

Madras Veterinary Journal

V 3. No 1. January 1924.

8L-
KZ m 211/213
N 24.3.1

196950

THE MADRAS VETERINARY JOURNAL

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EDITOR

THE OFFICER IN CHARGE IV CIRCLE, CIVIL VETERINARY
DEPARTMENT, CHEPAUK, MADRAS.

*Published under the Supervision of the Chief Superintendent,
Civil Veterinary Department, Madras.*

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VALUE OF CAMPHOR IN ANTHRAX AND
HAEMORRHAGIC SEPTICAEMIA.

BY

S. Ghose, G.B.V.C., Veterinary Inspector, Silchar, Assam.

The apology of the writer for this paper is, that he thinks it desirable in the interest of the owners of live-stock and profession alike, to present the members of his profession what he achieved since the inauguration of his self-initiated treatment alluded above some four years back.

Both Anthrax and Haemorrhagic Septicaemia have so far been held practically not amenable to treatment, though from time to time one or the other remedy was suggested by the professional experts for these two most fatal diseases, not with very promising results. The one which once found some favour was the subcutaneous and intracarbuncular injections of 10 per cent Carbolic Acid solution, experimented by a Commissioned Officer of the Army Veterinary Department, India, (Captain Conder, if I remember right) and described in the Journal of Tropical Veterinary Science. In view of the results so far obtained the profession does not seem to be quite enthusiastic over it. Suffice it to say that Huttyra and Marek, the two most leading scientists, in their much appreciated work styled "Special Pathology and Therapeutics of the Diseases of the Domestic Animals" contribute in no uncertain terms, that the value of this treatment in Anthrax has not yet been sufficiently substantiated. The writer carefully watched the value of this treatment in seven cases only with two cures. Subsequent sequelae in the shape of extensive sloughing wounds at the seat of intracarbuncular injections in both the survived animals were really annoying, if not discouraging.

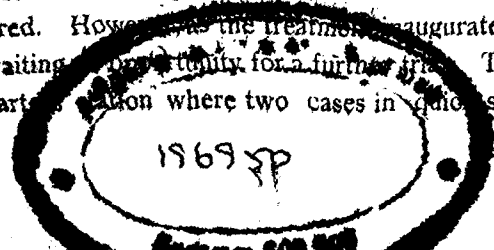
The reason for such a disappointing result is not far to be sought. 1 per cent solution of Acid Carbolic is said to be destructive of Anthrax bacilli. As the blood represents $\frac{1}{8}$ to $\frac{1}{5}$ of the total weight of an animal's body and the causative organisms of the disease swarm over the blood circulation, the whole circulatory system has to be impregnated with the medicine necessitating administration of lethal dose to effectively kill the bacilli. Such, if done, would be like rooting a tree out to free it from its saprophytic weeds. There is however one advantage when Acid Carbolic is administered in medicinal doses

as the agent helps in checking the growth of the bacilli allowing an animal which has strong recuperative power to tide over an attack. In such cases, recuperative power of the animal is more responsible for the cure than the medicinal agent.

Haemorrhagic Septicaemia does not appear to have engaged so much attention as the other disease so far as the treatment is, at least, concerned, with the result that nothing helpful is known, except the generally adopted stereotyped treatment (administration of some internal antiseptics and other symptomatic local and general treatment). High percentage of mortality ranging from 85 per cent to 95 per cent despite all attempts clearly indicates that a proper curative treatment has so far not been worked out.

As back as 1919 in the course of a tour the writer happened to come across a virulent outbreak of Haemorrhagic Septicaemia in an interior village where a large number of buffaloes were reported to have died of the disease. Three typical cases were found. As the tour was for general inspection of Veterinary Assistant's work the writer had then no medicine at his immediate disposal. It was neither convenient nor would have been prudent to recede from the interior about 46 miles to get at headquarters of the nearest Veterinary Assistant to fetch medicines, in view of short duration of the disease and slow means of conveyance usually available and resorted to (country boats) in that part of the district. So while it perplexed the writer for the moment, it occurred to his mind if Camphor, which was locally available in the market close by, should not be given a trial. The idea was that Camphor besides being an antiseptic increases the number of Leucocytes by stimulating circulation. The last named action of the drug is of great significance here, because Leucocytes have the reputation both as bactericidal and bacteriolytic agent acting either by incorporating and digesting the micro-organisms or by giving up lysins to produce dissolving action on the bacteria in the blood. Having thus made up his mind the writer lost no time and had his idea materialised. As he had to leave the district he left instructions rather sportingly with his Veterinary Assistant to enquire and report how Camphor responded.

At a later date he learnt much to his satisfaction that all the cases treated with Camphor recovered—a result for which he was not prepared. However, as the treatment inaugurated so well the writer was awaiting opportunity for a further trial. This he had at his headquarters where two cases in quick succession were treated



with equally satisfactory result beyond all his expectations. As a next step, the writer while microscopically confirmed an outbreak of Haemorrhagic Septicaemia directed his Assistant to try the treatment after his idea. Here three cases recovered out of five treated, two being in advanced stage of the disease did not respond to treatment. Possible explanation for this failure is perhaps full establishment of toxæmia—the disease having advanced too far. This however did not discourage the writer who caused the experiment to be further pushed on in a professional spirit and since then, several of his Veterinary Assistants reported satisfactory results in outbreaks clinically diagnosed and microscopically confirmed. The achievement was duly reported to the Superintendent, Civil Veterinary Dept., Assam, from time to time in special as well as in annual reports and inspection notes. The result of a recent trial was recovery of eleven out of twelve typical cases. This result against 85 per cent to 95 per cent mortality hitherto known is encouraging and deserves notice of the members of the profession.

Last year, when the department opened a competition amongst the Veterinary Assistants for writing best clinical notes on cases treated, one Veterinary Assistant made Camphor treatment on a particular case of Haemorrhagic Septicaemia, as the subject matter of his note which, being considered by the professional Head of the Department as the best paper, won the first prize.

While Camphor was responding so promisingly in Haemorrhagic Septicaemia the writer thought Camphor to be deserving of a trial in Anthrax. So some time after the initiation of Haemorrhagic Septicaemia treatment, an opportunity came and was availed of when the writer held charge of the Field Veterinary Hospital which was temporarily opened during the volunteers Camp of Exercise of the "Surma Valley Light Horse." One pony of the troop developed Anthrax which was soon piquetted at such a safe distance, as the Field Service would permit and placed under the Camphor treatment with the concurrence of the Officer Commanding the troops. Treatment, which was at once resorted to, was carried out on the same line as in Haemorrhagic Septicaemia and the case resulted in full recovery. Since then, it has been tried in several other outbreaks—some clinically and others microscopically confirmed—with equally satisfactory results in great majority of cases, especially when the treatment could be commenced in the early stage of the disease. The Deputy Superintendent of the department once told the writer that just to

test the efficacy of writer's treatment he once caused to give it a trial with 90 per cent. recovery (9 out of 10). This suggests that Camphor is the specific both for "Haemorrhagic Septicaemia" and "Anthrax."

For adult animals Camphor is given in doses of half an ounce per dose per animal, in the shape of electuary prepared with molasses and repeated every four hours, till temperature begins to fall and the progress of the disease is effectively brought under control as indicated by arrest of further development and gradual abatement of symptoms. In majority of the successful cases three to four doses sufficed to have the desired effect when the dose and frequency of administration of the drug is modified, by reducing the dose gradually to two drachms twice a day. Generally it did not take more than two to three days to effect a complete cure.

