Observations

on the

Treatment of Bronchocele

by

John Williams
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The different modes of treatment at one
time recommended for the treatment of Bron-
chocele are only equalled in the present day
by the different theories advanced to account
for its production.

Of the causes producing it, I shall say no-
thing. All I intend doing in this disser-
tation is to give a brief outline of what the
treatment of bronchocele was, what it is
now, and what it should, and probably
will be before long.

The most common remedial means for
may be recommended by writers on this
subject were frictions with various liniments; dry rubbing; stimulant and astrangent lotion; cold bathing, and cold douches; medicinal applications; plasters with calomel and aurine, or with ammoniacum and mercury; repeated blisters; leeches applied to the tumour; electricity and galvanism; moras; issues, and vesions; ligatures of the arteries supplying the gland; and extirpation of the gland itself.

Amongst the natural remedies recommended the most common were preparations of mercury; digitalis combined with camphor; sulphuric ointment; mariate of barite; the mariate of lime; preparations of niter and soda; various mineral springs; the use of sea water, and of distilled water; the ammoniated mariate of iron; balsam from ether alone or with mercury; and the ashes of the fucus vesiculosus.
Of all these the only means which afforded any thing like a sure chance of cure was the two latter, viz.:—burnt sponge and the ashes of the fused vesicularus. Though we have good reason for believing from the testimony of several learned and trustworthy observers that many of the others would succeed in some cases, when employed for a sufficient length of time. As a proof of this statement I select the following. — "In the treatment of bronchovex, says Dr. A. Bums, repeated topical detraction of blood from the tumour is highly beneficial. Electricity also has sometimes a marked effect; but, this is no remedy, which I should to strong by advice, than regular and long continued friction over the tumour. My personal experience in this plan, a bronchovex, treated in London, was materially reduced in the course of six weeks. Its post effects I
1. Surgical anatomy of the head and neck by Dr. A. Barnes.

2. Dr. Cailllet on the action of laudanum in fevers.
have otherwise witnessed myself, and it is a
remedy lightly recommended by Girard in
his "Traité des Lépreux." Mr. A. Burnet
commanded the friction to be made with a
flannel, moistened with hair powders, and
the part to be rubbed, at least three times
a day, for twenty minutes.

When speaking of calcined orange D. Comedic
says: "We are indebted to Arzilli in Villar
ovanas for its introduction. It has been used
under the form of wine, tincture powder, etc.
most always combined with tonic medic-
cines, to destroy its unpleasant action on
the stomach; but whatever corrective we
employ, it occasions symptoms of this or-
gan, which continuing long after the rem-
edy has been discontinued, produce in some
instances, a chronic malady difficult of
Cure." He further states that these in-
pleasant symptoms occurred more particu-
clearly when the goitre was very large, and the patient far advanced in life, and that it seldom produced those effects upon infants, where it was of little size and more recent.

The aetiology of the Tumours vesicolours was, I believe, first recommended by Mr. Pusey of St. Albans, and it was extensively and successfully employed by him and many others up to the time when all remedies were abandoned owing to the discovery of the effects of Loctine by Dr. Camdef of Geneva.

Dr. Camdef communicated his discovery to the Helvetian Society of Natural Science, assembled at Geneva, on the 25th of July, 1820, but a long time elapsed before it became very extensively employed, on account of various rumours that were spread about that it was a dangerous remedy to use. Time, however, dispelled
Some what the fears entertained on the subject, so that in the present day it has become the universal remedy for bronchoccele, and is regarded by most physicians as little less than a specific in that disease; indeed so great is its reputation, that we seldom hear any one trying any thing else.

Iodine and its iodides which are generally used internally, though for more cure in their action, and unattended with symptoms of such a serious character as some of the substances previously employed, still present obstacles of such a nature, as to render its use of not insensible and dangerous, at least very unpleasant in many cases.

The mere fact of being obliged to take a medicine, even if a more palatable kind than the preparations of iodine, for such a lengthy time as is required to cure bronchoccele, is
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in itself enough to, and often does—deter many
of those from using it; whilst others, from in-
dividual peculiarities or other causes, become
affected with symptoms of such a violent
character as to render it further use imp-

curable if not dangerous. In any case be-
fore its destructive effects manifest them-

...
they are by any means sufficient to deter us from using it in the treatment of bronchocela, but to point out the desirability of our knowing some other remedy, having similar desiderable properties, but wanting such properties as render iodine applicable.

