

Madras Veterinary Journal
V3. No. 1. January 1926.

KL. m. 211, N19
N 24.3.6
196954

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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EDITORIAL

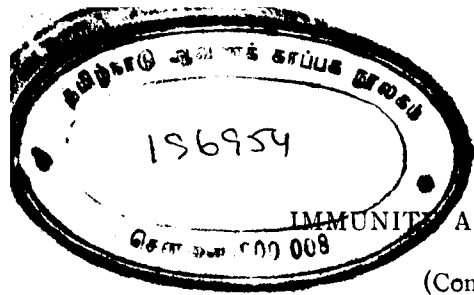
It is now six years since the Madras Veterinary Journal was started and it is with considerable regret that we have to announce that with this number it will cease publication.

The idea of a Journal was conceived for the purpose of giving those who were so inclined the chance of publishing cases of interest and ventilating their views with regard to any subject of a professional nature. It was said more than once that the Journal would do all it could to foster the formation of Veterinary Medical Societies and would be pleased to publish their papers and discussions.

Unfortunately, with the exception of the Madras College Veterinary Medical Association, no such society has been formed in this Presidency and so to a large extent the Journal has had to rely on private contributors for its material. Since the advent of the Indian Veterinary Journal, there has naturally been a falling off in the number of articles received from this source and we feel that it is quite unnecessary to endeavour to run two Veterinary periodicals in the Madras Presidency at the same time.

We claim a certain amount of success for the Madras Veterinary Journal while it lasted, and we take this opportunity of thanking all our contributors for their help in the past. Some little-known and some unknown conditions have been discussed in its pages but we have no doubt that there is much more of a like nature remaining to be unearthed. We therefore suggest to all our contributors that they continue their interest in such matters and send their papers in future to the Indian Veterinary Journal, for it is only by so doing that Veterinary Science in this Presidency will advance.

A final statement of accounts is included in this number and it is proposed to hand over the small balance available to the Principal Madras Veterinary College as a donation to the funds of the Veterinary Medical Association of the College.



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IMMUNITY AND THERAPEUTIC IMMUNIZATION.

(Continued from the previous issue).

BY

D. V. Subramaniam, final year student, Madras Veterinary College,
Vepery, Madras.

Black-quarter or Quarter evil.—The pulp obtained from a Black quarter tumour is spread on a plate and allowed to dry at 32-35° C, which is a virulent powder containing the bacillus.

A portion of this powder is triturated with twice its volume of water and made into a paste. It is applied on a dry glass.

For the first vaccination it is allowed to incubate at 100-104° F. and for the second at 90-94° F. The powder is made ready for inoculation by mixing in proportion of 1 centigramme with 1½ C.C. of water. This is Arloing's method.

Kitt's method consists of a single operation. The muscle fibre of a Black quarter lesion is dried by subjecting to a current of air below body temperature. Then it is attenuated by an exposure of 6 hours at 100° C. to a current of steam. It is rubbed up very finely suspended in water and triturated before use.

A new preparation consisting of the two vaccines in fixed proportion is attenuated in lines similar to that of Arloing. It is prepared in Imperial Bacteriological Laboratory at Muktesar and sent in form of pillule. This method consists of only one vaccination.

Rabies.—Pasteur was the first man to place antirabic inoculation on a scientific basis.

The spinal cord of a rabbit died of fixed virus is dessicated for 14 days in the presence of caustic potash at 73° F. when it ceases to be infective. Degree of virulence seems to be directly proportional to the degree of dessication. An emulsion of 5 millimeter cord in saline lotion is made. Inoculation is commenced with cord of 14 days' dessication and finished with that of 3 days' standing.

In cases of those bitten about the face, treatment extends for 21 days. It commences with cord of 14 days dessication when it rapidly comes to that of 3 days after 7 days. Then cords of 3, 4, 5, days dessication are alternately used up to 21st day.

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Modern treatment.—Hippocampus major of a rabbit dead of fixed virus is made into an emulsion with saline solution of 1-2000 strength. This is inoculated into the abdomen for 12 days, commencing with a minimum dose gradually increased to a strength of 1-400.

The infected brain preserved for certain time in glycerine loses its virulence for infection, but possesses some properties which ensure real immunity.

Present day treatment.—Now a day's dead virus is used. Brain and spinal cord of a rabbit died of fixed virus is powdered in a glass mortar into a pulp, is made into an emulsion with 85% of saline lotion and Carbolic acid is added to have 1% of Carbolic acid and 1% of brain substance. Then filter through muslin and incubate at 30° C. Then add sufficient saline lotion to make 5% of carbolic acid 8% of brain substance.

The treatment is inoculation for 14 consecutive days in abdomen.

3. *Small-pox.*—Inoculation of a healthy calf with lymph from small-pox vesicle gives the animal cow-pox, which is a mild form of small-pox. The lymph from the abdomen, the seat of inoculation of calf, is collected and preserved with glycerine after testing its efficacy.

Swine erysipelas.—Is said to be attenuated by passages through rabbits.

4. *Rinderpest.*—Pure bile from an animal recovered from rinderpest taken from gall-bladder under strict aseptic precautions and inoculated into a susceptible animal with the same precaution confers on the latter an active immunity.

Piroplasmiasis (of cattle) Animals to be immunised are injected with blood of animals recovered from piroplasmiasis. The blood of injected animal is daily examined until the organisms of piroplasmiasis appear in the blood. Then sufficient Trypan Blue is injected which cuts the disease short and immunity is thus established.

5. *Rinderpest by Sero-virus method.* Virulent blood of a rinderpest animal free from other diseases as trypanosomiasis, piroplasmiasis, or coccidiosis is got with due aseptic care and ½ c.c. is injected on left shoulder. Some quantity of anti-rinderpest serum depending on the weight and breed of the animal is injected in right shoulder. Animals subjected to this method of immunity are strictly segregated from other herds. In this case, a severe disease is rendered mild by the protective serum and a mild attack results in an active immunity.

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Sometimes the animals to be immunized are inoculated with anti-rinderpest serum, and before their passive immunity is completely passed off, they are allowed to mingle with infected cattle and the virus, dung and other excretions of infected animals are even rubbed over nostrils and mouth of this animal. This method though productive of the same result as the former is not always reliable and is less efficacious.