Advantages of this treatment :—

1. It offers an easy and a handy method of treatment at a rather low cost.
2. Under unavoidable circumstances and in cases of emergency treatment can be undertaken safely even by a nonprofessional owner.
3. The drug being easily procurable even from a village market offers excellent facility for immediate treatment even when one is unprepared and happens to come across an outbreak as a chance. This is of supreme importance in such fatal diseases of rapid termination.
4. The risk of drenching which often associates such diseases does not exist.

Cautions :—

1. Treatment must be commenced at the onset of the disease.
2. Dose of medicine must be freshly prepared and be sufficient.
3. Frequency of administration must be strictly adhered to in the beginning and properly regulated later on.
4. Care must be taken to see that the full quantity of medicine is really swallowed by the patient. This necessitates administration of the medicines slowly by a reliable hand.

A CASE OF MECHANICAL BRONCHITIS.

BY
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Subject.—A country bred aged bullock.

History of the Case.—The owner stated that he was giving a drench of common salt to the bullock. At the time of giving the draught the animal all of sudden began coughing severely and shivering. He stopped giving the medicine at once but the animal became worse in spite of all precautions taken by him.

Symptoms.—Temperature 104°F. The animal was much dejected, breathing was accelerated, pulse quick and full, conjunctiva was injected, sticky discharge from the nose and the animal was coughing severely.

On auscultation there were mucous rales in the anterior lobe of the left lung; The animal had lost its appetite and it was very thirsty.

Diagnosis.—Foreign body in lungs.

Treatment.—10th June, 1923. First of all hot fomentation was given to both sides of the chest and then a Plaster of Mustard was applied on the affected side. The inhalation of *Ol. Terebinthinae* was also given for 30 minutes and then the following Electuary was administered.

Ext. Belladonnae—1 drachm.

Ammonium Chloride—2 drachms.

Pulv. Camphor— $\frac{1}{2}$ drachm.

Potassi Nitrates—3 drachms.

Common Mass—1 ounce.

Mft. Elect, one dose. give one such dose once a day.

The animal was kept in an airy place with the covering of a blanket and the inhalation noted above was repeated in the evening as well.

11th June, 1923. The Electuary was given in the morning and inhalation was also continued. As the mustard plaster had not acted properly, the hot fomentation with the administration of Turpentine oil was constantly given the whole day, but the animal was in the

same condition *i.e.* the cough was as severe as it was on the previous day. The mucous rales were also still to be clearly heard though the temperature came down by one degree to 103°F.

12th June, 1923. The condition of the animal was slightly worse. Temperature was again 104°F and the pulse was very quick with difficult breathing. The owner was advised to keep the bullock in the dispensary as an in-patient and he consented. The previous Electuary was given with the addition of Sodium Salicylate 2 drachms and Potassi Iodide one drachm; and half an hour after the Electuary Country Arrack 8 ounces was given.

The hot fomentation was constantly done the whole day and inhalation was also given repeatedly. In the evening a dose of 8 ounces of Country Arrack was again administered.

13th June, 1923. The bullock was better, the temperature was 103°F, the breathing and pulse were not as quick as on the previous day. The mucous rales were also not so pronounced. The previous treatment was continued.

14th June, 1923. The condition of the patient was the same as it was on the 13th, so the previous treatment was kept on.

15th June, 1923. The case was much better. Temperature was 102°F. The previous treatment was continued except Country Arrack which was reduced to 4 ounces.

16th June, 1923. The cough was not so severe. Temperature was 102°F and mucous rales were entirely absent and vesicular sounds were normal. The previous treatment was continued.

17th June, 1923. This day the temperature was 101.4°F and the general condition was better with the exception of a slight cough.

18th June, 1923. Temperature 101°F and there was very slight coughing. The animal was this day discharged from the dispensary.

1st July, 1923. The animal was seen to-day and is in perfect health.

"FOALING AND ATTENDANT DISEASES"

BY

G. G. Oka G.B.V.C. (Bom) Agr College, Nagpur.

The period of carrying the young or gestation, continues on the average eleven months or forty-four weeks, but may be more or less in some cases. Cleansing, placenta, foetal envelopes or after birth is the covering around the foal or foetus. The placenta, is attached to the inside of the womb, to the little processes called papillae. Connecting the foal and the after-birth is the naval-string or umbilical cord. This is made up of blood vessels, which convey the foetal blood down to envelopes, where the nourishment is received from the mother's blood, and the impurities given up to her blood. The air element... ..Oxygen.....is also received here, so we might say that the foetus breathes through the cord and for this reason if it is broken, the foetus soon dies. Between the foal and after-birth is a fluid, the use of which is to protect the foal from injury from the motion of the mare.

*How to tell when the mare is in foal :—*There is an increase of fat and the animal becomes gentler in disposition. The belly gradually becomes distended and at the end of the sixth or seventh month, after a mare has taken a drink of cold water, there is a movement on the part of the foal. The signs are more noticeable on the left than on the right. Another way is to pass the oiled hand into the vagina and examine. This must be very carefully done or abortion may be produced. Examination per rectum may also reveal the fact. During the time of gestation, it is not the rule for the mare to get in heat every three weeks, but this is not an infallible sign, as occasionally a mare will take the horse when in foal; but ordinarily, when a mare ceases to come in heat after being crossed; it is a good indication that she has conceived. They will frequently pass the first period, but come in heat at the second and so they should be closely watched for six or even nine weeks after being crossed, for indications of being in heat.

*How to use a mare in foal :—*The best treatment for a mare that is in foal is to give her regular and moderate work up to the time of foaling. When the abdomen commences to enlarge, do not give rapid work. Never let her pull heavy loads or slip or strain herself or back up too suddenly, as these have been the causes of abortion in mares. Slipping is specially dangerous. During the winter she

should be out a portion of each day for exercise. The food should be liberal but not too fattening, such as oats, bran and good hay. In the spring, turn out to pasture at night. Water should not be too cold, but given rather often. Constipation should be corrected by bran-mashes, carrots etc. and if medicine is needed give a dose of oil. A few carrots or other roots given during the winter are excellent.

After mare foals turn her out with her colt for at least ten days before putting her into work again.

Signs of Immediate Foaling :—As the period of foaling approaches the swelling of the udder foretells the coming event. For a few days before, a liquid comes from the teats and in about twenty-four hours forms as a white wax around the orifices. The vulva enlarges, and there is an escape of glairy mucus. The belly droops, the flanks fall in and the loins are depressed. Finally the mare becomes uneasy, stops feeding, looks anxious, whisks her tail and may show colicky symptoms. In many cases the mare remains lying down violent contractions of the abdominal muscles occur. After a few pains the water bag appears and bursts, followed by the fore feet of the foal, with the nose between the knees, and by few more efforts the foetus is expelled. The whole act may not occupy more than ten to fifteen minutes, and should never be prolonged if every thing is normal. When the mare foals she should be given large roomy place.

The Naval String or Umbilical Cord :—The cord which connects the foal to the membranes is ruptured when the foal falls to the ground, or when the mare rises, if she has been down, and the membranes are expelled a few minutes later. If the cord does not break immediately, take a piece of string and tie it one inch from the belly, then cut off the naval-string an inch below where it is tied and leave the ring on until it drops off; this will prevent bleeding.

