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INDIAN
VETERINARY
JOURNAL



Vol. VIII.	EDITOR : P. SRINIVASA RAO, G.M.V.C., Veterinary Surgeon MADRAS.	No. 1. July 1931.
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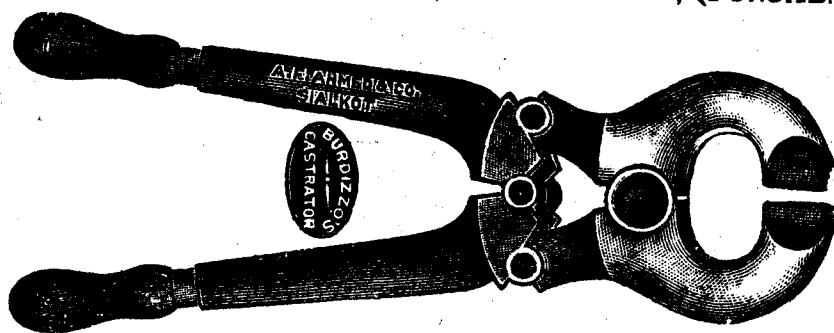
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July, 1931

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(The Journal of The All-India Veterinary Association)



17 OCT 1931

Editor :

P. SRINIVASA RAO, G.M.V.C.,

Veterinary Surgeon, Madras.

Office : 26, WALLAJAH ROAD, MOUNT ROAD, MADRAS (S. INDIA)

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NOTICE

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devoted to the cause of the Veterinary Profession.

PUBLISHED FOR THE ALL-INDIA VETERINARY ASSOCIATION.

EDITOR:

P. SRINIVASA RAO, G.M.V.C.,

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THE INDIAN VETERINARY JOURNAL

(The Journal of the All-India Veterinary Association)

Vol. VIII.] .

JULY, 1931.

[No. 1.]

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Major R. W. SIMPSON, M.C., G.B.V.C. Supdt. C.V.D., Mysore,
Who retires from service in July 1931.

THE Indian Veterinary Journal

Vol. VIII]

JULY, 1931

[No. 1

Editorials.

OUR EIGHTH YEAR.

Seven long years have rolled on since the inception of this Journal and now we are on the threshold of our EIGHTH YEAR. Many were the fears and doubts with which we came forward in 1924, to obey the call of the profession and took up this onerous task of manning an ALL-INDIA VETERINARY JOURNAL. Prophets were not wanting who predicted the early demise of this Journal. They pointed out in all solemnity how similar ventures have failed in more capable hands. We could see the truth in their statements. We feared, we hesitated and we questioned within ourselves if we had not rushed in where angels fear to tread!

But Fates have willed otherwise. It is the justice of the cause we represent that is responsible for what little success that has attended this Journal. We are thankful to the profession for all the help rendered. But more remains to be done. It is a reproach to the profession in India to continue issuing this Journal as a quarterly for very nearly a decade. Stagnation and Science are incompatible commodities. But yet we seem to stay on where we have started. Instead of bestowing unstinted praise on the devoted head of the Editor, year after year at the Conferences, (for which we are thankful) it would be well if the profession could extend its sympathy in a practical manner by way of increased number of articles and subscribers and thus necessitate the issue of this Journal as a monthly. It must be made a lasting monument, living and forcible, worthy of the great profession in India. Will the profession respond?

MAJOR R. W. SIMPSON RETIRES.

We invite the attention of our readers, to a report, published elsewhere in this issue of the *Journal*, of a pleasant function arranged by the members of the Mysore Veterinary Medical Association, Bangalore, for unveiling the portrait of its retiring President, Major R. W. Simpson, M. C., G. B. V. C., Superintendent, Civil Veterinary Department in Mysore. After graduating from the Bombay Veterinary College, Major Simpson entered into the Service of the State in the Military Department over three decades ago and he has now held the reins of the Civil Veterinary Department in that premier Indian State for well nigh eleven years, with conspicuous ability which will do credit to the head of a progressive department in any advanced country. The numerous services rendered by the Major in the various fields of activities have been handsomely acknowledged in the address presented to him on the occasion and in the eloquent tribute paid to him by the distinguished President of the function—Rajakaryapravina P. G. D'Souza—Member, Mysore, Executive Council. The happy sentiments expressed in the address presented to the guest by the members of the profession in Mysore, are equally shared by their *Confreres* in all the other parts of India as appropriately mentioned in the letter to the organisers of the function, by Mr. M. S. Sastry, G. B. V. C., General Secretary of the All-India Veterinary Association, on behalf of the Indian Veterinary Profession. We gladly endorse every word said on the occasion in praise of the gallant Major who has proved himself a real friend of and benefactor to the large agricultural population in Mysore State.