Vaccines.—Are classified under two groups as stock vaccines and autogenous vaccines.

Stock-vaccine.—Is one that is prepared from the same bacteria as one producing the disease, but which is acquired from a different source. It is preserved in the laboratory for use in emergency and for general purposes.

Autogenous vaccine.—Is one that is prepared from the same bacteria as one producing the disease in question but such a bacteria is acquired from the lesion itself (i.e.) as in a surgical disease or from the patient himself.

Autogenous vaccines are to be preferred to stock vaccines for the former are more effective. Stock vaccines are to be used in acute cases as pneumonia when we cannot wait till autogenous vaccine is prepared.

We have Monovalent and Polyvalent vaccines.

Monovalent vaccine.—Is one that is derived from a single strain of a particular bacterium (i.e.) Anthrax vaccine.

Polyvalent vaccine.—Is one which is derived from several strains and races of bacteria. Anti-distemper and anti-cobra venom vaccines are best examples.

We have *Prophylactic* and *curative* vaccines of which the former is used to prevent susceptible animals getting a disease while the latter is used to stimulate the activity of the body to withstand the effects of an existing disease.

How passive immunity is bestowed.—Production of passive immunity is a useful therapeutic measure in those diseases where the virus does not live long from animal body or in those cases where vaccines could not be prepared due to the casual organism not being discovered or grown in artificial media. Rinderpest is an example where the virus is said to die within 3 days of removal from the animal body. Serum for Foot and Mouth disease is a case where no

vaccine has been so far prepared. Serum is obtained from the blood of a highly immunised animal. Preventive and protective serums are used in various diseases as rinderpest, tetanus, diphtheria, foot and mouth disease, strangles, fowl cholera, métritis, mammitis, white scour in calves, hæmorrhagic septicaemia, contagious abortion, anthrax, and blackquarter.

In most of the diseases the serum method of immunization is preferred for it is free from some of the grave dangers attendant upon the active method of immunization. In those cases what we actually do is to attenuate organisms on Pasteurian methods and form. There are many weak points in Pasteurian method of attenuation. There is the difficulty of fixing the dose that is both harmless to the life of the patient and efficient enough to stimulate the antibodies and more especially the leucocytes to possess a high power of offence against those microbes. We have to be very careful in choosing subjects for inoculation, for fear a debilitated animal may succumb as a result of inoculation. Lastly while the animals that are inoculated are protected the lives of other animals of the herd are endangered by the creation of new foci of infections.

Immunizing by toxins.—It takes a long time to immunize and is attended with some risk. This method is not universally employed for immunizing animals. It is only resorted to for obtaining antitoxic serum. Tetanus and Diphtheria are good examples.

Behring and Kiaso rendered animals immune to Tetanus by injecting attenuated culture of tetanus bacilli which have been suitably treated with Iodine Trichloride and established the following facts.

1. Repeated injections of this serum (of hyperimmunised animal) into mice that are highly susceptible, render them absolutely immune.
2. The addition of serum of living or sterilised cultures of the bacillus completely destroys the pathogenic power of each.
3. The injection of serum (antitetanic) into the animals already suffering will not infrequently lead to absolute recovery.

Antitoxic serum or protective serum.—Make an artificial culture of a specific bacteria for a sufficient time in a suitable media. Destroy the bacillus by heating them in an incubator to the required degree. Filter it through a Pasteur-Chamberlaine Filter or Berkfield Filter to remove the bodies of the bacteria. Toxin is then attenuated by heat or by chemicals.

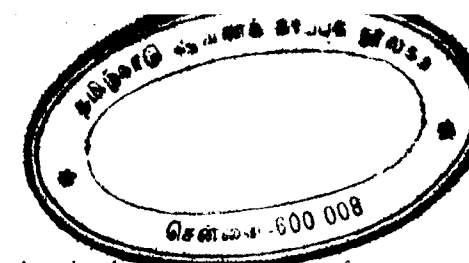
A non-lethal dose of this attenuated toxin is first injected into a healthy animal. After a time the animal recovers from the effects of toxin. Repeated inoculations with increased dose are given at different intervals.

Finally a stage is reached when the animal is able to withstand a dose considerably greater than the lethal dose. This animal is said to be hyperimmunised and its blood is full of antitoxins. Blood from such an animal is obtained from jugular vein under aseptic precautions. It is centrifuged and clean supernatant serum is separated. As the serum contains an effective chemical substance namely antitoxin which renders inert the toxins from which serum is got, it is known as protective serum.

Anti-Bacterial serum.—This consists of a similar procedure with the exception that toxin is replaced by bacteria. As this serum prevents the growth of bacteria in those animals in which it has been injected it is also known as preventive serum. We obtain such serum when the bacteria do not yield a strong toxin when cultivated as in some Streptococci. Animals hypervaccinated with Streptococci after a time yield a serum that confers a high degree of protection against bacteria though it has no antitoxic properties. Such serum is also called 'Anti bacteriological serum.'

As antitoxic serum is incapable of preventing bacterial growth and antibacteriological parts to neutralise toxin, the use of both serums confers immunity both against bacteria and its toxins. Some doubt the germicidal property of the serums as the bacteria against which they protect at times actually are cultivated. Hence the serums may be regarded to be acting as stimulus to the leucocytes giving them enhanced power to deal with toxins on the one hand and bacteria on the other.

The serum is examined for accidental bacilli by incubating, and tested for their efficiency on control animals. It has been found equal quantities of antitoxin and antibacteriological serums neutralise respectively the same quantity of toxin and bacillus. Their action could be studied outside. When a certain quantity of antibacterial serum was added to same quantity of bacillus, the bacillus was destroyed. But when the serum was heated to 56°C . the bacillus was not destroyed. This is because of the complement in serum being destroyed, in the absence of which the amoebocyte is unable to destroy the bacteria. But the effect of serum could be revived by



adding some serum of an unprotected animal to the mixture of protective serum and bacteria.

Historical sketch on immunity and conclusion.