To obviate any bad symptoms which might arise from the internal use of iodine, Dr. Condit and many others often have used an ointment containing it, literally to the Tumour with past success.

Saying aside altogether the above objections, it should be remembered that the cure fact of the ordinary preparations of iodine being efficacious in curing bronchocela, should not prevent us from seeking for some other remedy which is still more efficacious; for it is our duty in the selection of remedies to choose those which will dissipate the disease in the shortest time.
and in the respect manner

The substance which has lately been pro-
vided, and extensively used as a substitute
for iodine and its other salts, and that
which I shall confine myself to in the
rest of this paper is the Bromoiodide of mer-
cury, applied externally.
The bromoiodide of mercury was at one time
extensively employed in medicine, as a lo-
cal application in the treatment of chronic
lymphatic, glandular, and periostitic enlargements,
but of late its use seems to have gone out
of fashion. For what reason I cannot tell,
since there is abundant testimony that it was
a very efficient remedy in those affections,
and is now used by Veterinary surgeons with
great success in the treatment of enlargements
of the joints. It is still retained in the Edin-
burgh and Dublin pharmacopoeias, but is
expunged by the London College, and San
told that it is not met with the same frequency from
the authors of the National Pharmacopoeia.
The binocide of mercury as found in the shops
is a powder of a beautiful deep red colour. It
is volatile, and when sublimed, or even heated
to a degree much below sublimation, it as-
dumes a crystalline structure and yellow col-
our. The colour if it does not become red on
cooling, does so when mechanically disturbed.
It is soluble in about 1000 times its weight
of water, but is much more so in boiling al-
cohol and acids, and by solutions of iodide
of potassium, chloride of sodium, and bi-
chloride of mercury. When heated with fuf-
ane it is decomposed, iodide of potassium
is formed, and metallic mercury sublimes.
The only substances for which it is liable
to be mistaken are the binocide of mercury,
bisulphuret of mercury, prussiate of iron,
and oxide of lead and bismuth. It is distin-
achiased from the two first by becoming yellow.
When heated, and by the red colour returning
when the yellow crystals are cooled and crushed,
and from all the others, not only by its colour,
but by its volatility when heated.
Whether bineode of mercury possesses the
combined actions of its constituents, or whether
it associated itself in its actions with iodine,
or with mercury, are questions which admit
sympne discussion. Dr. Christian, who is
undoubtedly the most reliable authority on
all points relating to therapeutics, says that
it has been recommended by some phys-
icians, with the idea that it must com-
bine the desirous virtues of both its ele-
ments. No proof to this effect however
has hitherto been published. And though
its effects in skinous disorders are repre-
ented to be more speedy than those of io-
dine itself or the other metallic iodides,
Further evidence seems necessary to justify the good opinion entertained of it by some. It is laid to possess the property of producing salivation, like other metallic compounds, and upon the whole there is reason for thinking that as a physiological and medicinal agent, it associates rather with mineralials than with the preparations of iodine.

The fact of this substance being capable of producing salivation, though, it renders it probable that it possesses mineralial properties, is by no means conclusive; for there are often substances besides mercury which have this property, and iodine is one of these. But even admitting for the sake of argument that it does possess mineralial properties, that in itself does not prove that it is destitute of properties peculiar to iodine.

I do not know who first proposed the bismiocide of mercury as a remedy for
the treatment of brucellosis, the first published account of its use, which I have been able to lay my hands upon, dates it as employed in 1854, by Captain Cunningham, commander at Befarolco, East Indies; but from the fact that in this communication there is no mention made of how he first became to use it, or by whom it was proposed, it is highly probable that it was used long before that time. I am told on reliable authority, that it was used in England as early as 1857, by a country practitioner in Worcestershire, who has since left the neighbourhood, and the method he employed is the same as is generally followed in that county, ever since, but is quite different to that described by Major Holmes as employed in India. Nothing like an adequate idea of the extent to which the biniodide of mercury has been
Employed in India, and the result, French employment. Can be formed without procuring a communication by Dr. Manst published in 1857, and another by Mr. Greenhow in 1861, of which I select the following.