In his closing speech in the recent Birthday Sessions of the Representative Assembly in Mysore, the Dewan-President Aminul Mulk Sir Mirza M. Ismail, has been reported to have rightfully said. "We have been able to set an example in many matters." We quite agree and this has been possible for Mysore as she has the good fortune of having as the heads of her departments such capable and painstaking officers as Major Simpson, Dr. Coleman and others who do not feel that their duty ends in "*administering*" the departments under them but who feel, they "must all work towards the common good which should be dear to the heart of every worker in India, a more prosperous and enlightened agricultural population as a basis for India's prosperity".

Major Simpson "is the first provincial head of a Government Veterinary Department, who in response to the call of the profession, took a keen personal interest, led and organised a Provincial Association in this country." Again he "is the first among the heads of the Provincial Civil Veterinary Departments in this country, who has



Group Photo taken on the occasion of unveiling the Portrait of Major R. W. SIMPSON, M.C., G.B.V.C., Supdt. C.V.D. Mysore.

taken a personal interest in organising and successfully working up the sessions of the All-India Veterinary Conference." Among his many achievements for the benefit of the stock owner in this country, mention may be made of "the introduction, for the first time in India, of S.S. inoculation against Rinderpest on a large scale," when the *experts* in the other parts of this country were hesitating to undertake this beneficial measure and were even protesting against its introduction in this manner lest a great catastrophe might overtake us in this land if done without a large number of highly paid superior officers on the spot. The success of this great measure attracted the attention of the Royal Commission on Agriculture in India and emboldened others in this country to adopt it in their own areas. Again "the establishment of the Mysore Veterinary Serum Institute at Bangalore, the first of its kind in this vast country, excepting the Imperial Institute of Veterinary Research at Muktesar, the appointment of special officers to investigate into the diseases of sheep and goats and other animals and the introduction of rules for regulating the movements of cattle within the State with a view to check the spread of contagious diseases among animals, are of great importance among his achievements in Mysore. He did all this without ado, but with astonishing modesty and quickness. All these measures amply prove that the Major is a man of "courage and vision" as said on a previous occasion by Dr. Coleman. Throughout, he had the hearty support and co-operation from the latter officer and he was glad "to acknowledge with gratitude that nothing could have been achieved, if Dr. Coleman, as administrative head, had not taken the deep and sympathetic interest he has always done in the welfare of the staff and in furthering the work." The retiring officer has done a yeoman's service to the ryot in Mysore and he has enabled this premier and progressive Indian State to lead other parts of India even in Veterinary matters.

Major Simpson retires from a long and meritorious service and we are happy to assure him that he carries with him the good wishes of the dumb Indian ryot and the Profession for a long and happy life to enjoy the well earned rest.

QUACKERY OR WHAT?

"Inscrutable are the ways of Providence" says the adage: but still more inscrutable seem to us the ways of the Government. We are forced into such reflection at the news that the Government of Madras are considering the possibility of training up "Inoculators" at the Madras Veterinary College! We have too good an opinion of the Local Government to think that the news is correct. We

heartily wish that it is baseless. But sometimes such idle rumours have the ugly habit of turning out to be true at the eleventh hour. Let us therefore examine this question and see how grotesque, how primitive and how unfair (both to the country and the profession) is such a proposal.

Now, what is the crying need of the hour? The toll from rinderpest is great; and this should be checked. Agreed. What is the remedy? Enough of serum and virus, and enough number of hands to protect the cattle on a larger scale, and more quickly. The obvious thing for the Government to do, therefore, is to see that these things are provided for adequately. But, unfortunately the Government have not been able to supply enough of serum and virus, even to the present staff of the Civil Veterinary Department, who have been working at great pressure for the last so many years, without relief, without recognition, without praise and without thanks even! Such being the case to propose to train "Inoculators" is simply starting at the wrong end; for, the proposal only aims at providing men of doubtful quality and utility even before the medicines are made available. Will it be any wonder if these men go about the land with no work whatsoever and, like the proverb about idle hands, find some mischief to do! The question is not without its humorous side, but for the serious complications involved. It is just like employing a coach-man long before one is able to find the means to purchase a horse and a coach!