Prevention is said to be better than cure. Prevention consists in immunizing the animals. Immunization has been practised from very remote periods in a crude fashion in an empirical way.

In oriental countries the seats of snake bites were rubbed with a mixture of the poison of the snake along with some juices of certain herbs. In China, Persia and Turkey, children with wounds in their hands were asked to milk from cows that had cow-pox. In India there were yogic performers who were immune to strychnine poisoning due to their constant practice of eating nux vomica. In Africa healthy bovines were actually given pieces of lungs of animals dead of contagious pleuro-pneumonia as a bolus. In America a sword was plunged into chest cavity of animals dead of Bovine pleuro-pneumonia and it was rubbed on the subcutaneous scratchings on the body.

Thus many an ordinary household saying gradually became great scientific truths. It was from a milkmaid that Jenner learnt that human beings who had an attack of cow-pox were immune to small-pox. It was only after this that he placed vaccination on a scientific basis. Similarly the question of attenuation of virus struck Pasteur on which principle he prepared anti-anthrax vaccination and antirabic serum for which science and humanity owe him a great deal. Then Behring and Kiasato were the first to discover the possibility of conferring immunity through the medium of serum.

Thus we see that the thick veil over the problem of immunity is gradually being removed by the hands of Time and I am sure science has not said its last word on the subject.

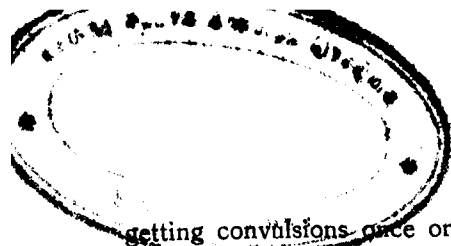
A CASE OF MILK FEVER IN A COW

BY

V. P. Subbiah, G.M.V.C., Veterinary Assistant Surgeon,
Veterinary Dispensary, Virudhunagar.

Subject.—A red localbred cow aged about 5 years was brought to the dispensary on the evening of 25-10-23.

History.—The owner informed me that the cow calved 3 weeks back and for the last two days it was not feeding well and was



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getting convulsions once or twice in a day. I asked the owner to leave it in the Dispensary to be kept under observation.

A stimulant mixture was slowly given which the animal took without any difficulty.

Symptoms.—On 26-10-23 the temperature was 102°F. the cow was off-feed, bowels constipated, no urine was passed. She moved about in a restless manner striking the abdomen with the hind legs. There was grinding of the teeth. All on a sudden she got a fit of convulsions and began to fall down staggering. She was partially unconscious, eyes were dull and insensitive to the touch, pupils dilated, pulse weak and imperceptible.

Diagnosis.—Milk fever.

Treatment.—A warm soap enema was given after emptying the rectum. Micturition was effected by simply inserting the finger into the urethra. The cow was milked thoroughly dry. The udder was cleansed well with soap and lysol lotion 2½ per cent. An ordinary valve connection from a bicycle wheel was taken and well sterilised in boiling water. This valve tube connection (metallic) served as a teat catheter, to which a little boric ointment was applied. The one end of this which has a blunt point and a sideways hole was slowly inserted into the teat and the other end (screwed portion) was attached to an ordinary cycle pump. By holding the teat and the catheter with the left thumb and fore finger and the end of the pump in the left palm of the hand, air was slowly pumped in with the right hand until the teat and the quarter became firm and distended with air and the attendant was asked to secure the end of the teat with a broad tape with moderate pressure to prevent the escape of air, at the same time gently withdrawing the teat catheter and the pump.

The other quarters of the udder were similarly inflated with air, the catheter being disinfected each time before it was passed into the other teats. The udder was then gently massaged upwards so as to diffuse the air throughout the gland. The tapes tied round the teats were loosened after about four hours. As the animal was weak I gave a hypodermic injection of strychnine hydrochloride ½ grain. The next morning i.e. 27-10-23 the cow looked better and was able to recognise surroundings. The udder was again inflated with air, as described above and the teats were released after three hours.

In the noon the cow looked quite healthy and took some grass and water. She was then kept on simple diet for a few days with

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administration of tonic powder twice a day and formalin two drams in conjee as it is said that formalin acts as a good antiseptic in affections of the udder.

The cow was a good milker and after the udder treatment was commenced, there was practically no yield of milk and the owner became very much dissatisfied with the cure effected. But a week later the yield was gradually increasing and the owner was much satisfied.

Remarks.—Though the disease is said to attack cows so early as 12 or 24 hours after parturition or on the 2nd or 3rd day, yet this case occurred three weeks after normal parturition and easily responded to the usual treatment of milk fever.

A CASE FOR DIAGNOSIS.

BY

D. Sahany, G.B.V.C., Veterinary Assistant Surgeon, Rajnandgaon, Central Provinces.

On the morning of the 8th July 1925, a cow of about 8 years of age was brought to the Station Hospital for treatment with the following symptoms.

The whole body looked enormously swollen up to the knee and hock joints and the animal was a bit dull and presented the appearance of an unusually stuffed up dummy. The Veterinary Assistant incharge, suspecting it to be a case of "Black quarter," prescribed Acid Carbolic. It was subsequently shown to me and on manipulation I found that the swelling of the body was emphysematous (with only gas subcutaneously) and quite unlike that of "Black Quarter" which, I have found in my experience in attending out-breaks of the disease, invariably indicated not only gas but fluid as well, always involving deeper structures and the lesion never extended over the whole body as in the present case.

The temperature was 102°F. respiration regular and pulse normal. There was no mark of violence or wound on the surface of the body and the animal was not pregnant. It presented all other phenomena quite consistent with a normal state of health. Blood smears were sent to the Veterinary Laboratory, Nagpur, but no specific organism was detected.

Will the gentle readers of your journal kindly state if they have come across such cases and if so what treatment they adopted, and with what result. Sometime back, I had an opportunity of treating a similar but much less defined case with other symptoms of indigestion which ultimately recovered by being treated for such.

A DOG WITH PIROPLASMA GIBSONI.