Dr. Manst's communication consists of a report drawn up by Major Holmes, Commander at Sepowlee. He says: "In the districts about Motihoree, Sepowlee, Bathiah, Bhajoka, and on the Goomtee, indeed along the whole line of the Terai, the quinsy is so prevalent that it can scarcely be an overestimate to state that, in many localities, one individual in ten is afflicted with this terrible disorder."

"In some cases the tumour attains a certain size, and passes into a chronic state, without serious inconvenience to the person affected; in others, it increases rapidly, and at the end of a few years, often becoming
an enormous excrescence, terminates in loss of
intellect in some cases, and in others in death.

"In the Cold weather of 1854-55, Captain Cum-
ningenham, second in Command, 1st Georgia
Cavalry, began to apply the bichloride to the
sores in the following manner:—An oint-
ment was prepared according to a formula,
as follows:—Melt 3 lbs. of lead or mutton
suet, strain and clean; when nearly cool, add
9 drachms of bichloride of mercury, taking
care to make the powder fine by triturating
in a mortar. Work in the mortar until no
grains of red are apparent in the ointment, and
put it into a jar for use, taking care always
to keep both powder and ointment from the
rays of the light. Use as follows:—About
an hour after sunrise apply that ointment to
the sore with a spatula made of ivory, or
thin broad, smooth bamboo, quantity ac-
cording to size of tumour—rub it well in

for at least ten minutes. Let the patient then sit with his quiter held well up to the ear, and let him remain so, as long as he can endure it. It is probable that about noon he will suffer severe pain from the blistering effect of the ointment, although no pustules are raised on the skin. About 2 P.M. the ointment should again be applied with a very careful and tender hand, and the patient should be dispatched to his home, with orders not to touch the ointment on any account with his hand, but to allow it to be partially absorbed, which absorption will be complete on the third day. 

"This treatment is quite sufficient for an ordinary case. Should the case be a very bad one, the patient is ordered to return next year for the removal of what may remain of the tumour. Except in cases of the very largest cleft this is seldom necessary."
After the application of the second year no quinine is known to continue.

"The patients begin to come about the beginning of November, and continue till the end of March; after that time the cane's very act to violently on the medicine, that it is not advisable to apply it.

"The cases effected have been very numerous. On my arrival at St. Vincent, I was glad to join Captain Cunningham in this good work; but with him rests all the credit of having established it.

"The cases are not now so numerous as they were in 1755. At that time 500 or 600 were not unfrequently treated in a single day; a small charge of 2 shillings for each case was levied for some time, in order to make the people let more value on it; but as this seemed to check some patients, it was discontinued.

"Until lately no account of the numbers treated
Has been kept, but since Captain Cunningham commenced, up to the present time, it cannot have been less than 60,000. Many came from a great distance, Gowring, Agra, Moghulpur, Mulayee, but the cases in the neighbourhood are decidedly less numerous - in fact the disease is being extinguished. In no case, except one, have we failed to make a complete cure during the second year."

"It appears to me that the use of the sun, either by some chemical action on the ointment, or by causing a more rapid absorption, have much to do with the cases affected."

Appended to this report are answers by Captain Cunningham to questions put to him by Major Holmes. In answering the two last Captain Cunningham says: "To my certain knowledge the bismuth of mercury did fail in one case to effect a cure. I applied it myself seven or eight times on one man, and was particularly careful in seeing that he did not take
it off, but it did not act upon him, which I could not account for. In old cases, where the pustule has become as a stone and as large as a stone, and about the size of a turkey's egg, I have found it fail; but when the flesh is soft I have seen the pustule wonderfully reduced, and I have no doubt but that it would be removed altogether were the people only to continue the application, which, however, they seldom do, owing to the great pain it causes.

"I have never heard of any instance in which any danger arose to the patient from the application of the bichloride of mercury, though a man did come home with lues on his neck, which he said had been caused by the medicine a year and a half before; but since then I have seen another man with similar lues which the doctor said were syphilitic, and he never had the bichloride applied to his neck."
1. On the treatment of leprosy with the Mercuric Sulfate.

