleic acid, according to Fowne, is obtained by the saponification olein. the fluid constituent of most natural fats and fixed oils. The oleate is the result of the combination of the oleate with a base. The article dispensed is a solution of the oleate in oleic acid, the latter combining with mercury, bismuth, zinc, lead, atropia, and morphia. They are prepared generally as five or ten per cent. solutions, and with the exception of the oleate of zinc, are liquid.

The first use I ever made of the drug was in a case of tinea decalvans or alopecia areata, if we wish to latinize the condition found. The patient, a young girl of sixteen years, of a consumptive family, though strong and healthy herself, noticed, about five years ago, a white streak in the scalp, devoid of hair and covered with a thin scale. This was immediately followed by bald spots appearing all over the head, until complete baldness was threatened. The spots varied in size from half an inch to two inches in diameter, each covered with a thin scurf, which on being removed the skin was found very nearly normal, perhaps slightly congested. Each patch was well defined, the hair ending abruptly at the margin. Matting of the hair occurred in the beginning; then it became lusterless and brittle, the ends split, and it fell out. During the course of the disease, and particularly in the commencement, itching and formication greatly troubled the patient. Various remedies were used, mercurials, copper wash, sulphur, sulphurous acid, and others, all with no result; the scalp in the meanwhile being shaved and attention paid to cleanliness. This state of affairs continued for over five years, new hair springing up only to perish again. Nine months ago I examined the patient and directed her to use a five per cent. solution of oleate of mercury. The hair was shaved off and the oleate rubbed well in every day; in the morning the scalp was well cleansed with Castile soap and water, and the oleate again applied. In the course of a month a great change was noticed, the hitherto bald spots became covered with hair. On again prescribing the remedy, I added as a tonic five grains of the alkaloid quiniæ to the ounce. The hair is now jet black, curly, and thick, and from three to four inches long. The scalp is entirely free from bald spots, and I consider her cured of a malady alike detrimental to her hair and peace of mind.

The cause of this disease is parasitic, and its seat the hair follicles.

Tilbury Fox, in his work, says the fungus in tinea decalvans is "the microsporon auduoini. The spores are from the $\frac{1}{2500}$ to the $\frac{1}{500}$ of an inch, the filaments few, wavy, and devoid of granules. The fungus is sometimes found in the epithelium at the extending edge of the disease. He believes, however, that it often lodges behind, in the empty follicles, attacking the epithelial structures therein and interfering with the proper reformation of the hair."

This case is remarkable on account of its duration and for the shortness of the period in which the cure took place. This, I believe, is due to the rapid penetration and action of the oleate, a property not possessed in the same degree by the ordinary ointments.

I have had happy results in a case of indurated acne of the face occurring in a young man without obvious cause. The disease was of three years' standing, the face being dotted with the pustules and nodules of inflammatory deposit in the skin. Seborrhœa was present to such an extent that it made it difficult to grasp the skin. He had been using the following:—

℞.	Liq. potassæ	ʒ j.
	Aquæ rosæ.....	ʒ iv.

M. And applied it several times a day.

I frequently, with the aid of a bistoury, scarified the skin and let out the stagnated blood and broken down sebum. Under this treatment he improved, but still the indurations remained, and for this I ordered equal parts of a five per cent. solution of oleate of mercury and cosmoline. Under its influence the nodules and indurations disappeared, and he is now cured. I have seen the speedy dissolution of enlarged glands when treated with the oleate of mercury.

Mr. John Marshall, of England, who first introduced the article, recommends it for all parasitic skin diseases. He also uses the oleate of mercury and morphia in superficial inflammations, especially of the joints. Bartholow, in his work on therapeutics, says "the oleate is extremely serviceable in syphilitic indurations, but is not advisable when ulceration exists." He further remarks that it promptly produces the constitutional effects of mercury. In my cases the oleate was used for several months, and no ill effects followed.

Dr. Alder Smith, in the *British Medical Journal*, reports a case of tinea sycosis cured by the constant application of a five per cent. solution of oleate of mercury.

Dr. John V. Shoemaker, in a paper, urges its use in eczema, psoriasis, pityriasis, erythema, and herpetic eruptions. He found it an invaluable application for general thinning and loss of hair, and employed the oleate of atropia in arresting the abundant secretion of seborrhœa and in subduing high inflammatory action in some cases of erysipelas. He found in the oleate of bismuth a useful remedy in soothing and relieving the cutaneous irritation of acute specific eruptions, especially scarlatina.

Dr. Shoemaker sums up their advantages as follows: First, they do not decompose, like the ordinary ointments, and act as irritants to the skin. Further, oleic acid possesses absorbent and solvent powers that are more active than the bases of ointments. And lastly, they, being liquid, are better suited for application over the scalp, beard, axillary and pubic regions, as they do not mat together the hair.—*Med. and Surg. Reporter.*

* Read before the James Aitken Meigs Med. Association of Philadelphia.

ON THE FORMATION OF A CHEMICAL COMPOUND OF AMMONIA WITH SILVER BROMIDE.

By J. VINCENT ELSDEN, B.SC. (Lond.), F.C.S.