BY

P. I. Chakko, G.M.V.C., Veterinary Assistant Surgeon in charge of the Veterinary Dispensary, Coonoor.

In the middle of last May I was asked by a visitor to this Town from Madras to attend on a bull terrier bitch aged about two years. It had a temperature of 103°F. and I suspected it for catarrhal fever as it is often found in dogs brought to the hills from the plains. Diaphoretics and febrifuges were given for a week but the temperature was kept up between 103° and 105°F. Its appetite became very poor and it became very thin and anaemic with foul smell from the mouth. Blood smears were taken and examined at the Pasteur Institute and Piroplasmosis was suspected. So the same smears were submitted for examination to the Principal, Madras Veterinary College on 24-5-25 and a dose of Trypanblue was injected subcutaneously. Intimation was received from the Principal on 28-5-25 that the Microscopical examination showed presence of *Piroplasma gibsoni* and that the injection of Novarsenobillon was indicated. By this time the animal had become so weak and emaciated that it could not even raise up its head but the temperature remained between 103°F. and 105°F. Therefore it was decided to inject Novarsenobillon as a "Kill or Cure" treatment. A carefully regulated dose of '2 gram was injected subcutaneously inside the thigh on 29-5-25 (This medicine should have been injected intravenously as it is highly irritant to the tissues but I could not get any veins on account of the extremely debilitated condition of the dog.) Abscesses were formed at the seats of injection of Trypanblue and Novarsenobillon and both were opened in the forenoon of 1-6-25 and the temperature came down to normal the same evening. The same day smears were examined at the Pasteur Institute with negative results. The abscesses were dressed for a fortnight and the dog gradually improved in health and condition and I am glad to say that the owner took back the dog

to Madras although none of us thought that she would recover. Lately I have heard that she had a litter of pups and she is keeping very well.

In this connection I must state that although the pyros have been destroyed by Novarsenobillon, the recovery of the dog greatly depended on the untiring efforts of the owner in nursing the dog day and night with essence of chicken, Benger's food, eggs etc., strictly according to my instructions.

I strongly recommend this medicine to my professional friends to be tried when every opportunity arises.

A SEQUEL TO INOCULATION.

BY

R. Venkataraman, G.M.V.C., Veterinary Assistant Surgeon, Chingleput.

While conducting preventive inoculations against Haemorrhagic Septicaemia, in Madurantakam taluq, Chingleput district, a country bred cow of the usual debilitated condition observed in a village was inoculated with 20 c.c. of H.S. serum. An hour or two after inoculation, this animal, though several animals of its type received the same dose, exhibited the following symptoms.

The whole face including the lips and cheek and head were swollen, the mucous membrane of the eyes was injected, but no discharge from them was observed. Both the ears were hot and swollen and was like wood to the touch. On the body several raised circular patches hard and flat similar to urticarial eruptions were observed. The animal had no tendency to graze. The mucous membrane of the mouth was soapy to the touch and there was not any appreciable amount of stringy saliva dribbling. The vulva and its mucous membrane were swollen and injected to an alarming extent. The animal showed 2° rise of temperature. Some amount of shivering was also observed. The animal had a wild look with both eyes shot out and seemed as if it would butt if any one ventured to approach. These aggravated symptoms subsided at about 12 noon the animal having received the injection at about 7 a.m. It was found allright in the evening. This animal was healthy like the other animals prior to its injection and I believe these aggravated symptoms are due either to an overdosage or to the idiosyncrasy of the animal depending upon its bodily resistance. The owner of this animal a

ryot who is conversant with the benefits of inoculation, reported to me that he had seen similar symptoms in one of his animals during previous inoculations which became all right similarly after some hours.

CASE NO. 11.

The subject in this case was a countrybred she-buffaloo in good condition at Parukkal, a village in Madurantakam taluq which was protected against Anthrax. This animal received an injection of 45 c.c. of Anthrax serum at about six o'clock in the evening. Shortly after at about 7-30, the animal was seen with its eyes injected-discharge from them—base of horn hot—slight discharge of stringy saliva from the mouth which felt soapy to the touch and hot—the neck was extended and the animal was making a grunting noise and its breathing could be heard from a short distance. Heaving of flanks and catchyrespirations were also observed. There were no cutaneous lesions in this case. T. 104°F. The subject being a buffaloe and finding also that deglutition was both difficult and painful, I could not administer any antiseptic in conjee and could not venture a drench. An enema of soap water was given and an electury of Pulv zingiberis with cresol was tried. There was no appreciable taking of it on the part of the animal since it could not manipulate the tongue properly in its febrile condition. Since the condition of the animal was not encouraging I informed the owner that the disease might have been in the inoculation period. To my surprise next morning he came and told me that his animal was doing well as usual. I subsequently examined the animal to find that the breathing and temperature returned to normal and the animal appeared lively attempting to nibble at grass. I am only recording these 2 cases to show that some animals irrespective of their debilitated condition, physical appearance and general condition show a reaction on their part to inoculation and that one generally need not be alarmed at the aggravated symptoms exhibited by the animals in such cases.

PEDUNCULATED GROWTH IN THE RUDIMENTARY TEAT OF A BULLOCK.

BY

*A. R. Venkatachalam Ayyar, G.M.V.C., Veterinary Assistant Surgeon
Srivilliputtur.*

Subject.—A country bred white bullock-aged-from Renganaiya-ckanpatti a village 8 miles off was admitted into this Dispensary on 2-9-24.

History.—The animal was purchased by the present owner about 3 years back when, he noticed a slight elongation of the right anterior rudimentary teat about the size and length of a little finger. At the tip of the elongation he observed a small hard bulb-like thing which gradually increased to its present size of a mango. The owner is not able to furnish any further information beyond this. The animal was cast down and careful examination revealed a hard lump with its surface soiled by scales of dirt and mud. At its inferior part was seen an opening inside which were full of maggots.