Times without number we have written in these pages the urgent need for a Serum Institute, a Research Institute, and an all-round expansion of the department to meet the growing demand for Veterinary aid from the public at large. But the Government heeded not. We even said Nemesis, that zealous Goddess, will demand her just retribution from the Government before the bar of public opinion, sooner or later. But the Government went on its way merrily, while rinderpest was taking its toll in the land. Surely, Nero was fiddling while Rome was on fire. If the welfare of the ryot, so much championed by the Government in season and out of season, were really a live issue with them, emanating from their heart and not from the lips, the Serum Institute should have been an accomplished fact long ago. Will they be straight and answer why the matter of opening the Institute is still in the air? Over two years ago the question has been "under the consideration of the Government"—whatever that might mean. The burden of song from member after member on the floor of the Legislative Council was the shortage of serum and not so much the shortage of men. If only there had been regular supply of serum and virus without break-downs, the poor overworked staff of the Madras Civil Veteri-

nary Department would have achieved yet better results. Default, if any, is on the part of the Government. Let them rectify it, even if it be at this late hour.

The next point to consider is how far it is wise to let loose in the land a band of 'quacks' *licensed by the Government* to create what menace they could for the development of Veterinary Science in this country. Their services cannot be confined to inoculation against rinderpest alone. For it is a well known fact that the disease has its periodic rise and fall. They must perforce be used for inoculation against Black-Quarter, Anthrax and H. S. Those who know how difficult sometimes it is to differentiate one from the other, under field conditions, will full well realise what amount of harm will result by entrusting such work in the hands of ill-equipped men. The Indian ryot is a conservative by birth. To get over his prejudice and inspire confidence in him, it has taken 25 years of laborious work for Civil Veterinary Department. Now, he knows that the Veterinarian is his friend. He asks for him through the Press, on the platform and in the Councils of the land. It is this piece of magnificent work that the Government is trying to undo by its fantastic proposal. The Inoculator will soon assume the role of a Veterinary Surgeon, whether the Government wills it or not, and by his malpractices will soon annihilate the sympathy gained so far by the profession. We know the Government do not mean it. For no civilised Government can be a party to encourage quackery to the detriment of Science. But if a false step is taken as a result of lack of imagination on the part of those in authority, it might prove a fatal step in the years to come.

On the financial side even, we do not consider the proposition a sound one. For the amount to be spent on these Inoculators by way of pay and travelling allowance, the Government could recruit sixty instead of forty students every year at the Madras Veterinary College, and thus hasten the day when each taluk could boast of a Veterinary Surgeon. What is wanted is a bold and comprehensive scheme launched with a determination of standing by the ryot. Palliative measures are no remedies. A radical cure is the need of the hour. Expansion in the right direction ought to be the policy of the Government and not mere tinkering with the question. Patch work is the privilege of petty contractors. It does not find a place in the new constitution of an enduring monument. Such ought to be the ideal, such the goal and such the endeavour of a benign Government. We hope the Government will drop this question of Inoculators in the interest of the country and the profession.

IS AFFILIATION NECESSARY?

We should have thought that it is too late in the day to question the wisdom of affiliating the Veterinary Colleges in several presidencies and provinces to their respective Universities. Even so appears to be the attitude of high authorities. It makes us wonder if Fates could conspire so completely against the profession, as to blur the vision of such high personages! It is an elementary right, a just and reasonable demand of a scientific profession, eager to advance and keep abreast of the times and in line with other professions, that is so much questioned, so long delayed and so far denied.

We have outlived the stage of diplomas and certificates. We live in an age when the hall-mark of an University has a charm all its own. It seems to serve as a pass-port of culture and character which commands universal regard and recognition. The status of a profession is enhanced by entering into the portals of an University.

By conforming to the requirements prescribed by the University, the profession is forced to take rapid strides. The Senate assumes an interest in the profession and tries to control its efficiency. Thus the country is benefitted ultimately. The profession enters into the comity of other learned professions. The members of the profession need not then labour under the disadvantage of a sense of *inferiority complex*, which now stands in their way of full and genuine co-operation with the profession of Medicine on one hand and Agriculture on the other. The result is obvious. The progress is slow, tardy and rightly not as marked as it ought to be.

It is an irony of fate that a profession of doctors which is so vital to the cattle wealth of the land, to public health through diseases communicable from animals to man and to the discoveries of medicine to benefit humanity at large, should remain yet unaffiliated to Universities, while in justice it should have had precedence over so many other professions which we refrain from naming.

In our issue of January 1929, we dealt with this subject in detail quoting the opinion of the Royal Commission on Agriculture, of the Conference of the Principals of all Veterinary Colleges in India and of Professor Hobday, Principal, Royal Veterinary College, London, and Honorary Veterinary Surgeon to His Majesty The King. He is one of the most eminent and respected members of the profession in the world, who has given some thought to this question. We do not intend going over those weighty arguments once again. We could only remind the several Local Governments of the trite saying that justice delayed is justice denied.