Mercury ointment by H. M. Steadman, M.E.C.S.

The other communication referred to is by H. M. Green how T. R. C. L. After some preliminary observations he says, "It was here that the unfortunate Major Holmes tried in vain to successfully, and here, too, that he was by barbarously murdered during the Indian Mutiny.

"Since I came here in November 1860, I have felt it a pleasure to carry out, as far as my limited means would allow, the benevolent treatment of quinine among the poor people of the district; and having no dispensaries or other funds, I have followed the plan of causing the Native doctor of my regiment (the 3rd Sth Irregular Cavalry) to apply the treatment to all who choose to pay two pice (about a halfpenny) for it. This small sum having been found by Major Holmes sufficient to cover the expenses of the need-
line. During the last six cold months more than 15000 hundred people have been treated at Argosy, and with the greatest success. Some cases required a second or even a third application of the ointment, but very few proved incurable. I may mention that I used a much stronger ointment than was prescribed by Captain Cunningham, for to 3 lbs of lead or fat, 12 drachms of biiodide of mercury were added. After this ointment was smeared over the patient, the instant cut in the skin with his neck well exposed. The effect was apparent in an hour or two, for a blister rose; but in the course of a week or ten days this healed, and left the human if not completely cured at least very nearly diminished........

..."My friend Dr. Coats, civil surgeon at Matchence, has kindly given the result of his dispensary practice during the last
six cold months. It seems he has a total of 1,390 cases, of which 767 have been cured, 3318 relieved, 988 have not benefited or have been found incurable, 937 have ceased to attend, and 367 are still under treatment.

These results are very satisfactory, and from the immense benefit she derived from the brine. Indeed, a wide-spread reputation in these districts, and is considered a certain cure. That being so, the question arises, whether it could not be introduced into western countries; into Europe and America, into the valleys of Switzerland, the hills of Derbyshire, the valleys of the Ohio and the Mississippi.

There is not, it is true, in all these countries, the same powerful climate which in India so much in the action of this remedy helps us. But were the climate absent, it would be well to try whether a roasting fire would not supply its place, and
<table>
<thead>
<tr>
<th>How long affected</th>
<th>How treated</th>
<th>Length of treatment</th>
<th>Result</th>
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<tbody>
<tr>
<td>6 months</td>
<td>Application of the lung: Hyoscine + hydrochloric acid</td>
<td>80 days</td>
<td>Cured</td>
</tr>
<tr>
<td>1 year</td>
<td>Application of the lung: Needle + hydrochloric acid</td>
<td>80 days</td>
<td>Cured</td>
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<tr>
<td>4 months</td>
<td>Application of the lung: Hydrochloric acid</td>
<td>67 days</td>
<td>Cured</td>
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<td>4 months</td>
<td>Application of the lung: Hydrochloric acid</td>
<td>75 days</td>
<td>Cured</td>
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<td>25 years</td>
<td>Application of the lung: Hydrochloric acid</td>
<td>226 days</td>
<td>Cured</td>
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<td>2</td>
<td>Application of the lung: Hydrochloric acid</td>
<td>93 days</td>
<td>Cured</td>
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<tr>
<td>10 years</td>
<td>Application of the lung: Hydrochloric acid</td>
<td>98 days</td>
<td>Cured</td>
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<td>2</td>
<td>Application of the lung: Hydrochloric acid</td>
<td>52 days</td>
<td>Cured</td>
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<tr>
<td>6 months</td>
<td>Application of the lung: Hydrochloric acid</td>
<td>40 days</td>
<td>Cured</td>
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<tr>
<td>12 months</td>
<td>Application of the lung: Hydrochloric acid</td>
<td>42 days</td>
<td>Cured</td>
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<tr>
<td>2 months</td>
<td>Application of the lung: Hydrochloric acid</td>
<td>37 days</td>
<td>Cured</td>
</tr>
<tr>
<td>12 months</td>
<td>Application of the lung: Hydrochloric acid</td>
<td>35 days</td>
<td>Cured</td>
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<tr>
<td>6 years</td>
<td>Application of the lung: Hydrochloric acid</td>
<td>87 days</td>
<td>Cured</td>
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<tr>
<td>2 months</td>
<td>Application of the lung: Hydrochloric acid</td>
<td>54 days</td>
<td>Cured</td>
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<tr>
<td>2 years</td>
<td>Application of the lung: Hydrochloric acid</td>
<td>56 days</td>
<td>Cured</td>
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<tr>
<td>3 weeks</td>
<td>Application of the lung: Hydrochloric acid</td>
<td>23 days</td>
<td>No good</td>
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<tr>
<td>2</td>
<td>Application of the lung: Hydrochloric acid</td>
<td>71 days</td>
<td>Cured</td>
</tr>
<tr>
<td>1 month</td>
<td>Application of the lung: Hydrochloric acid</td>
<td>23 days</td>
<td>Cured</td>
</tr>
<tr>
<td>3</td>
<td>Application of the lung: Hydrochloric acid</td>
<td>41 days</td>
<td>Cured</td>
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raise the requisite blister." The rest of his communication refers to the causes and other matters concerning bronchocele.