Treatment.—Simple. The part was well washed with carbolic lotion. A tight ligature was applied to the peduncle about an inch from its base. An incision was made below the ligature and the growth with a portion of the peduncle was removed. There was bleeding from the cut surface and this surface was cauterised with nitric acid and bandaged. On the following day the part was dry and clean and therefore no washing was done and it was merely dressed with some Boric ointment. On the 3rd day the animal was again cast, ligature was removed and the dressing repeated and the animal discharged. A few days later, I happened to visit the village to popularize this institution, when, I met the owner who told me that the animal was all right. This growth which I had preserved in my Office was subsequently shown to the Circle Officer during his inspection of this Veterinary Dispensary. This specimen was submitted to the Principal, Madras Veterinary College, for favour of identification on 18-10-24 and the result communicated to me was "Inflammatory fibrous tissue".

A STRANGE CASE OF COLIC IN A HORSE.

BY

*P. I. Chakko, G.M.V.C., Veterinary Assistant Surgeon
Veterinary Dispensary, Coonoor.*

On 24-8-25 at about 6 p.m. I was called to attend to a horse with colic at Wellington 2 miles away from my Hospital. I reached there as early as possible and observed the animal lying down on its back with slightly distended abdomen and I diagnosed the case as one of subacute flatulent colic. I gave a colic drench and also an enema of warm soap water. This had no effect for half an hour and so I introduced the stomach tube through the left nostril. As soon as the tube entered the stomach there was a gush of gas and froth. I lowered the end of the tube and to my great surprise, liquid began to flow and a big bucketful of blood serum was collected. The tube was kept in the same position for half an hour but no more fluid came out. The animal showed some relief but the temperature was subnormal and the extremities were cold. There was an R.A.V.C. Officer present on the occasion and none of us had any hope of the recovery of the horse and the owner asked me to go there next day to conduct a post-mortem examination. However a dose of brandy was administered and the animal was left alone for the night. When I went up there next morning, I found the animal standing and shaking its head thus asking me permission to receive its morning ration. Can any of the readers inform me the cause of such a large quantity of blood serum in the stomach?

PLEURO PNEUMONIA CONTAGIOSA AND ITS
TREATMENT BY TINCTURE IODINE.

BY

*K. S. Prakasa Rao, G.M.V.C., Touring Veterinary Assistant Surgeon,
Vizagapalam.*

I came across an outbreak of pleuro pneumonia contagiosa among goats. I followed the regular treatment for pneumonia consisting in giving electuaries, containing expectorant drugs, and steam inhalations of Turpentine and Eucalyptus oil etc., but failed in all instances.

A weak solution of Tincture Iodine, 5 minims in 5 c.c. of distilled water was tried intravenously for 4 goats. The fluid was injected

with a 10 c.c. human syringe, as the needle was fine. After about 6 hours there was a free expectoration and two of the animals began to eat leaves in the evenings. There was also reduction of temperature, which was 105°F. before injection by 3°. The treatment could not be continued as there was difficulty in getting the syringe. As it has been the practice among the shepherds to sell all the sick animals, I could not persuade the owners to keep the animals for treatment which may sometime prove unfavourable. I request that those that come across such cases may try this treatment.

PARAPHIMOSIS AND STRICTURE OF
URETHRA IN A BULLOCK

BY

*A. Narayanan, G.M.V.C., Touring Veterinary Assistant Surgeon,
Satur.*

Subject.—A grey Kangyam bullock aged 6 years.

History.—This animal was purchased at the Kanniseri cattle fair in May 1924. After a time the owner found the penis protruding out of its sheath and hanging a span in length. The animal was not able to retract the penis, but was licking the organ and drinking its own urine every now and then. On examination the owner found out that he was duped by the dealer who had pushed the paralysed penis in and sutured the external orifice of the sheath with twisted horse-hair. The suture kept on for a time but afterwards gave way leaving a piece of the twisted horse-hair in the suture hole. The repulsive sight of the penis hanging and the animal drinking its own urine led the owner to have recourse to deprive the animal of the protruding part of its penis. Hence he sought the help of a quack, who just pulled the penis out a little and cut it off leaving it bleeding profusely to take care of itself. This was done by the end of June 1924.

The result was that, after two months, the owner found the animal straining and unable to micturate as usual, with extensive swelling of the sheath, and formation of an abscess in the anterior third of the sheath, near the external orifice. The animal with very great difficulty passed a few drops of urine at every attempt.

At this stage the owner sought my assistance. I proceeded to the village the next morning with my pocket case for an operation.

The animal was cast and on examination the end of the penis was found adhering to the walls of the sheath and the abscess had broken inside with discharge of pus through the external opening of the sheath. Only a few drops of urine were seen trickling down when the hand was passed with pressure over the region of the penis. The penis neither could be retracted nor protruded. The cut end of the penis had adhered to the sheath at the junction of the middle and anterior third. I decided to open the sheath in the inferior portion and pull out the penis if possible.

Operation.—With the usual antiseptic precautions an incision 2 inches in length was made and a digital exploration revealed the penis adhering only to a portion of the wall of the sheath. This was torn and the penis was pulled out through the incision when the urethral canal was found to have closed to only a pinhole, through which drops of urine were escaping; with some difficulty the probe was put in through this hole after enlarging the canal a little with knife, the canula was put in when there was a large gush of urine through the canula. Then the penis was amputated half an inch above the cut end and sutures were put, on the urethral wall along with the erectile tissue.

Treatment.—The canula was removed and the penis pushed in, after painting Tr. Iodine and dusting Boro Iodoform. The abscess was syringed well with carbolic lotion and dressed through the external opening of the sheath. I left the place in the evening with instructions for further dressing and to foment the swelling twice a day.

The operation was done on 1st October 24 and the owner reported to me on the 9th that the animal was passing its urine well, and the abscess had completely cured.

Remarks.—1. It has been observed in many cases of bovines especially in the young, that they drink their own urine due to deficiency of salt in the system and gradually protrude their penis which ultimately becomes a vice in them leading on to paralysis of the penis. I am led to think that this particular case is a similar one.

2. The most noteworthy point is that the animal's condition was not much affected by the absorption of urine and circulation of uraemic poison in the blood.

3. In as much as the animal loses all powers to retract the penis when the organ is paralysed it is best to have recourse to the operation of amputation of the organ.

4. Finally, it would always be advisable to examine very carefully the external orifice of the sheath for any suture in examining animals for soundness in a cattle-fair ground.

HAEMOTOMA.