Natural way for the foal to come :—When there is a single foal, the usual position is with the fore-feet first, the nose between the knees, and with the front of the hoofs and the knees and the fore-head directed upwards towards the anus, tail and croup, or, in other words the foal lies on its belly. When there is a twin birth, the second foal usually comes with its hind feet first, and the back of the legs, the points of the hocks, and the tail and the croup are turned upwards towards the anus and the tail of the mare. This position also occurs with a single foetus. In both these ways, the curvature of the body corresponds to that of the passages. The first is called the anterior, the second a posterior presentation.

Precautions to be taken in parturition :—Certain precautions are very necessary. Be gentle, have every thing clean-hand, arm, ropes and instruments. First wash the hand with soap and water and then oil it freely with carbolized oil (Oil 1/3 pint, carbolic acid one tea spoonful.), introduce nothing into the womb until it is thoroughly oiled. Cut finger nail short and remove the dirt from them. In assisting, pull steadily and gently, only when the mother throws. In repelling or pushing foetus back into the womb, repel only when the mare does not strain. In introducing the hand for an examination make it cone shaped. Bear in mind that, gentleness is more important than speed. In making an examination, the water sack should be broken and the hand introduced, directly against the foetus. If the foetus is found to be in wrong position, try to set, it right. If the presentation is difficult to correct, give the following dose. Chloral Hydras half to one ounce in a pint of water, or two ounces of laudanum may be used, or a tea spoonful of Fluid extract of Belladonna. Repeat after half an hour or one hour if necessary. Make the animal stand while the correction is being made.

If after labouring for one-half hour no progress is found, an examination should be made and the foetus if found to be in wrong position should be corrected. Sometimes a very slight mal-presentation which can be corrected in two or three minutes, will stop the passage of the foetus. Why allow the mother to suffer for an hour or two? The examinations cause no extra pain and may be the means of relieving so much. In severe cases when a vet is to be called, which is always best, quiet the mare with the drugs and if the labour becomes severe, place the hand in the womb and hold the foetus from coming back and farther. After the womb has contracted so as to crowd the foetus well back into the arch, it is very hard to make a correction, and by preventing this the Vet has a much better chance when he arrives.

Difficulties met with in foaling.—With natural presentation difficult parturition is a rare occurrence. At times however, labour pains appear and the mare wants to foal, but the mouth of the womb remains closed. In such cases smear the hands and the arm with carbolic oil and introduce into their passage and in some cases the mouth of the womb can be very easily opened in this way. If it will not open easily, smear the neck with Fluid Extract of Belladonna and lard, equal parts, and after a little while it will probably easily open.

If the front legs and head appear, and the labour does not bring the foal any farther, use gentle force, pulling on head and legs, when the mother strains holding what you get. Never pull on any presented part until you are sure the presentation is correct. Sometimes when the presentation is correct, a case of dropsy of the belly—will prevent the foetus coming out in such a case push foetus back, pass in a knife, guarded by the hands so as to not injure the mother and make a small incision in the foal's belly to let out the water and then start again, and she will probably soon foal, if gently assisted.

In cases of water in head (Hydrocephalus), the feet and point of nose will start, but advancement ceases and an examination reveals the difficulty the top of the head is much enlarged and soft; puncture the head with trocar or knife, let out the water and press in its thin bony walls. Now give a little help to the mare and she will easily foal.

A foal may come with head and only one front leg extended, and the mare cannot deliver. In such a case, push the foal gently back and bring the other leg forward, and mare will foal probably without more trouble. Sometimes the front legs come with the head, which is turned back, either to one side, upon the back or down between the front legs. Push the foal back; take a piece of rope four or five feet long, make a loop and slip it over foal's nose. Ask the assistant to pull the rope gently, while you help to straighten the head and neck, placing them between the legs, follow with a gentle pulling, if necessary and the foal will come. Sometimes head will appear, but both front legs are turned back. Push foal well back, catch front legs and bring them forwards, one at a time, then pull gently on the legs to complete delivery. All four legs sometimes come together and head is turned back. In such a case it is best to push the front legs back into the womb as far as you can with hand and arm, and bring foal out backward, pulling gently on hind legs.

If the presentation is backwards, the hind legs come first, the delivery will generally be normal, although not easy as front presentation. If, however the foal is coming backwards, and the legs do not appear, and nothing but buttocks, tail and hips are felt, the hind legs being turned in under; shove the hind end of the foal upwards and towards the front of the womb, then slip the hand down and get hold of the foot of a hind leg and lift upwards and backwards until you can bring

the leg out into the passage: repeat the operation with the other leg, and the foal will come away backwards. It is more difficult to correct rear than front presentations.

In case of twin foals, if there is difficulty, examine the case thoroughly and which ever foal is nearest the outlet, deliver first, first making sure that the legs which are presented, and that you are pulling on are the legs of the same foal. The second foal comes very easily.

Sometimes the foal will be lying partially upon its side and the feet will not come out straight, but strike the side of the passage and prevent delivery. In such a case straighten by rolling the foetus down on to its belly.

Deformities or freaks of nature hardly ever come twice alike, so no specific instructions as to assisting delivery can be given. A thorough examination must be made and good judgment used as to the best way of proceeding, acting on the plans given in the different positions.

In all cases where it is necessary to push the foal back into the womb, the hind parts should be raised, by bedding or some such things, or by turning the head of the mother on the sloping side as this will tend to make the foal go forwards.

It is always best to use the hands, and pieces of fine ropes, avoiding as far as possible all knives and instruments. Blunt or even sharp hooks can sometimes be used with advantage in correcting a presentation, but due caution must be used not to injure the mother, and they should always be attached to a rope to avoid dropping them.

If a mare is not delivered of her foal in half an hour, or so after the labour commences, there is something wrong, for, when everything is normal the contractions of the womb and abdominal walls are so powerful that she foals in a few minutes. It is best, after waiting as above, to make an examination, and if anything is wrong to correct it at once, for it is easier to do it immediately than after the mare has been troubled for a couple of hours. By so doing the mare's life is often saved as well as that of the foal.

Cleansing—placenta—, or after-birth.—Sometimes the mare will not clean properly, and part of the membranes remain

attached to inside of the womb, and it will be left hanging out behind. In such a case one may try the following;—Raw Linseed Oil $\frac{1}{2}$ Pint, Sweet spirits of Nitre 1 Ounce, Fluid Extract of Belladonna 1 tea spoonful. Mix and give as a drench.

Put cloths, wrung out in hot water, or a pack of hot salt in a bag on the loins and cover to keep in heat. If this does not cause it to come away in the course of twenty four hours it will have to be removed. Have the mare held by the head with one front leg held up and the tail held to one side. Oil the hand and arm with Carbolised oil, take hold of the membrane with left hand and twist it, while the right is passed into where the membrane is attached to the womb; commence at the top, gradually detaching it, working the fingers gently in between it and the womb. Give the mare one or two teaspoonful of saltpeter two or three times a day.

Flooding—Profuse bleeding after foaling:—

*Cause:—*Failure of the womb to contract after foaling, congestion or laceration or eversion of the womb.

*Symptoms:—*If blood accumulates in the womb from not contracting, the Symptoms are advancing weakness, swaying, unsteady gait, paleness of the eyes and other mucous membranes and a weak failing pulse. A manual examination of the womb detects blood clots. If it escapes from the vulva the condition is evident.