THE AXE.

The Retrenchment-axe is out again. This time it appears to be a more formidable weapon than hitherto. It has had its birth under high auspices. It has been forged on the anvil of the Legislative Assembly and specially tempered with the hearty co-operation of officials and non-officials. Before releasing it, the Hon'ble Member in charge of the Axe with the Government of India has sent out a sermon from his high pulpit, impressing on poor mortals the need for that holy instrument and the respect due to it! We are thankful to the Hon'ble Member for the enlightenment bestowed.

Special Provincial Committees have been formed to arrange for its reception. Special officers have been deputed to draw out its tour-programme. Everything promises to go like a merry-go-round. We should have no complaint against the periodical use of this instrument, if only it is judiciously applied. But from past experience, we fear it has a knack to strike those who are already stricken. It is the 'Under-dogs' in service that come in most for its attentions. It is their very meakness and helplessness that make them suitable subjects for its operations. They dread it even as the poor victims in an abattoir dread the Poll-axe. The pampered and petted nature of the 'Top-dogs' in service seem to scare away even this instrument of High birth.

We despair of the Veterinary profession in India. Leading an existence bordering on Life and Death, the profession has been craving for more succour; but the prospect is gloomy and they must be thankful to God if they are not deprived of their present famine ration. May God bless them!

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Obituary.

THE LATE Mr. K. A. RAMASWAMI AIYAR, G.M.V.C.

Yet another demise of a popular colleague we have to record. Mr. K.A. Ramaswami Aiyar, Veterinary Assistant Surgeon, Civil



The Late Mr. K. A. Ramaswamy Aiyar
Veterinary Asst. Surgeon, who died on 11th May 1931.

Veterinary Department, Madras, was ailing for the past one year and in spite of best medical aid, succumbed to the disease on 11th May 1931, at Kottakal. He was a zealous worker, who served in several capacities in the Civil Veterinary Department, Madras. He was an Assistant Lecturer at the Madras Veterinary College for some time. He served for a good length of time as Office Veterinary Assistant Surgeon to the entire satisfaction of the departmental officers and staff. Wherever he was, he was popular. He was only 39 years of age at the time of his death. He leaves behind him his wife and a host of friends to bemoan his loss.

We convey our heartfelt condolences to the bereaved family.

General Articles

BURSATEE, AN ACTINOMYCOTIC INFECTION IN HORSES IN INDIA.*

BY

LIEUT. S. DATTA B. Sc., M. R. C. V. S.

*Veterinary Research Officer, Imperial Institute of
Veterinary Research, Muktesar.*

The current views concerning the etiology of Bursatee may be ranged on the side of one or of the other of two well defined hypotheses.

(1) that the disease is caused by Habronema worms deposited in pre-existing sores by flies: (2) that it is of mycotic origin, being caused by some species of fungus which finds its way into the horse's skin in a manner not yet definitely understood. The present paper embodies certain experimental data in support of the latter hypothesis.

The author kept a large number of horses during the rainy season in humid locality side by side with Bursatee cases with unprotected lesions. The former were in very poor condition and had wounds in almost every part of the body and were under detention and treatment under the Prevention of Cruelty to Animal Act. The stables abounded in flies and in the absence of fly proof partitions the flies enjoyed free access from animal to animal but none of the uninfected animals, although thus constantly exposed to infection, developed the disease.

Concentration of eosinophile bodies in the lesion has long been considered a factor strongly supporting the helminthic theory. The author has shown that the profound concentration of eosinophiles of Bursatee tumour is essentially the same as recorded by all workers upon actinomycosis and maduromycosis and which was first described by Kanthac (1892) as "Russel and Fuchsin bodies" and subsequently considered as "degenerated plasma cells" by Unna.

The author has succeeded in isolating actinomyces in pure culture from Bursatee lesions which seemed to correspond in morphology, cultural properties and staining characters to those of human and bovine infections. When a saline suspension of the culture was inoculated on the side of the face of a donkey, a nodular growth developed at the site of inoculation and this persisted for two months. The prevalence of Bursatee during rains and in humid localities is explainable from the biological nature of the cause,

*An abstract of the paper presented to The Indian Science Congress, Nagpur, 1931.

moisture being an essential requisite of fungus growth. In view of the fact that Bursatee lesions are generally located in parts (e.g., the fetlock) which are exposed to much risk of injury, it is possible that an abrasion frequently serves as the portal of entry for the causative fungus. Lesions on the sheath, glans penis and legs suggest infection from land as in Madura Foot of man.