Through the kindness of Messrs. Fletcher and Rosen, Surgeons, Bromsgrove, Worcestershire, I was enabled during the last two vacations, to try the effects of the bismuthide of mercury in 21 cases of bronchocele, and to watch their progress nearly all through. I noted down the phenomena which occurred during the course of treatment, from which I have carefully constructed the appended table, which will show at a glance the results which were arrived at.

Case 1. was treated all through, and cases 2, 3, 4, and 5 for a time in the manner usually practiced in Worcestershire. An ointment was prepared consisting of 10 grains of the bismuthide of mercury to one ounce of Earth; this was encrusted over the tumor, and left there until it was absorbed; it was reapplied about three times a week in
the same manner until it produced redness of the skin. Pain; it was then discontinued until the redness and pain disappeared and again applied until the tumour disappeared.

At the end of three weeks or a month the bronchocele began to show signs of diminution in size; it always diminished most just after the ointment caused much irritation. The tumour got hard and was beginning to soften. This treatment always proved tedious, perhaps more so than by the use of iodine, but the patients invariably preferred using the ointment to swallowing the medicine.

Cases 2, 3 and 4 were treated in the same manner for the first three weeks or a month, and afterwards by the stronger ointment as in the following one.

In case 5, the bronchocele first made its appearance about 7 years before; it was cured by the internal use of iodine about 3 years.
after it first made its appearance, but in about a year afterwards it recommenced to grow. It had existed about three years when I saw the patient. I now treated it in the manner recommended by Major Holmes, with some slight modifications, as follows:—Having prepared an ointment composed of 20 grains of the Bismutis of Mercury to an ounce of lard (that recommended by Major Holmes being 15 grains to the ounce), I applied friction to the tumour with a piece of coarse flannel drenched with a portion of it for about ten minutes; I then smeared the tumour over with another portion of the ointment and caused the patient to sit in a chair in the lawn, with the neck well exposed to the rays. She continued in that position for about an hour, at the end of which I examined the tumour and found it very little altered in any way, the skin was slightly painful but not more so than just after I had applied the friction. At 1 P.M.
I again applied it (the first application was done about half past nine A.M.) in the same way as in the moving but instead of placing the patient exposed to the rays of the sun, I this time had him exposed to a bright fire, and in order to protect the face from the heat, placed a mask on. This produced considerable irritation but no vesicles formed. It was again applied in the same manner at 6 P.M. same day. After patient was exposed to the heat of the fire for about half an hour a vesicle formed and soon after several more appeared and the tumour became very painful when touched. Next morning the skin was red where there were no vesicles, the tumour was hard and painful. Pulse 80. Respiration was not at all affected. Vocalization perfect. The irritation and pain disappeared in about a week, but the tumour continued hard for some days afterwards. As the pain lessened in int-
It became an itchy character, and this itchy-ness continued until the tumour became nearly soft. The tumour was observed to be diminishing in size as soon as this itchiness began, and continued for some time after the hardness had disappeared. The bunchewell which was at first situated in the region of both lobes and isthmuses at the end of a month had so diminished in size that it could just be detected in the left, and only very slightly in the right lobe and isthmuses. The ointment was again applied and followed by similar results. The tumour was quite dissipated in six weeks from the time of the first application of the ointment.