*Treatment:—*Give a large dose of Fluid Extract of Ergot—one ounce repeating in half an hour if necessary, apply cold water or ice to the loins and external generative organs. Besides this remove clots if present, and flush out the womb with an Alum or Iron Solution from one to two ounces of alum or iron sulphate to each quart of water. Flush out filling the womb full. In my practice I find that continuous flow of cold water on the loins superseded all the remedies. Adrenalin may be tried subcutaneously.

*After pains:—*These are the labour pains continued after the foal is cut off the womb.

*Symptoms:—*Animal continuously strains in the same way as though the foal has not been born.

*Treatment:—*First find out the cause. If there is another foal and it is correctly presented allow her to expel it; if from bleeding treat accordingly. If due to nervous irritation, keep mare quiet and watch her that she does not force the womb out and give the following to relieve the pain.

1. Cbloral Hydras—1 ounce
 Treacle—4 ounces
 Water—one Pint
2. Or Laudanum—1 ounce
 Fluid extract Belladonna—one tea spoonful
 Sweet spirits of Nitre—one ounce
 Ginger—one table spoonful
 Mix in water and give as drench, repeat every hour and a half or two hours until relieved. The first one is less costly and produces a good effect.

Put a pack of hot salt in a bag and apply that to the loins or apply hot blankets, and give her a hot bran mash. Stay with her until all straining ceases, and if womb should start to evert, prevent it by clasping lips of vulva and holding them together.

Eversion of Vagina:—

This is the turning out of the vagina or passage leading from the womb.

*Causes:—*From standing in the stall with the hind feet too low before foaling; from lying down, when on account of being so full, the womb presses back and forces the vagina out, from straining to pass urine or dung.

*Symptoms:—*There is a bulging out of the passage, through the vulva forming a large red tumour; or it may show only when lying down, going back when the mare gets up, or it may become swollen and remain out.

*Treatment:—*Bathe the part well by pouring cold water over it which removes the dirt and reduces the size; do not rub the part; if the dirt does not wash off pick it off gently, and then pour over it slowly a quart of alum water.

Alum—1 to 2 ounces

Water—1 quart

Also pour over it weak Carbolic Solution.

Carbolic Acid—1½ tea spoonfuls

Glycerine—4 tea spoonfuls

Water—1 quart

Now return it by placing the palm of the right hand against the back of the tumour and gently pushing and with the left hand near the vulva, gently work it back to place; see that the finger nails of the left hand are short, so as not to cause any injury. After returning it must be retained; some do this by applying a truss which allows the animal to make water; but prevents the return of the accident. Trusses are hard to keep in place and frequently get off, allowing the accident to re-occur. The way I have found is to put on sutures or stitches across the vulva, use a good strong tape say one inch wide. Put in about 3 stitches, and there will be very little chance for the accident to reoccur. There will be no hinderance in urination. To prevent straining give her a drench as for "After Pains". As the time for delivery approaches, she must be watched closely, and stitches removed as pains come on put the stitches in again for a few days. After this keep the animal where the hips will be higher. Control with twitch, side-lines or hobbles during the treatment if necessary.

Eversion of the Womb—Foal bed turned out:—If the womb fails to contract after difficult foaling, the after pains will sometimes lead to the organ turning inside out and passing out through the vagina, hanging as a large red mass from the vulva, sometimes extending as far as the hocks.

Treatment:—Put on hobbles. Get two assistants to hold a clean sheet under the womb to support it and gently use cold water, alum and carbolic lotion. Clean the part thoroughly. After this is done return it by commencing around the vulva and putting it back. Let the assistants hold the womb as high as the vulva to support it. Sometimes by taking a long strip of cloth commencing at the lower end and winding it round and round the womb as tightly as possible, it forces the blood out and reduces the size and helps in making it return

more easily; then as the womb is returned, gradually unwind the cloth. Returning the womb is a long hard job, do not be in a hurry, but be gentle. After half or more has been returned it will go in much faster. After it has been returned pass the oiled hand in and smooth the womb as nearly as possible. Put in sutures. While it is being returned and for some days afterwards, keep the hind parts higher. Give her a dose of Chloral to prevent straining. Remove the placenta before returning. This is a serious accident with the mares and if the womb gets injured while out, chances for recovery are very slight. As there is a tendency for inflammation to set in, the following treatment should be given after the womb is returned. Feed the animal very light, on easily laxative digestive food and give from a pint to a quart of linseed oil and two to four ounces of Epsom-salt daily to keep the bowels loose, try the following

Fluid Ext. of Belladonna—2 Ounces

Fluid Ext. of Aconite—2 Drachms

Alcohol—6 Ounces

Saltpeter—4 Ounces

Water to make—1 Quart

Dose:—Two ounces three or four times a day, continuing five or six days.

If after two or three days, the animal appears dull pulse become more rapid, temperature rises, inflammation is developing then treat for "Inflammation of the Womb." Remove the sutures after the condition appears to be normal.

Rupture of the womb:—This may occur from the feet of the foal injuring during delivery, or from ill directed efforts to assist, but it is specially liable to occur when there is an eversion of the womb. The resultant dangers are bleeding from the wound, escape of bowels through the opening, and the fatal injury by the mare's feet or otherwise; and peritonitis, caused by the escape of poisonous and irritating liquids of the womb, into the abdominal cavity.

Treatment:—If the wound is in an everted womb, the first thing to do is to close the wound which must be carefully sutured before the womb is returned with catgut sutures. Afterwards

daily douche with Boric-Acid $\frac{1}{2}$ ounce, Glycerine 4 drachms, water 1 Quart. When from feet of the foal or from ill directed efforts to assist, little can be done other than the medicinal treatment, this is generally fatal.

Rupture of the vagina or Passage:—It occurs during the act of foaling, and is done by the legs of the foal not coming straight through the passage or from the foal being too large for the passage. At times the mare may have seemingly foaled all right but later faeces is seen coming through the vulva. An examination with oiled hand will locate the rupture.

Treatment:—In a case where the foal is coming out and is caught with a leg in each passage, oil the hand and push back into the womb, and bring both the legs out the right way. Keep the animal quiet and give her soft laxative diet; to keep the bowels clean and if in season let her have fresh cut grass. If bowels are costive give raw linseed oil. If feverish use the prescription as in "Eversion of the womb". Flush out the vagina twice a day with the following: Boracic Acid 1 Ounce, water 1 Quart; close lips of vulva around the tube and fill vagina full; once a day flush with Carbolic Acid 2 tea-spoonfuls, water 1 quart. Use tube and funnel.

Inflammation of the Vagina and Vulva:

This may follow difficult parturition. Sometimes the surface alone is inflamed while at others laceration occurs. It is a serious case in mares. It may follow metritis.

There is swelling of the vulva and the mucous membrane is congested. Later on there is muco-purulent discharge. Vagina is hot and painful. Urination is painful.

Treatment: Wash out the part completely with antiseptic solution. Give laxative diet, keep bowels open. If in season give green grass.

Inflammation of the womb:—Or Metritis: This is an inflammation of the substance of the wall of the womb.

Cause:—The condition may arise from injuries to the womb during or after a difficult case of foaling; from exposure to cold or wet; from the actions of putrid products in the womb, and

from using dirty instruments, ropes and hands when assisting in delivery; also from the delivery of the womb. The chief contributing cause is the retention of the faetal membranes or after births. Another contributing cause of Metritis is the presence of dead foetus in the womb.