A CRITICAL REVIEW OF THE LITERATURE UPON ENDEMIC BOVINE HÆMATURIA WITH THE ELABORATION OF A THEORY CONCERNING ITS ETIOLOGY.

BY

LIEUT S. DATTA B. Sc., M.R.C.V.S.,

*Veterinary Research Officer, Imperial Institute of
Veterinary Research, Muktesar.*

Certain generalisations are made from a critical study of the literature and they are compared with the known facts concerning the disease as it occurs in India. All the major and minor suggested causes so far incriminated can, it is believed, be excluded. Reference is made to HADWEN'S experimental production of hæmaturia with commercial oxalic acid, but his conclusions have not been accepted. His experimental results have been utilised for developing a new theory, namely, a metabolic theory. The improbability of cattle taking such unnatural forage as that known to contain much oxalic acid, and HADWEN'S own difficulty in obtaining such forage in sufficient quantity for experimental work have been considered in rejecting his theory.

From the available literature, the author has shown that oxalic acid can be elaborated in the system and is therefore capable of producing the disease on account of defective elimination.

Excess of oxalic acid in the blood and urine presupposes the removal of calcium from the tissues and fluids. Reduction in the calcium content of the tissues may explain the absence of any tendency towards cicatrisation of bladder lesions resulting in the finding of large amounts of clotted blood in the bladder post-mortem, in hæmaturia which suggests that the immediate cause of death is internal hæmorrhage into the bladder. This indicates hæmophilia as the causal factor, due to calcium deficiency brought about by oxalates or by other acids which are also capable of bringing about calcium deficiency.

The presumptive conclusion is therefore that a variety of causes acting over long periods produce such a metabolic state that there is

a stagnation of oxalic acid, or possibly some other allied acid, elaborated in the system, and deposited in the bladder. A deficiency of calcium then set up results in hæmophilia or thrombopenic purpura. Minute lesions due to the action of the deposited oxalic acid fail to heal, leading to excessive hæmorrhage and eventual death. It has been shown by actual experiments that coagulants produce beneficial effects at least temporarily and that there is an absence of tendency to cicatrisation in an otherwise benign condition, which lend support to the presumptive conclusion arrived at.

OMNADIN IN DISTEMPER OF DOGS A COLLECTIVE REPORT.

BY

A. G. BROCKE, D. Sc., (JENA).

Among the diseases occurring frequently in the veterinary surgeons' practice, the distemper of dogs plays an important part. Usually distemper occurs in small animals from 3 to 12 months of age, but in exceptional cases grown canines, and even those which passed the disease already, are affected. However, experience has shown that special dogs are immune against distemper from the very beginning.

From the etiological point of view appropriate feeding and keeping of the dogs ought to be carefully considered because mistakes herein create a hyper-susceptibility for the disease. If the infection has actually taken place, the temperature rises after some days accompanied by loss of appetite, catarrhal symptoms and affections of the gastro-intestinal tract. Conditions go from bad to worse until the animal is in such a marasmic state that a fatal end is unavoidable. If treatment is not set in as early as possible, complications with pneumonia, high fever, etc., usually occur and nervous symptoms complete the picture. Intense muscular spasms are observed which lead to progressive paralysis. In about 90% of the cases, the nervous affections are lethal. If the animal survives, spasms of special muscles will remain which occasionally disappear after some time.

Proper treatment or prophylaxis is especially hampered on account of the fact that up till now the virus of distemper is not known. Therefore, specific treatment with vaccines, strictly speaking, does not exist. And the therapeutic effect obtained with those preparations is due only to their nonspecific properties.

Basing on this experience, the nonspecific therapy of distemper of dogs gives very promising results, a reason why recently the use of Omnadin was introduced in veterinary practice also,

Omnadin, a "Bayer-Meister Lucius" product, so far was known to human medicine only. It is composed as follows:—

- (1) A mixture of reactive albuminous bodies, consisting of metabolic products of various non-pathogenic schizomycetes which in experiments on animals play a very protective part.
- (2) A similar mixture of lipoids from gall.
- (3) A similar mixture of animal fats.

Its therapeutic action is based on a consideration that every infectious disease has to be regarded as a conflict between the body and the causal agent which starts the illness. It is the aim of a non-specific treatment to stimulate and increase the dormant biological protective forces of the organism itself for the destruction of the invaded germs.

Omnadin was originated by Much, who says that not only albuminous substances are to be regarded as the sole carriers of immune biological reaction, but that lipoids and fats play a principal part in immune therapy.

In treatment the Omnadin action sets in rapidly, and already after the first injection in a number of cases a typical, and as a rule critical fall of temperature takes place. If the disease is not cut short, the clinical course at least becomes milder and uncomplicated. Anaphylaxis has not been observed with the use of Omnadin.