Case 6. was the largest bunchewell I have ever seen. It commenced about 25 years before and increased at intervals up to the time I saw it. It was treated by the internal use of iodine after it had existed about six years. After ta-
The remedy for five weeks the patient became dissatisfied and gave it up. It however had the result of improving its further results for a considerable time. When seen patient she was hoarse, her respiration was wheezing and she complained of stiffness in her throat. An ointment of the same strength as in Case 5 was prepared and employed in the same manner. After the patient had it applied twice, the usual phenomena followed but with increased intensity; respiration became more impeded and wheezing and the voice more affected. The pulse was above 85. All these symptoms passed away without any treatment and the tumour was partly reduced in size, and the patient instead of being frightened at the severity of the symptoms that presented themselves during its application came again in a month to have it reapplied. But this time the symptom
P. S. I should have stated against Case 6 that after the irritation produced by the application of the counterfeit had subsided the voice became natural and the whistling vibration disappeared.
were much less alarming. The ointment was applied altogether five times at intervals of about a month or six weeks, with the result of a complete cure.

All the other cases were treated in the same manner, with the results indicated in the table.

Case 18. was a man aged 48 or 50 from the bronchocele had existed 33 years, without any other alteration than becoming as hard as a stone. The ointment was applied twice, but without diminishing the tumour in the slightest degree.

Case 20. was the best of all. The tumour commenced about a month before, and continued enlarging up to the time I saw it, when it was soft and yielding or enveloping the right lobe and isthmus. The ointment was applied so as to induce irritation &c. as in the other cases & followed by a complete cure in 23 days from the time it was applied.
I may also remark that in no case except No. 6, was the respiration in any way affected during the treatment.

The average length of treatment in these 26 cases, ranging from the first application of the ointment to the complete dissipation of the disease, is 91 days. The average length of treatment in the 78 cases reported as cured, by Dr. Manson, is 117 days.

From the statements of Major Holmes and Mr. Greenhow, and from the results of my own observations, I am convinced that the eunioide of mercury is a most efficient remedy for the treatment of bronchocele and the very best that has hitherto been employed in that disease. I do not say that it is applicable in every form of bronchocele, but in those cases in which the tumour is soft and yielding, and independent of an anaemic state of the system, this substance of properly employ...
ed will be found infallible

The only objections that can be urged against it is, that of producing irritation and pain in the pustule when it is applied, but this is by no means sanguine as is apt to be imagined, and I think more than balanced by the speedy and effectual manner in which it removes the disease. The bad symptoms produced in Case 6 were only a slight affrontation of what previously existed, and subsided without any treatment. Out of the many thousand cases treated in India, there is not a single case reported as having proved fatal or even blistered life at all.

I was told the other day that it was apt to cause intractable ulceration, but I can only say that I never saw a case in which ulceration was produced. The case mentioned by Captain Cunningham is more than doubtful. I think that the rest of the vic-
ciodide of mercury has been sometimes followed by ulceration in this country and co[lou]nd in India, can be explained in this way—

that the preparations recommended in our pharmacopeias are much too strong, containing beforehand of the bromide of mercury to an ounce of this or some other fatty substance, whilst that employed in India contains only about 20 grains to the ounce. Upon the whole I think that this cannot be urged as an objection, as it cannot arise if ordinary care be employed.

Another question deserving notice is, whether the disease is not less likely to return after being controlled by the bromide of mercury, than when removed by codine and its other iodides. I have been several cases of return after the use of codine and ciodide of potassium, but I have not been a case showing any signs of reappearance after the use of the bromide of mercury and I am confirmed in this statement by Mr. Round of Benares, who has used the bromide.
1. Microscopic Anatomy by Prof. Haase
2. Pathological Anatomy by Prof. Haase
for a considerable time.