Metritis is an extremely dangerous condition. It is frequently followed by Septicaemia or Pyaemia, sometimes Pneumonia and at times Laminitis. These two latter conditions occur when the uterine veins become infective and infection is carried away in the blood stream. Sometimes the inflammation extends through the uterine walls, infects Peritoneum setting up Peritonitis and other complications as Mastitis and Cystitis.

Symptoms:—The disease usually occurs two or three days after foaling. There is first shivering and staring coat. Respiration is rapid. Pulse is rapid and weak, appetite lost, defaecation causes pain and constipation results. Arched back, stiff movements of the body, looking back at the flanks, uneasy motion of the hind legs.

The vulva is swollen, the vaginal mucous membranes are darkened, painful and very hot. Muco-purulent discharge is present which gives a most offensive odour and of a dirty grey and reddish in colour and often contains pieces of putrid after-births. The Uterus is found to be dilated and contains fluid in large quantities which sticks horribly. Before death, coma sets in usually and temperature becomes subnormal.

Treatment:—Give a laxative in the form of a pint to a quart of raw linseed oil. Keep the bowels active. Try the following:

Fluid Ext. of Belladonna	...	1 ounce.
Fluid Ext. of Aconite	...	1 Drachm.
Alcohol	...	4 ounces.
Saltpeter	...	2 ounces.
Water to make	...	1 Pint.

Dose: Two ounces four or five times a day.

If temperature is high, give one drachm of Acetanilidum and an ounce of Alcohol in $\frac{1}{2}$ Pint of water morning and night. Half drachm doses of quinine two or three times a day are also good. Flush out the womb very freely with warm water until water flows away clean, then inject twice a day.

Boracic Acid 1 ounce.
Warm Water 1 quart.
and also twice a day :
Carbolic Acid 2 tea spoonfuls.
Warm water 1 quart.

In flushing out the womb, use tube and funnel, filling womb full by closing lips of vulva with the hand. Apply almost continuously, hot blankets to the loins, Mustard paste applied to the loins is also good. If much pain is manifested give Chloral or three grain doses of Morphia every three hours.

Following the flushing out of the womb, watch her to see that the straining does not evert the organ.

Hypodermic injections of Strychine are better if given twice a day and Alcoholic stimulants at frequent intervals are also beneficial.

Try to induce the animal to eat. Gruel, eggs and milk should be given. Lucern, carrots, and mashes if available may also be tried.

Puerperal Fever :—This is a fever, usually occurring second or third day after foaling. It is aggravated by colds, exposure or neglect.

Symptoms : are those of general fever, temperature is high say 102 to 103 degrees, F. Pulse and respiration are accelerated, bowels are constipated urine scanty and high coloured; milk secretion suspended, udder inclined to be hard, appetite affected. May occur in mares of all ages, but it most often is met with after the first pregnancy and it seems to accompany the effort of nature to secrete the milk.

Treatment :—Give her a well ventilated loose box; protect her from draughts. Keep the animal warm. Give soft food, grass if in season and plenty of pure water to drink. Give half drachm doses of Quinine twice a day. Treat as a simple fever. Recovery takes place in two or three days unless complications arise.

Inflammation of Udder :—**Mammitis**—**Garget** :—This is an inflammation of the glands that secrete the milk.

Causes :—The condition may arise from exposure by the animal lying on the cold, damp ground in fall or spring, from foal not sucking properly or from injury. Not very common with mares.

Symptoms :—There will be fever, and all other symptoms of fever being present, animal may walk lame. One or both glands become enlarged; The milk dries up or is decreased, watery, or of a reddish serous fluid, which at times becomes foetid.

Treatment :—Keep the bowels free. If fever is high give the following.

Re. Fluid extract of Belladonnæ 1 ounce.
" " " Aconite 1 drachm.
Salt peter 2 ounces.
Water to make one pint.

Dose : Two ounces three or four times a day.
Foment the udder for two hours daily
and apply one of the following

I. Turpentine one part.
Spt. of Camphor or lard four parts.

II. Turpentine two ounces.
Fluid extract of Belladonna two ounces.
Soap liniment four ounces.

If milk should become thick, inject into the udder through the milking tube, warm water one pint, carbolic acid one tea spoonful then knead the udder thoroughly and milk out.

Sore teats, cracks, warts :—Due to calves sucking, the teats are subject to abrasions, cracks and scabs and as a result of this or independently, warts some times will appear and become troublesome. These should be clipped off with sharp scissors and their roots burnt with lunar caustic. For sore teat use the following

Sulphate of zinc ½ drachm.
Balsam tolu 15 grains.
Vaseline 3 ounces.

Or
Sub-nitrate of Bismuth ½ ounce.
Carbolic acid 15 drops.
Vaseline 1 ounce.

Abortion or slipping the foal.—This is the term used in case the foetus is expelled from the womb, before it is capable of surviving outside the organ. If the foetus is advanced enough to live, but before the regular period, it is called premature birth.

Symptoms.—vary according to the stage of pregnancy. In first or second month mare may miscarry without any symptoms and the fact is known only by the animal coming in heat. If some what later, there will be loss of appetite, neighing and straining and small foetus is expelled with its coverings. At a still later stage, the symptoms will be marked the mare will be very restless, will get up and lie down, walk around until the labour pains come on, which soon cause the water bag to appear and break, and delivery will soon be completed if presentation is correct. This may take in all an hour or two or may continue a day or two, the symptoms subsiding for a time, only to reappear with renewed energy.

Treatment.—Should be preventive, if possible avoiding all conditions which might cause the accident. After the pains come on, it is doubtful if the accident can be prevented. Chloral Hydras may be tried. If pains continue, however but act does not progress assist, as in difficult parturition. Give the animal rest for a few days, feed lightly, give bran mashes, small doses of oil and tea spoonful salt petre three times a day.

EMPHYSEMA IN A KID.

EY

*L. Subrahmanya Ayyar, G.M.V.C., Veterinary Assistant Surgeon.
Negapatam.*

One morning about a month back, a kid was brought to the dispensary with the following history. "The kid was quite all right the previous evening and ate a lot of gram and early in the morning it was found to be what it was".

General appearance.

The whole body was bloated abnormally. Palpation revealed a crackling and crepitating sound something akin to the swelling of Black-Quarter. The animal was standing with both forelegs stretched forward and stiff, both hind similarly back. The expression was anxious, breathing hard

and the bleating painful. The temperature was 104°F, bowels were constipated, urine was high coloured and bloody. I was rather perplexed on seeing the case with the emphysema. The man who carried the patient was not able to furnish me with any information about the case and this made my position more uneasy. Then I began to trace the owner, find his calling and asked how the kid had gram. I learnt that the owner was a servant in the municipal cattle depot, where sheep and goats of the servants are grazing and they naturally got a fair share of the feed of cotton seeds and gram allowed to the cattle. A thought at once flashed to my mind if the kid could have swallowed any sharp material or piece of glass accidentally found in the feed and whether this has worked its way into the chest cavity or elsewhere causing a fatal generalised emphysema of the subcutaneous tissue. The animal was quite unable to move. I fomented the loins and gave a warm soap water enema. Shortly after the kid passed a fair quantity of bloody urine and this made me suspect something wrong with the kidneys. All the same I was not very hopeful of the case as I could not locate the seat of injury or trace the cause of the affection. I ordered gentle massage of the whole body and gave Pulv. Jalap 1 drachm mixed in jaggery and directed the animal to be taken home gently, and that he need not be carried here, but that I would see the same at the pettah in the eve. I did so thinking the animal might die of Asphyxia in a short time.