BY

T. S. Venkatesa Iyer, G.M.V.C.; Veterinary Assistant Surgeon,
Devakottah.

This disease generally affects one or both ears of the dog as a result of bite or frequent rubbing of ear due to the accumulation of dirt, wax etc. When frequent irritation is brought on, blood vessels between the cartilage and skin rupture presenting a soft fluctuating swelling.

On 2-4-24, a dog suffering from this ailment in its left ear attended the Dispensary for treatment. On examination, a soft painful fluctuating swelling was observed. The owner informed me that this swelling was due to the bite of another dog which took place a fortnight back. After attending to necessary precautions before the operation, the swelling was opened out on its inner side, the cavity was emptied of its blood clots and then well syringed with Hydrargyri Perchloride lotion 1 in 2000. The cavity was dressed with Tr. Benzoin co. and Boro Iodoform powder. The usual ear bandage enclosing the other ear also was put on, to prevent frequent shaking. The same treatment was continued for 12 days during the end of that time the wound completely healed up. Another advantage was that the patient was very quiet and retained the bandage in position without giving cause for anxiety to the doctor and the owner.

A CASE OF HYDROCELE IN A BULLOCK.

BY

G. Theophilus, G.M.V.C., Veterinary Assistant Surgeon, Saidapel.

While I was camping at Velliyoor—Tiruvellore taluk, Chingleput Dt. in October 1924, a bullock—Ongole breed—about 7 years of age, fair in condition was brought to me for treatment from a village 4 miles away.

History of the case was that the animal was improperly mulled one year ago and as a result of it there was the enlargement of the scrotum which was gradually getting bigger and never smaller even for a day. The scrotum was so big as to interfere with the usefulness of the animal.

The scrotum was about the size of a big cocoanut hanging down as far as the hock joints, interfering with the normal action of the hind-limbs. It was more bulging at the bottom and it tapered away towards the abdomen. The surface was smooth without any folds of skin. It was slightly cold to the touch at the bottom and gradually getting warmer towards the abdomen. On pressure it was found to be soft and yielding and it felt just as a water-bag and the bullock did not evince any pain when pressure was applied. The testicles were not felt as there was a considerable quantity of fluid and the spermatic cords were normal at the abdominal ring and they could not be traced downwards in scrotum. Bowels were moving normally and appetite was unimpaired. Micturition also was normal.

Treatment.—As the owner was unwilling for a surgical operation the fluid was tapped with antiseptic precautions. The fluid was clear and transparent and resembled clear water in every respect. Sufficient care was taken to see that no infiltration of fluid took place between the tissues. The size of the scrotum has been considerably reduced and corrugations of the skin were now seen on the scrotum in thick folds. Only one testicle was felt as a slightly hard mass. 20 C.C. of Iodine solution (equal parts of Tinct. Iodine B.P. and sterilised water) was injected into the scrotum in 2 different places (i.e.) 10 c.c. in each seat, with care to see that the solution is injected into the cavity which contained the fluid. The owner was advised to put the animal on light diet and to apply on the scrotum a paste consisting of fermented toddy and chalk.

The bullock was examined on the third day and afterwards. Temperature was normal and the scrotum was about the same reduced size and the bullock was not disturbed in any way by the size of the scrotum.

A CASE OF DYSTOKIA IN A BUFFALO

BY

*M. T. Krishnasawmi Ayyangar, G.M.V.C., Veterinary Assistant
Surgeon, Veterinary Dispensary, Kallakurichi.*

While in charge of the Hospital at Erode, I was called to a buffalo calving.—

History.—The animal was suffering from pains for the past 2 days. Presented only the forelegs. The owner engaged a quack to help the buffalo deliver the calf after having anxiously waited for nearly 24 hours to see if she would calve of her own accord. The quack had manipulated as he liked, to no purpose.

Clinical Observations.—The buffalo could not get up. The calf was dead inside. Nothing but the forelegs could be seen presented. The abdomen was highly bloated and the animal was breathing hard. The genital organs were highly swollen, lacerated and bluish.

Treatment.—I tried my best with all antiseptic precautions to put in my hand to get the foetus to normal presentation. As the foetus was dead and swollen, and the womb highly inflamed and was pressed heavily by the bloated rumen, I could not move my hand inside or the foetus, though with great difficulty I was able to feel the head which was turned sideways and backwards and resting on the thorax. I could not chloroform her as I had no assistant then. I, therefore gave up all hopes and informed the owner the impossibility of removing the foetus through the natural passage. The owner pressing me to save the buffalo at any rate, the following procedure struck me then and I attempted at it.

The fore legs were drawn out as far as possible and I removed the leg opposite to the side on which the head was resting at its elbow joint. Through the dilated pelvic opening I cut the skin and 2 anterior ribs of the foetus at the sternum to enable me to put in my hand. Inserting the right hand into the thoracic cavity of the foetus, I removed its contents. Tearing the diaphragm and pushing in the hand I removed almost all the contents of the abdominal cavity. The head of the foetus being brought to the normal position on account of the yielding space, the pelvic opening was able to allow the foetus out, with slight traction. The calf looked very well developed like one of 2 months old. The uterus was then douched with pot. permanganate lotion, the placenta removed and a stimulant drench

administered. For nearly 6 hours the buffalo was in a recumbent posture and she got up afterwards. Gradually she got better with symptomatic treatment for a few days.

Though text books give a line of treatment for such and similar other affections, it is found that under conditions that are exhibited to us at the time, it is impracticable to follow any set line. There is more to be learnt from observation and treatment of every individual case, provided we do not fall into the "rut of routine".

'MUSTH' IN ELEPHANTS.

BY

J. D. David, G.M.V.C., Veterinary Assistant Surgeon, Madura.

'Musth' or 'Rut' is the term used for the rutting period in elephants generally in the male one. All male elephants have a gland in the temporal region called the musth gland on each side. These glands open by means of a pin hole at the skin. They are generally inactive except when the animal is rutting at which time a yellowish discharge flows out.

Reasons for musth.—Elephants that are little worked and overfed generally get it regularly, though we also see elephants working in timber yards get it. I also hear that elephants that are in the wild and those that are kept with other cow elephants rarely get it.