THE following observations will probably be interesting to many who may be studying the influence of ammonia in emulsion; for, although the results contained in the following lines were obtained by the action of concentrated ammonia solution upon silver bromide in the absence of organic matter, yet it seems probable that similar reactions will occur, to some extent at least, in all cases in which ammonia is added to gelatino-bromide emulsions.

The bromide of silver was prepared by precipitation, and carefully washed by decantation. Its color was then pale yellow; but on placing a quantity into a bottle containing sufficient concentrated ammonia solution (sp. g. 0·880) to dissolve it, the color immediately became white, and remained so, even in full daylight, until the solution was complete.

From this solution of bromide of silver in ammonia, the salt appears to be deposited in at least four distinct modifications; and, in order to explain more clearly under what conditions a true chemical compound of ammonia with silver bromide is capable of being deposited, I have thought it well to describe each of these different forms in the order in which they were observed. All the observations were made with the microscope, and the one-inch objective was employed throughout. The results obtained both by bright daylight and by lamplight were identical.

1. On placing one drop of the original saturated solution, diluted with five drops of water, beneath the microscope, it will be observed that, on evaporation, nearly the whole of the bromide is deposited in the form of *brilliantly-colored transparent crystalline plates* of very perfect and regular forms, among the most frequent of which are the regular hexagon and the equilateral triangle (see Fig. 1).

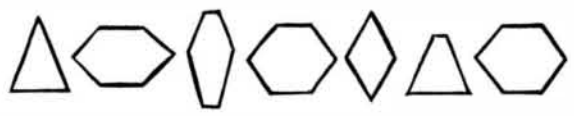


FIG. 1.

Forms of silver bromide deposited from ammonia solution.

The size of the crystals varies considerably from less than $\frac{1}{1000}$ in. to more than $\frac{1}{100}$ in.; but their thickness can scarcely amount to $\frac{1}{20000}$ in., being almost inappreciable beneath a high power of the microscope.

These crystals have various and most beautiful shades of color, both by transmitted and reflected light; they sparkle with great brilliancy, and appear blue, green, yellow, and red indiscriminately. Generally, each crystal has its own color throughout; but sometimes a crystal appears divided into two parts, each with a distinct shade of color, as if it were a twin crystal. Less frequently appear variegated crystals. The crystals have no influence upon polarized light when lying flat; but they appear to be doubly refractive when the rays pass obliquely through them, as if they belonged to the hexagonal system.

The crystals, unlike ordinary bromide of silver, are perfectly stable, even in strong sunlight. When exposed for days to its action they present no difference, either in color, transparency, or brilliancy. Hyposulphite of soda, as well as ammonia, dissolves the crystals, except a thin brown film retaining the original shape, such as would be the case if they consisted of the sub-bromide, as in the equation:

$$Ag_2Br + Na_2S_2O_3 = Ag_2S_2O_3 + 2NaBr + Ag_2$$

Although this view is also supported by the stability of the crystals in daylight. it requires still further confirmation.

2. When the original saturated solution is used, diluted with not more than an equal volume of water, the bromide is deposited in a modification quite distinct from the above. As the evaporation of ammonia goes on, the solution is seen to become filled with square and oblong, transparent, colorless crystalline plates, generally of very perfect form, but sometimes showing regular deviations from their normal shapes, owing probably to imperfect crystallization (see Fig. 2).



FIG. 2.

Forms of crystals deposited from concentrated solutions of silver bromide in ammonia.

The thickness of these plates is about the same as that of those described above. Although perfectly colorless by transmitted light, by reflected light they shine with the most splendid tints of color. Under the action of polarized light they are seen to be strongly dichroic, being alternately light and dark four times in a complete revolution of the crystal between crossed nicols. These crystals are, therefore, doubtless tetragonal. With polarized light they appear generally of a pale lavender color, even by transmitted light.

These crystals are exceedingly unstable, and appear to be incapable of existence in the absence of ammonia; for when evaporation reaches a certain stage, they all disappear and leave nothing but an opaque, brownish residue in their place; but I was able to collect a number of these crystals in a test-tube, which, when inverted, suffered the liquid to be drained off, leaving the crystals dry. They then appeared tolerably stable in diffused daylight, remaining quite unchanged. On warming the tube, even slightly, however, they at once were converted into opaque, yellow bromide of silver, which quickly turned slate-brown in daylight. The same decomposition of the crystals was effected by the addition of water or of acids.

Evidently these crystals consist of a compound of ammonia and silver bromide in a state of very loose chemical combination, the slightest change of conditions being sufficient to dissociate the ammonia and to leave only silver bromide. The action of re-agents upon this substance, to which a formula NH_3AgBr may perhaps be assigned, may be thus represented:

$$NH_3AgBr + H_2O = AgBr + NH_5O$$

while the effect of heat is a simple dissociation.

$$NH_3AgBr = NH_3 + AgBr.$$

3. In each of these former cases the bromide was deposited by rapid evaporation. If the solution is left for some days to evaporate slowly, the bromide is deposited in neither of the two forms described above, but as solid green cubical crystals, having generally the form of the octahedron, or its combination with the cube. These crystals are perfectly transparent, of great luster, and retain their green color for

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