As promised I went to the pettah, not to hear that the kid was dead as anticipated by me, but to my surprise, I was told that the kid was not so bad as it was in the morning, and that he attempted to move. I had him massaged again at the pettah and further enquiry about the case only revealed that the condition was sudden and no cause could be attributed. I sent some men to find out if there were any external wounds. None were found. The kid was kept on conji diet. I directed the kid to be kept in a clean, ventilated place and hoped for the gradual reabsorption of the gas. But for the temperature I would have given a cold application to condense the gas. To my great relief, a senior officer happened to be here and I showed him the case and at his suggestion, I pressed a small trocar and canula over the loins after clipping the hairs and painting the part with Tr. Iodine and pressed out the imprisoned gas. Tinct. Iodine was painted, over the part again. The next day, the

same thing was done on the opposite side of the loins and the emphysema gradually reduced and in a week the kid came back to its original size. By way of internal medicine the kid had for 2 days the following:—

Re.

Spts. Ammon. Arom.
Spts. Aetheris Nit.
Spts. Chloroform.
Tr. Zingiberis. $\frac{1}{2}$ —1 drachm
Aqua Jaggery ad.—3 drachms.
Ft. S. Now.

But for the valuable timely hint of the senior officer, I do not know if the kid would have survived, and if I would be in a position to send this article to the Journal.

A case which apparently appeared to me a fatal one has recovered but how the trouble was caused is yet a mystery to me.

ULCERATIVE KERATITIS

BY

B. Ramiah, G.M.V.C., Touring Veterinary Assistant Surgeon, Koraput

Case No. 1

Subject.—A cow elephant in good condition.

History.—The animal was brought to me one morning with the information that it ran away from the hands of the *Mahout* into a forest and was secured after two days when the following symptoms were observed.

Symptoms.—The right eye lids were swollen, lachrymation and frequent blinking with a tendency to keep the eye closed were also observed. On separating the eye lids there was excessive redness of the conjunctival mucous membrane. The cornea was dim, cloudy and opaque with the presence of a small ulcer in its centre. There was no constitutional disturbance. The animal drank and ate well.

Treatment.—The eye was fomented frequently and a powder consisting of equal parts of calomel, boric acid and quinine sulph was dusted into the eye for about two months twice daily.

The eye is quite normal as before and even the speck of opacity which was sometimes persistent has completely disappeared.

Case No. 2.

A cow calf, aged one year in good condition, was brought to me for the same complaint. The eye affected was the left. The symptoms were just the same but only the treatment differed. This time an ointment made of yellow Oxide of mercury was applied to the eye twice daily for a month. The result was quite similar to that of case No. 1. I do not know if these drugs could be used with such beneficial results in chronic cases. Those that came under my treatment were of acute nature.

HAEMATOCLE IN A BULL.

BY

N. Ramanadhan, G.M.V.C., Touring Veterinary Assistant Surgeon, Kamalapuram.

Subject.—A bull of the local breed aged about 7 years.

History.—No definite history could be got from the ignorant owner. The animal should have sustained injury to the testicles either by slipping and falling in the byre on the hard Cuddapah slabs with which byres are floored in this district or the usual heartless acts of whipping the tired animals which characterises the ryots of Cuddapah district should have occasioned the injury. All that the owner could say definitely was that the animal was all right 4 months back and that the testicles began to grow in size till they attained the size of a full-blown No. 5 Association foot-ball when it was brought to me.

Operation.—The preliminaries of the operation, *Viz.*, casting and securing, washing the testicles clean etc., being done with all care, an incision was made on the scrotum as for castration. After breaking down the adhesions between the scrotum and the testicles carefully, the animal has been castrated by clamping, ligaturing and cauterising the cord. Sutures were then applied to the open wound of the scrotum after arresting the subsequent venous bleeding.

After treatment consisted in fomentations and application of neem oil to the wound. A week after castration the scrotum became again swollen and pus began to trickle down. Sutures

were then removed and the scrotum was completely cleaned of all blood clots and pus and the same treatment was continued. The wound completely healed in a week afterwards.

Clinical description of the testicles.—They were hard to the touch and painless before removal. After removal they became soft to the touch owing to the escape of blood through the puncture caused by the exploring needle before the operation was performed to examine what they contained. One testicle after removal was cut open to satisfy myself as to what it contained. About 8 to 10 ounces of venous blood escaped on opening and the parenchyma was very much discoloured.

OCCURRENCE OF OCULAR FILARIASIS AND KUMRI IN THE SAME HORSE.

BY

R. Natesan, G.M.V.C., Touring Veterinary Assistant Surgeon, Kurnool.

Subject.—A young country-bred pony, gelding and in good condition when the worm was present and in poor condition when it developed Kumri.

History.—During my tour in Kurnool Division I castrated the above pony in December 1921. On the 18th April 1922 the same pony was brought to the Veterinary dispensary, Kurnool with the history that there was worm in the eye, when I was in charge of the dispensary. On examination I found a worm moving in the eye, $1\frac{1}{2}$ " long. At once with the necessary antiseptic precautions the animal was cast and the worm was removed very easily and then bandaged. After two days at the owner's request the animal was discharged, when no other worm was seen in the eye. In August 1923 i.e., 16 months after the removal of the worm I visited the village where this animal was. The same animal was brought before me for treatment and to my utter surprise I found that it had developed Kumri.

Symptoms.—The symptoms are exactly the same as noticed by Mr. Marghabandu in his patient. In addition there was constant dribbling of urine and the animal was very poor in condition.

Treatment.—Applied a blister over the region of the loins and gave nerving tonics and laxatives internally.

Remarks.—In Mr. Marghabandu's case the pony recovered from the effect of Kumri after removal of the worms and subsequent treatment. But in my case even after the removal of the worm and after a lapse of 16 months the animal had developed Kumri, and there was no worm in the eye. In Mr. Marghabandu's case both Kumri and worm occurred simultaneously but in mine they occurred one after the other.

This I want to place before the profession for information that Kumri can occur very late after seeing the worm in the eye and also that both can occur in one and the same animal at the same time.

TREATMENT OF ACUTE RHEUMATISM OR RHEUMATIC FEVER IN EQUINES.

BY

*P. N. Sivarama Ayyar G.M.V.C., Veterinary Assistant Surgeon
Veterinary Hospital, Cocanada.*

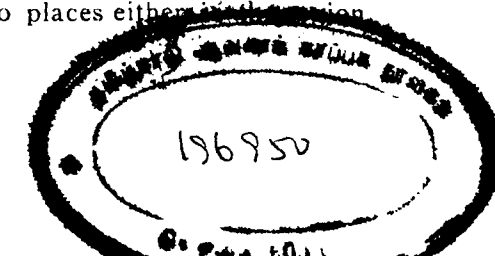
When I was in charge of the Veterinary hospital, Berhampur I had occasion to come across a few cases of Acute Rheumatism in jutka ponies. May I put down my experience and treatment of such cases, with the hope that our professional brethren will try the treatment when occasion arises and communicate the results thereof through the medium of this Journal.