Symptoms.—A clever mahout diagnoses the musth in its early stages but an untrained mahout suffers by not being able to do so. By clear and acute observations of the animals, idiosyncracies and habits and its natural ways of movement one can diagnose musth very easily. The premonitory symptoms are equal to those found in other domesticated animals. Generally it is noticed to begin in the nights and in the early morning only it is clearly noticed. Hence it is that certain mahouts, who have not got the courage, refuse to sleep in the elephant shed. That is another reason why a light should always be kept at night in the stall. If the elephant is happy the animal laps its ears continuously. But during musth the animal makes less movements and sometimes keeps the ears at right angles to the body steady and keeps looking with its scrutinizing eyes. Slight discharge from the nostrils more than natural may be noted. There are three forms of musth (i.e.) (1) *Kannamathan* (2) *Kabalamathan* (3) *Kosamathan*. Out of these three *Kosamathan*

seems to be the most furious form in which we find the animal is very angry. In *Kannamathan* the animal is not so furious but the discharge from the musth glands is very profuse and foul smelling. In *Kabalamathan* there is profuse flow of nasal discharge. In all these forms the urine trickles continuously with seminal discharge and some times excoriates the hind legs below the thighs. The animal does not take its feed at all on the first day but takes plenty of water and throws continuously water over his body perhaps with a view to answer to the excess of heat that is in the body at the time. If during the time by mistake the mahout rides him, he goes for a short distance unwillingly and then tries to shake him off. If perchance the mahout presses his leg upon the musth gland the animal grows very furious.

Prevention.—Ofcourse prevention is not very easy in animals that have no hard work. Regular feed and plenty of drinking water is very essential. A daily walk of 6 to 8 miles is also necessary. In addition to all these, the animal must get plantain stem twice in a week.

Treatment.—Musth is no disease but is one of the manifestations of nature. But as the elephant is restive and furious the animal is tied with iron chains at the beginning of the attack, as it is difficult to approach him after it is fully developed. Generally the animal tries to kill the mahout at the time; at other times the animal is quiet. I had the good luck and opportunity of treating the Tirukostiyur temple elephant in the Sivaganga Zemindary and found that the elephant was breaking the rafters in the roof and breaking open the walls. At that time the animal gets double its strength and energy. When I went and saw the animal in this condition I completely starved the animal. Not even water was given for two days continuously. But the mahout had already injured the animal in trying to control it. In a plaintain I enclosed Chloral Hydras in doses of 3ii to 3iv every three or four hours, and gave it to the animal through a small window. On the third day the animal was very easily controlled. Plenty of plantain stems were supplied after that and Bromides of potassium and sodium in doses of half an ounce daily only were given in feed.

IMPACTION OF THE COLON IN AN ELEPHANT

BY

C. Padmanabhan G.M.V.C., Vety. Asst. Surgeon, Palghat.

Subject.—An elephant aged about 6 years.

History.—The animal was found showing colicky pains for 3 days, not eating and drinking as usual. There was tympany and hard breathing. The owner gave some native medicine which contained Cannabis Indica or 'Ganja', Opium and aromatic bitters. The animal did not pass its dung and urine. The condition became grave. The animal would not move freely and was not eating and drinking. When I saw the animal I found the temperature to be 98° F. and the animal was dull. The rectum was empty.

Examination.—I noticed that the elephant was beating its flanks with the trunk and straining. There was no tympany at this time. I oiled my hand and inserted the whole of my arm when my fingers could feel a hard mass which on pulling with the fingers would not move. The mass also was found to be partly covered posteriorly by wrinkling folds of mucous membrane of the bowel something like a ring. The mass was as big as a foot-ball. The usual size of the dung ball of this elephant is that of a cocoanut with its outer fibres removed.

Treatment.—Gave an enema medicated with castor oil and soap with a little Ol. Terebinthinae. Only the water came out. The mass would not move. Smeared castor oil into the rectum and the parts near the mass. Animal also began to strain a little, I walked the elephant for about 15 minutes. There was no sign of the mass moving from the place. Only course then left for me was to remove the mass fibre by fibre as my hand could not reach it to have a firm grip. I removed the mass in this way with great difficulty as the animal was struggling. It took two hours for me to remove the whole mass: when the last fibres came out there was some blood also adhering to the fibres. Gave internally the following.

Soda Bicarb.	...	2 ounces.
Ammon. Carb.	...	$\frac{1}{2}$ an oz.
Pulv. Nuxvomica	...	1 drachm.
Pulv. Zingiberis	...	2 oz.
Tr. Asafoetida	...	1 oz.
Jaggery	...	Q.S.

This was continued for 3 days.

When the whole mass was removed it passed urine freely. The mahout then told me the truth that the elephant was given a small palmirah tree a day previous to the ailment which contained coarse fibres and the trouble was caused by feeding this small elephant with fodder containing coarse fibre. The case would have been serious if the impaction had occurred somewhat anteriorly.

EXTRA UTERINE GESTATION IN A BITCH.

BY

K. I. Prakasa Rao G.M.V.C. Veterinary Asst. Surgeon, Vizagapatam.

Subject.—A fox terrier bitch aged about 2 years.

The animal was brought to the hospital for treatment as the owner suspected the animal to be suffering from false pains. Mr. Raghavan examined the animal and found her to be anaemic. The temperature was normal. Syrupus Hæmoglobinae was given both morning and evening after meals.

Two days afterwards the owner took the Veterinary Assistant Surgeon in charge to see the animal as she started suffering from labour pains. On examination it was found to be a difficult case to try. As it was a most valuable bitch the Officer 1st Circle, also was taken to see the animal. He examined the animal too and found it a case of extrauterine gestation. As the instruments were not taken cæsaerian section could not be done immediately, to save at least the pups. The animal was brought to the Hospital in a motor car when she expired on the way. When the abdomen was opened 5 pups were found with different foetal coverings floating among the bowels. Every one of them was attached to the floor of the abdomen. Although the envelopes were punctured and the pups delivered, we were not able to save any one as they were not alive.

This is the first case of extra uterine gestation I have seen in my service.

DERMOID CYST IN A BULL.