Out of the literature, the following extracts are rather impressive:—

Dr. Doctor, Veterinary Surgeon, Hamburg, has used Omnadin in more than 100 cases of distemper. In certain cases, one injection of 2 c. c. intramuscularly was sufficient, sometimes 2 or 3 injections brought about the cure. The cases treated were already in rather advanced state. A marked fall in temperature and improvement of the general condition as a rule followed the first injection. He has not seen by-effects of any kind.

Dr. Mikuschka (Berliner Tierärztliche Wochenschrift, No. 32, 1929) in Vienna, prefers intravenous injections given in the Vena saphena, which brought down temperatures of 41°C. (106°F.) to normal within 12 hours. Gastro-enteritis of dogs was cut short and cured in 90% of the cases. The total number of his cases treated amounts to nearly 200, wherein Omnadin failed in the advanced stages and fully developed nervous symptoms.

Dr. Meyer has used Omnadin in catarrhalic, gastro-intestinal and nervous forms of distemper. Besides a rapid depression in temperature, immediate increase of appetite played its part towards improvement of the diseased dogs.

Drs. Vogelsang and Jelpe (Therapeutische Monatshefte für Veterinärmedizin, Bd. 11, Heft 2, 1928) report of 3 cases of paralysis of the hind legs as after-effect of distemper, which were influenced favourably by Omnadin injections.

Ruediger advises in his dissertation on Therapeutic trials with Omnadin, to give the preparation as early as possible before the stage of "exhausted defensive". If the gastric symptoms are predominating, he recommends to give the preparation without symptomatic treatment.

Out of all the papers mentioned the most effective dosage for treatment seems to be to give 1—2 c.c. injections of Omnadin in intervals of about 2 days. Of course the dosage should be individual according to bodyweight, for doses as high as 3 c.c. have been given to large dogs without any harm. For prophylaxis, intravenous injections of 0.5—3 c. c. a week seem to be a fairly good preventive measure (Mikuschka, B. T. W., 1929, No. 32).

Cats are generally more susceptible and different authors recommend not to exceed 2 c. c. for one injection in dosage.

In general the publications are rather favourable, and Omnadin when used together with symptomatic treatment seems to be well worth to be earnestly considered in the treatment of distemper.

Lately comparatively good results are reported from Mr. McGregor, Principal of the Veterinary College in Calcutta.

MANUFACTURE OF RINDERPEST VIRUS*

BY

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Introduction.—Serum Simultaneous method of inoculation has been adopted for protecting cattle against rinderpest in the State since the year 1925, in place of the Serum alone method which was in vogue previously. In this connection it may be noted that it is necessary that the two biological products—rinderpest virus and anti-rinderpest serum—required for this method of protection should be potent as well as pure. Serum should be potent enough to prevent

*Paper read at the Seventh All-India Veterinary Conference, Bangalore, 1930.

the animal getting the disease or any bad reaction and the virus must not only be living and sufficiently virulent to give the necessary active immunity, but must also be free from other bacterial contaminations to avoid undesirable consequences. In this paper the question of virus production in Bangalore Serum Institute is discussed with reference to the study of virus producers.

When the Mysore Serum Institute was started in Sept. 1927, bull calves were made use of for virus production;—some being obtained locally, others imported from the malnad areas of the State. Sometimes half-bred calves were also used. Certain difficulties were felt by the use of bull calves. Firstly, about 25% of the local and about 70% of the malnad calves were found infected with *piroplasma bigeminum* in which cases the blood could not be made use of even though the animal took the rinderpest infection; secondly, hardly about 30% of the local calves took the infection. As a result it was often impossible to adequately meet the demands for virus from the Civil Veterinary Department. To overcome these difficulties, buffalo calves were tried as virus producers; they took infection easily and they did not show *piroplasma* infection though they can with *piroplasma* blood be infected experimentally. Out of 3920 buffalo calves examined 6 animals have shown distinct *piroplasma bigeminum* either single or double and in 16 postmortems *piroplasma bigeminum* was observed in heart blood. In addition nearly 50% of the animals took the infection. Hence the buffalo calves were found to be more useful than the bull calves and were continued to be made use of.

Incubation period.—The period of incubation: varied among the animals. The following table classified indicates the number of days of incubation the animals have taken to exhibit the first sign of the disease (i. e.) rise of temperature.

	1	2	3	4	5	Total.
No. of animals	48	362	772	987	31	2200
Percentage	2.18	16.45	35.1	44.6	1.41	

Out of 2200 animals 362 required 2 days, 772 required 3 days, 987 required 4 days, the maximum number 44. 6% required 4 days.