We all know that acute Rheumatism is more a disease of the joints wherein the tendons, thecae of muscles and ligaments are involved, characterised by metastatic lameness of one or more joints, with high fever, loss of appetite etc. due to specific condition of the blood. The affected joint is swollen, hot, tender and painful to the touch. In all such cases I adopted the following line of treatment.

R/ Sodi Salicylas. grs. 40.
Liquor Strychnine. half a drachm.
Aqua Distillata. one ounce.

Dissolve the salicylate of Soda in recently boiled and cold distilled water. Filter it and add half a drachm of Liquor strychnine. This liquid is to be injected subcutaneously with a 20 C. C. hypodermic syringe in two places either in the region of neck or shoulder.

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This treatment should be continued daily for a week, when the treatment should be stopped for 2 days. Again the same treatment is resumed, injection being resorted to every alternate day. With 2 week's treatment the animal will recover or vastly improve. The affected joints as well as the seats of injection are fomented for half an hour. The animal must be stabled in a dry, warm and roomy place and should not be exposed to any chill weather.

Diet.—Bran mash, hay and green grass may be given, all grain feed should be withheld. After recovery the animal should be placed under a course of tonics such as Soda Bicarb, Pulvis nux vomica, Pulvis Gentian and Pulvis zingiberis.

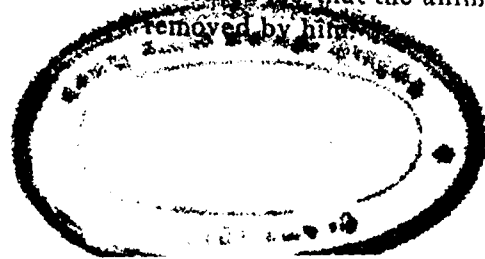
Caution.—If injection is not done aseptically an abscess may arise at the seat of injection.

CROP BOUND IN A HEN

BY

A. R. Venkatachala Ayyar, G.M.V.C., Veterinary Assistant Surgeon,
Tanjore.

On the morning of 8-11-23, an old Mahomedan gentleman brought a hen for treatment, saying that it belonged to a good breed and that he was very fond of it. The history of the case ran as follows. The animal took too much of bran the previous day and it was looking very dull with no inclination to feed. The crop was impacted with bran and I thought of giving a dose of oil, but at the suggestion of the owner, I ventured to cut open the crop the same day and I accordingly put a vertical incision on the right and inferior portion of its neck, after plucking away the feathers of that part and disinfecting the part with Tincture of Iodine. The skin was cut through until the wall of the crop was reached. This was also cut and the impacted material was visible. Some were removed by squeezing the stomach with fingers and the remaining by the scoup. The cut structures were sutured one after another and the uppermost one was dressed with Tincture of Iodine and Boric Iodoform. The patient was not brought from next day. I casually met the owner a few days back, and he informed me that the animal was all right and the sutures were removed by him.



EXTRACTS.

Cattle Disease.—In spite of the heavy losses suffered by two districts the total casualty return for the whole Province is not much more than that of last year. With regard to the outbreak in Amherst the Deputy Commissioner remarks: "The reason for the severity of the outbreak is undoubtedly the fact that the district has been comparatively immune from attacks of the disease for some time. Consequently the number of highly susceptible animals are large and cattle disease rules had been forgotten." The contributory causes to the spread of the disease in the words of the Deputy Commissioner were "the indifference of the people in the less remote and their opposition in the more remote parts of the district to all measures for preventing the spread of the disease."

Segregation Rules.—Segregation rules are generally reported to be more or less understood and followed. One Subdivisional officer remarks, however, "There is reason to believe that some cases of cattle disease were burked by cattle owners from a desire to save themselves from the bother of following the segregation rules and to keep the carcasses for consumption and sale, in case of death". I am sure he is right; he goes on however, "unless veterinary knowledge is diffused and the owner has learned to sacrifice his convenience and property for the common good of all it is difficult to enforce the rules in their entirety." I admit the difficulty of enforcing the rules in their entirety but I doubt very much if the altruistic state of affairs he mentions will ever come about. In no other country that I know of is the individual expected to sacrifice his convenience and property for the common good of all. In England with the help of the Agricultural Colleges, veterinary knowledge is fairly diffuse and veterinary surgeons are plentiful; notwithstanding this, however, a very stringent Contagious Diseases (Animals) Act exists with provision for compensation in case the Board of Agriculture considers slaughter of affected and in-contact animals expedient for the public good so that except for the inconvenience of disinfection, etc. ordinarily the individual does not suffer heavy pecuniary loss. I need hardly add the penalties for evasion of the law are sufficiently stringent to ensure its purpose. That a diffusion of veterinary knowledge in Burma may result in a better understanding of the problems of disease and their prevention I admit, but it won't make the Burmese nation any

more self-sacrificing than it has the people of other nationalities. As an example of what can be done by strict enforcement of the present rules I quote the following from the Deputy Commissioner, Prome: "There was no serious epidemic of any kind during the year under report. This is due to the cattle routes from Sandoway being effectively looked after by the Veterinary Assistant from Nyaungchidauk, a village midway between Padaung and Taungup road, thus preventing the import of diseased cattle to cattle markets and subsequent spread of infection to various parts of the districts. As an additional check, cattle brought to the cattle market, Prome, are regularly inspected by the Veterinary Assistants before they are distributed to various villages in the district".

The greatest defect in the present rules is the fact that no provision exists for punishing those who instigate the unfortunate cattle owner to break the rules by skinning the carcasses, selling the meat etc.,

Registration of Cattle Deaths.—The system of registration of cattle deaths has been in force in Lower Burma for some years. In Upper Burma it has been applied to Yamethin and Kyaukse districts. Returns from the last named district are not submitted to this office. I am of opinion this registration should be compulsory throughout the Province. The system is admittedly inaccurate in many respects, notably in the diagnosis of the causes of death but even then it is better than the rough estimate at the end of the year at present supplied. What has struck me very forcibly in preparing this report has been the extraordinary discrepancy between the deaths from non-contagious and from contagious disease. I would draw attention for instance to the following figures:—

Meiktila district reports 28 deaths from Rinderpest and 6 from Anthrax; total 34; deaths from other causes 1,007.

Mimboo reports Anthrax 4 deaths, Foot-and-mouth 13 deaths, total 17; other causes 2,525.

Pegu reports Rinderpest 197, Anthrax 49, Foot-and-mouth 51, total 297; other causes 4,914.

Bassein reports Rinderpest 9, Anthrax 20, Foot-and-mouth disease 277; total 306, other causes 4,410.

These figures have been taken from the cattle mortality returns this year. When it is borne in mind that the mortality

figures for the contagious diseases mentioned generally accepted by the Veterinary profession throughout the world are:—

Rinderpest, mild outbreak, 20 per cent.—severe 75—90 per cent.

Haemorrhagic Septicaemia in cattle, 85 to 95 per cent.

Haemorrhagic Septicaemia in buffaloes—

Italian authorities 50 to 60 per cent.

Hungarian authorities 87 to 98 per cent.

Foot-and-mouth disease, mild affection, 0.2—0.5 per cent.

Foot-and-mouth disease, malignant, 50—70 per cent. it seems to me a very fair conclusion that all the cases of contagious disease were not reported as such but registered under "other causes". The Deputy Commissioner, Insein, reviewing the figures for his district remarks "Assuming the above figures are true and complete we are faced with the fact that the three main cattle diseases account for less than 3 per cent. of the total deaths of cattle from disease or natural causes or snakes and wild animals. We know this can hardly be true. No explanation of the discrepancy is offered". The accuracy of registration has been repeatedly questioned by my predecessors and I only drew attention to it in view of the resolutions passed at the Second Veterinary Conference at Calcutta in March this year.