BY

*T. S. Venkatesa Iyer, G.M.V.C., Veterinary Assistant Surgeon,
Devakottah.*

A Dermoid Cyst was found at the interior aspect of the tail of a bull about 6 inches from the base of the tail. Its size resembled that of a marble. On opening the cyst, the cavity was filled with sebaceous material containing hairs. The lining membrane had numerous hair follicles with hair entirely enclosed. The whole sebaceous material with hairs was sent to the Principal, Madras Veterinary College, who pronounced this to be a case of Dermoid cyst.

Treatment adopted was as follows :—the cyst was opened, all foreign materials removed cavity touched with the acid carbolic, and BoroIodoform stuffed inside and edges kept in apposition and sutured leaving small outlet for free drainage. The owner was supplied with Tr. Iodine to apply to the part every day. Within a fortnight the wound completely cured.

This is an interesting case which is rarely seen in Veterinary patients.

I hasten to publish the same for the information of the readers of the Veterinary Journal. A similar case of Dermoid cyst in a buffalo was recorded in the Veterinary Journal, October 23 by Mr. A. E. Cameron. Veterinary Surgeon, Animal Pathologist, Veterinary Research station, Leth Bridge, Alta.

(Another in a horse by G. A. M. Harle, M. R. C. V. S., is published in the Veterinary Journal for February 1925—Ed.)

A CASE OF RHEUMATISM IN AN ELEPHANT.

BY

J. D. David, G.M.V.C., Veterinary Assistant Surgeon, Madura.

I was called to treat a cow elephant in Kaliarkoil of Sivaganga taluk. When I went there I found that it was a case of Rheumatism and I was surprised to see one in elephants. The animal had a temperature of 100° and 101°F and a rapid respiration; she was constipated. The urine was very high coloured, the animal was off feed and there was metastatic lameness in both the hind legs below the fetlock. The animal was given an enema on the first day and a

purgative with Aloes 3vi. Calomel 3ii and Extract Belladonna liq. 3ii with masses of ground tamarind leaves and pulp. The animal had 3 or 4 motions and the temperature went down to 98°F the next day. The lameness also decreased. The following prescription was for 2 weeks.

Re. Soda salicylas 3iv.

Pot. Iodide 3ii.

Aqua 2 oz.

Sig. in feed daily.

The rheumatism was cured and I have not heard of a subsequent attack for the last one year.

But I found after 15 days that the animal had stomatitis. This is the result of soda salicylas. I hear that human beings get it when treated with soda salicylas and it is strange that an elephant should also get it. So we should note that in treating elephants we must be very cautious and dose them as horses, as the elephant has got a simple stomach.

IMPACTION OF THE THIRD STOMACH OR
FARDEL BOUND, IN A BUFFALO

BY

C. Padmanabhan G.M.V.C., Vety. Asst. Surgeon, Palghat.

Subject.—One he-buffalo aged about 10 years.

History.—The animal was suffering from fits every now and then for a fortnight when it was brought to the Dispensary.

It was eating and drinking fairly well.

Symptoms noticed.—Animal was debilitated, dull, and the eyes were sunken, the animal was staggering and falling sideways, head being raised at the same time. These fits last for a minute or two. Then it got up, stood steady, eating a little. It was noticed that urine was passed involuntarily at the time of fits. Bowels were constipated.

Temperature 98°F.

—It was suspected for the impaction of the third stomach. The following inixture was given.

Mag. Sulph. 6 oz.
 Sodii. Sulph. 4 oz.
 Sodii. chloride. 4 oz.
 Pulv. Zingiberis. 2 oz.
 Aqua. 1 pint.
 Mft. Haust.
 Sig. now.

There were no fits that day. Next morning the case became worse. The haw of the eye was noticed to be protruding. The animal was weak, neither eating nor drinking. The following mixture was given.

Ammonium. Carb. 4 drams.
 Pulv. Nuxvomica. 2 drams.
 Gruel 1 pint.
 Mft. Haust.
 Sig. now.

In the evening the animal fell down exhausted and could not get up. The next morning the animal was found lying down exhausted with all its four legs well extended. Heart was found to be weak.

Gave hypodermic injection of strychnine hydrochloras.

The animal died at noon the same day. Post mortem examination was conducted. The third stomach was found hard and well distended. On cutting, it was found that the knife could not pierce. With difficulty however, it was cut into two pieces, when the internal contents were found to be quite dry, something like dry dung, no moisture at all.

The veins of the small intestines were very much congested. Other organs were found to be normal except lungs which were emphysematous.

Will any of my professional brethren kindly suggest any treatment to effect a cure?

Statement of Receipts and Charges for the year 1924—25.

RECEIPTS.		Rs. A. P.
Balance for the year 1923 vide the statement of Receipts and Charges published in Journal Vol. 3.		
No. 1	...	43 6 6
Receipts by subscriptions for 1924-25 only	...	447 4 0
Receipts due by subscriptions for 1924-25 only	...	105 0 0
Total	...	595 10 6

Deduct subscriptions and advertisements of those deceased and whose whereabouts are not known included in previous years' receipts.

Subscriptions	...	24 2 0	
Advertisements	...	86 12 0	
		110 14 0	
			110 14 0
			484 12 6
Sale proceeds of the Typewriting machine	...	110 0 0	
			594 12 6

EXPENDITURE.

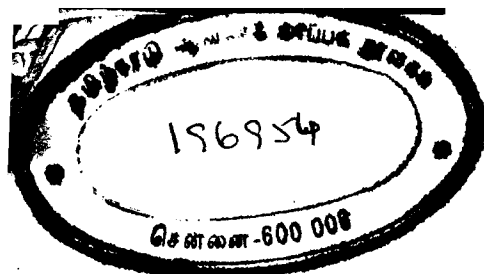
Printing charges including cost of paper for 6 Nos. (including this issue)	...	296 6 0	
Stamps	...	80 0 0	
Remuneration to clerks	...	120 0 0	
Auditing fees	...	20 0 0	
		516 6 0	
Balance	...	78 6 6	

Checked and found correct
 V. NATESA PILLAI,
 Head Accountant.

16th Feb. 1926.

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