Selection of suitable infected animals for virus production.—During the year 1929-30, 2701 buffalo calves were made use of as

virus producers. Even at the beginning of the year difficulties were felt in getting sufficient number of calves with the usual characteristic signs and symptoms of rinderpest such as the morning temperature of 104°F and other minor symptoms as eye discharge and nasal discharge which are usually looked for before the animal is selected for bleeding. Morning rise of temperature to 104°F in infected animals was very rare. As the morning temperatures of normal buffalo calves were lower than those of bull calves, for example, in the months of Oct. 1929, the temperature of bull calves varied from 98° to 99°F whereas those of buffalo calves ranged from 96° to 97°F, the diagnostic temperatures in the latter was taken as 103° F and above. Even then sufficient number of animals could not be bled to meet the demand of virus though the number of animals used for infection was increased to 12 a day. It was observed at the same time that a large number of animals which were rejected as not fit for bleeding, were dying, showing the typical signs of the disease within the observation period of 15 days. A statistical study was undertaken to find out the characteristics of the rinderpest infection in buffalo calves when experimentally infected, to collect the necessary information as a formula for the selection of suitable animals for virus production.

During the year, 2,701 animals as already stated were made use of as virus producers of which 956 were bled for virus. Out of the 956 animals 277 i.e. 10.6% of the the total inoculated showed a temperature of 104°F and above, the remaining 679 consisted of the animals that were bled during the year with temperatures between 103° and 104°F and of those that were bled with still lower temperatures during the month of June 1930.

The lowest morning temperature shown by the animals during the incubation period is taken as the temperature of the particular animal to be the minimum and the difference between this temperature and the maximum temperature during the pyrexial period is taken into consideration for the study. The lowest temperature noted during the incubation periods are 96°, 97°, 98°, and 99°F.

The average minimum temperatures of all the animals used on a particular day have been worked out for the period under consideration and they are classified according to months and the number of days in the months. The average monthly dry bulb temperature at 8 a.m. and the average humidity of the months are also included in the table.

TABLE I.

Months.	Atmospheric temperature.	Humidity.	96°	97°	98°	99°	Remarks.
July 1929	70.9	81.1	11	10			Animals were inoculated only on 21 days.
August	71.0	78.7	6	5	1		do. on 12 days.
September	72.1	80.7	6	17	6	1	
October	71.3	82.0	14	14	2	...	
November	69.3	76.9	11	16	2	...	
December	69.9	79.3	20	11	1	...	
January 1930	65.8	77.5	24	8	...	...	
February	67.7	70.5	14	8	1	...	no calves used from 24-2-30 to 9-3-30.
March	73.3	62.8	3	14	6	...	
April	77.1	67.5	21	9	...	...	
May	74.4	76.8	2	29	...	...	
June	73.1	78.2	9	19	1	1	
July			12	19	...	...	
August			14	14	2	1	
September			...	12	12	6	
October			6	20	5	...	
November			15	15	...	...	
December			178	240	37	9	Total No. of days 464

Out of 464 days under consideration 178 days showed 96°, 240 days showed 97°, 37 days 98°, and 9 days 99° F. Hence the low temperatures of 97° and 96° were more common in the proportion of 3 to 2. From a study of the above table it is observed that during Dec. 29 and January, February and April 1930, 96° average prevailed more often than during other months and that 97° average was more frequently conspicuous during May and June 1930, especially during May 1930. When the atmospheric temperature was low in the months, December 1929, January and February 1930 a large number of days showed 96° F as the lowest temperature and a large number of days showed 97° when the atmospheric temperature is high in the months of May and June 30. But in the month of April when the atmospheric temperature is at its highest, a large number of days of 96° temperature are obtained.

In the month of May when humidity is at its third highest and the atmospheric temperature is at its second highest 29 days out of 31 showed 97°. Most probably there are factors other than atmospheric temperature and humidity that influence this low temperature during the incubation period. Most probably the factor of living organism is one of them.

The total number of animals used during the year 1929-33, 2,701 are divided into three groups for convenience,

Manufacture of Rinderpest Virus

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1. Those that were bled for virus use 956,
2. Those that were rejected but died of the disease within fifteen days 793.
3. Those that were rejected and did not die 952.

The three groups are tabulated to show the signs of the disease observed in association with temperature variation of 1 to 9° F.

TABLE II.

Bled calves for 1929-30.

Temperature difference.