I am no great believer in the ignorance of the Burman, cultivator, every one who has been brought up with stock must know the signs of health and disease, no matter what his nationality. He may not know the scientific nomenclature used by English Veterinary Surgeons any more than English farmers do but like them he has his own peculiar names for diseases and if he does not register deaths correctly under those names the reason is to save himself the inconvenience of the cattle disease rules and restrictions. I give one more example—2,149 animals died of debility or old age in Amherst district and 394 of snake bite. Even in districts where registration is strictly enforced District Officers have not the professional ability to criticise the death returns, a large number of deaths from diarrhoea for instance would not suggest the possibility of rinderpest. In spite of these criticisms I am of opinion registration should be compulsory throughout the Province and the

monthly returns carefully scrutinised. It is only by this means that we will in time get a true estimate of the state of affairs.

Examination of Thugyis and others.—As directed in Development Commissioner's forwarding letter on last year's report I offer the following remarks on these examinations. It is necessary to begin by clearing up a serious misapprehension. These examinations were not designed as "First Aid" Classes so that the hope that they would result in one cultivator in every village being able to diagnose and treat the more common forms of cattle disease will not be realised. The text book of examination is the "Manual of the More Deadly Forms of Cattle Disease in India" obtainable in the vernacular Burmese from the Superintendent, Government Printing, Burma. The last edition was published in 1906 and a supply was issued to any Deputy Commissioner who applied for them for distribution in his district. The idea of examinations with rewards was first instituted by the Deputy Commissioner, Bassein, in 1910 and from the records in this office the system continued for four years after which it ceased. The system was reviewed by the Deputy Commissioner, Kyaukse in 1912 and later extended to Meiktila and Yamethin.

I do not consider these examinations of much value. The Burmah cultivator has a better knowledge of contagious animal diseases than his English confrere. An English farmer may be excused for not recognising Rinderpest or Foot-and-mouth disease but the Burmese cultivator has seen so much of these diseases that he has no difficulty in recognising them without Veterinary aid; if he conceals the existence of disease it is not from ignorance but deliberate design and he will continue to do this so long as we persist in treating him as a congenital idiot. The simplest and least expensive way of dealing with cattle disease is to insist on the observance of the cattle disease rules and if the headman does not know the symptoms of the contagious disease it will not take him long to find them out.

[To be Continued].

(From the annual report of the Civil Vety. Dept. Burma for 1922.)

DEPARTMENTAL NOTES AND NEWS.

1. Veterinary dispensaries at Yellamanchilli, Draksharam, Dindigul and Dharapuram were opened on 1st December 1923 and at Ramnad on 21st December 1923.
2. Veterinary Assistant Surgeon A. Rajappa is on leave for 8 months from 15th September 1923.

"MADRAS VETERINARY ASSISTANT SURGEON'S
SERVICE ASSOCIATION" MADRAS.

TO

THE EDITOR,

MADRAS VETERINARY JOURNAL, MADRAS.

SIR,

In informing you that a "Service Association" for the non-gazetted officers of the Civil Veterinary Department, Madras has been formed in the above name with the Head-quarters at Madras, I request you to kindly give publicity to the same in your journal.

The Memorandum of the Association is attached hereto.

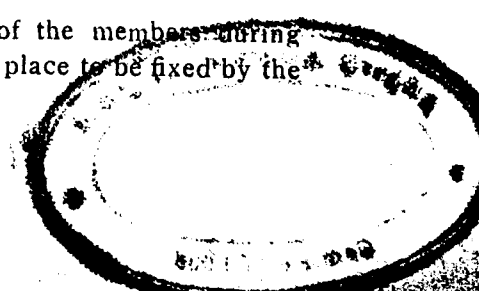
Yours faithfully,

L. S. PARAMESWARAN,

Secretary and Treasurer.

MEMORANDUM OF ASSOCIATION.

1. The Association shall be called the "Madras Veterinary Assistant Surgeon's Service Association".
2. The membership shall be open to all the non-gazetted Veterinary officers in the service of the Government of Madras.
3. The affairs of the Association shall be managed by a Committee, consisting of a President, a Vice-President, a Secretary and Treasurer and six other members.
4. Every member shall pay an annual subscription of annas eight. The rate of subscription shall be calculated for every calendar year.
5. The objects of the Association shall be :—
 - (a) To promote sympathy and friendly intercourse amongst its members.
 - (b) To hold an annual gathering of the members during the Christmas holidays at a place to be fixed by the Committee.



(c) To consider questions of importance affecting the service in general.

6. All Funds of the Association shall be invested in the Postal Savings Bank.

7. The members of the Committee shall frame such rules from time to time for the proper carrying out of the Association and for the managements of its affairs and such bylaws shall be binding on all the members and shall only be altered at a general meeting of the members.

8. In all cases of differences of opinion among the members of either the Committee or the General Body, the opinion of the majority shall prevail.

9. No change in the Memorandum of the Association shall be made unless resolved upon at a general meeting such resolutions being supported by not less than two-thirds of the members present at such meeting and voting thereat.

Statement of receipts and charges for the year 1923.

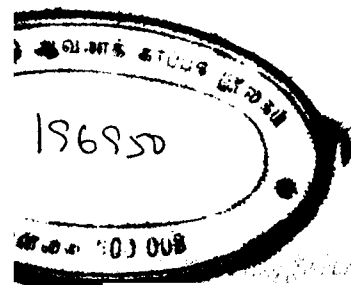
Receipts.—

Balance for the year 1922- Vide the statements of receipts and charges published in No.

Journal	235	1	0
Receipts by subscriptions	423	6	0
Excess subscriptions for which credit has to be given next year	4	2	0
Receipts due by subscriptions	137	6	0
Advertisements	46	0	0
	845	15	0

Expenditure.—

Printing charges including cost of paper	348	6	0
Stamps	79	2	6
Remuneration to clerks... ..	120	0	0
Auditing fees	15	0	0
Cost of a typewriter	240	0	0
	802	8	6
Balance Rs...	43	6	6

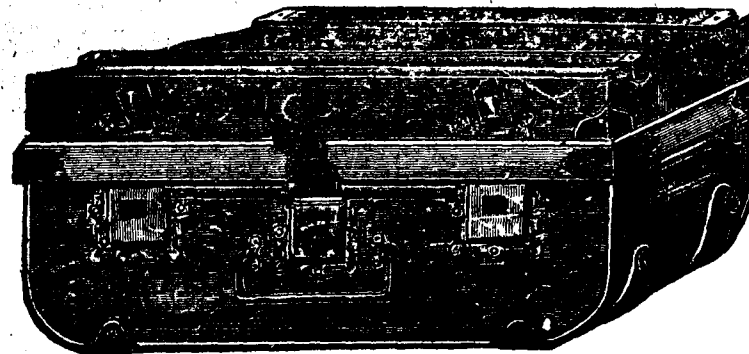


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The following is the schedule of rates:—

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All business and literary communications should be addressed to:—

THE EDITOR,

Madras Veterinary Journal,

CHEPAUK, MADRAS.

PRINTED AT THE N. M. S. PRESS, VEPEY, MADRAS.