The only other point which I shall consider regarding the bismuth of mercury in the treatment of bronchocoele, is its mode of action, and the changes which take place in the bronchocoeleous tumour as a result of its application; but before we can thoroughly understand it, it is necessary that we should be acquainted with the general anatomy of the disease. "This form..." says Prof. Houston, "when speaking of the ordinary in-
dentate bronchocoele, though it may be called by
metaphyseal, is not quite strictly so designated, as
there is no formation of new glandular tissue, but
only distension of the original cavity, by an
increased quantity of secretion." Dr. Weillie, speak-
ing of the same form of the disease says: "When a
section is made through it, it is found to con-
dist of a number of cells, which contain a
transparent viscous fluid. These cells vary in
size in different localities of the same kind in
different individuals. Some are of the size of a..."
Regarding the manner in which the dermoid of mercury acts when applied to a bronchocele new tumour, the following questions suggest themselves:

1. Is it absorbed in the course of its action? 2. Is it a purely local irritant? or, 3. Does it act both by absorption and by producing local irritation?

It is apt to be supposed that (from its insolubility) it cannot be absorbed, yet, when an ointment containing it is applied to the tumour, and left there for a few days undisturbed, it disappears; and when this treatment is followed up for a sufficient length of time, even though it produces no inflammatory disturbance, the tumour diminishes in size. If the ointment be made stronger and rubbed well in and especially if it be exposed to a higher temperature its irritant action becomes manifested at the same time as the ointment disappears.

The changes which take place in the bronchocele...
tumour seems to me to be as follows:—As the result of the irritation produced by the application of the bichloride of mercury and increased heat to the surface, a subacute inflammation is set up which leads to an excitation. It is probable that the inflammation thus artificially induced does not attack the constituent cells, as probably here as elsewhere the constituent cells of such bodies are not prone to take an inflammation; but attaches itself to the areolar or connective tissue between the cells individually, or between the lobules of cells collectively. This excitation placed as it is exterior to the constituent cells or lobules of cells as the case may be, becomes an important agent in the subsequent absorption of the tumour. The plastic lymph is invaded underpace organization, and the fibrin during or after the act of organization contracts and by this contraction owing to the viscosity of its organized lymph...
Causes uniform pressure. Now uniform pressure implies absorption, and in this way I think we can satisfactorily account for the disappearance of the constituent elements of the trachea, but the organized fibrin still remains to be accounted for, got rid of.

Before the inflammation is fairly set-up in the trunk a considerable quantity of the bunciodide becomes absorbed. When the exciting cause (the bunciodide of mercury that) of the inflammation is withdrawn and the inflammation itself subsides, the absorbtion being previously debilitated by the presence of the inflammation, resume their function with increased vigour, being stimulated by the previously absorbed bunciodide of mercury, and carry away the fibrin out of the system; but from the fact of the contents of the cells being fluid and consequently in a better state for absorption than the fibrin.
-the former are carried away before the latter is rendered absorbable. 

That this is not a mere theory as regards removal by absorption, it may be mentioned that the same or nearly the same phenomena have actually been observed to take place in other organs. Dr. Bennett, Prof. Vickrow, and others have observed inflammation leading to necrosis of lymphatic and subsequent contraction of its fibrous tissue in the liver, leading to Cirrhosis, causing absorption of the normal and healthy structure of that organ. So also in the interstitial form of Bright's disease of the kidney, Vickrow says that this is also due to chronic inflammation as in Cirrhosis of the liver. In it the fibrous stroma is increased and the rest of the organ is absorbed, owing to the pressure exerted upon its parts by increased and organized fibrous.

Now that is what probably takes place in first...
the first instance in the thyroid tissue, but, owing to the action of the bichloride of mercury, the absorber are excited to increased action and the recently organized fibres is carried out of the system.

So much for the medical treatment of bronchoccele; when this fails surgeons have attempted to give relief by one of three operations. Thus some cases are recorded as having been successfully treated either by the introduction of hydrocyanic acid into the bronchoceleal tumour or by ligature of the thyroid arteries, and some have attempted the removal of the diseased gland altogether. I think the latter operation is unjustifiable from the danger attending it, and the other introduced to treat the ligature of its arteries will seldom be requisite if the bichloride of mercury be properly and carefully applied.