	1°	2°	3°	4°	5°	6°	7°	8°	9°	Total.	Percentage on 819.
M.L. & B.D.	...	—	—	7	12	31	28	13	5	96 animals	11.7%
M.L. & S.D.	...	—	8	5	7	25	20	16	1	82	10.0%
M.L. & D.	...	—	—	24	83	159	143	73	13	495	60.4%
M.L.	...	—	2	16	23	29	30	17	2	119	14.4%
B.D.	...	—	—	2	1	7	2	3	—	15	1.8%
S.D.	...	—	—	—	4	3	2	1	2	12	1.4%
	—	—	10	54	130	254	225	123	23	819	..

Symptoms not characteristic of rinderpest

Diarrhoea	—	—	1	7	17	19	20	10	4	78	..
With symptoms	—	—	1	9	11	10	14	5	—	59	..
	—	—	12	17	158	292	259	138	27	956	..

TABLE III.

Rejected calves that died within 15 days after inoculation.

	1°	2°	3°	4°	5°	6°	7°	8°	9°	Total.	Percentage on 515.
M.L. & B.D.	2	5	7	17	18	22	9	1	1	92	17.8%
M.L. & S.D.	...	...	3	6	3	10	8	...	...	30	5.8%
M.L. & D.	2	13	26	56	78	57	23	13	3	271	52.6%
M.L.	...	3	6	7	16	7	6	1	...	46	8.9%
B.D.	...	3	13	7	13	7	4	1	...	48	9.3%
S.D.	1	1	11	7	3	5	...	—	...	28	5.4%
Total.	5	25	66	100	141	108	50	16	4	513	

Symptoms not characteristic of rinderpest

Diarrhoea	5	15	19	36	27	17	10	—	—	129	
With symptoms	15	19	39	36	22	14	2	2	—	149	
Grand Total	25	59	124	171	190	139	60	18	4	793	

TABLE IV.

Rejected calves that did not die.

Symptoms of rinderpest.	1°	2°	3°	4°	5°	6°	7°	8°	9°	Total.	Percentage on 334.
M.L. & B.D.	—	—	—	—	5	1	2	1	—	9	2.7%
M.L. & S.D.	—	—	1	1	2	4	1	—	—	9	2.7%
M.L. & D.	—	5	22	39	70	59	24	6	—	225	67.3%
M.L.	—	2	8	13	23	17	10	1	—	74	22.1%
B.D.	—	—	—	2	1	1	1	—	—	5	1.5%
S.D.	—	2	—	3	5	1	1	—	—	12	3.5%
Total.	—	9	31	58	106	83	39	8	—	334	

1. Symptoms not characteristic of rinderpest Diarrhoea.
2. No symptoms

1	7	27	40	39	20	3	—	—	—	137
18	58	106	144	99	48	6	2	—	—	481
Total.	19	74	164	242	244	151	48	10	—	952

TABLE V.

Total number of animals in all the three groups that showed temperature variations.

Total rejected 1745.

Bled calves.
Rejected and died.
Rejected that did not die.

1°	2°	3°	4°	5°	6°	7°	8°	9°	Total.
—	—	12	70	158	292	259	138	27	956
25	59	124	171	190	139	62	18	4	793
19	74	164	242	244	151	48	10	—	952
44	133	300	483	599	582	369	166	31	2701
477					2224				2701

Out of the 956 bled animals 797 have died within 15 days
Out of the 1745 rejected 793 have died Do

TABLE VI.

Total number of animals that showed signs of the disease antemortem with the varying difference of temperature.

Rejected. Bled calves.
Rejected and died.
Rejected and that did not die.

1°	2°	3°	4°	5°	6°	7°	8°	9°	Total.
—	—	10	54	130	254	225	123	23	819
5	25	66	100	141	108	50	16	4	515
—	9	31	58	106	83	39	8	—	334
5	34	107	212	367	445	314	147	27	1668
146					1522				1668

TABLE VII.

Table showing the antemortem diagnosed rinderpest and postmortem diagnosed rinderpest cases.

Calves.	No.	Declared antemortem rinderpest.	Declared postmortem rinderpest.	Percentage of death among the antemortem diagnosed rinderpest case.
Bled calves	956	819	640	78%
Total rejected calves.	1745	849	793	93.4%
Total.	2701	1668	1433	85.2%

Total number of animals declared antemortem 1668.
Total number of animals declared rinderpest postmortem 1433.

TABLE VIII.

Death rate among the two groups of calves, those with temperatures 104° and above and those with temperature below 104°

	Total number	Died	Death rate.
1. Calves with temperature of 104° and above.	277	198	71.5%
2. Calves with temperature below 104°.	1411	1235	87.5%

Among the total number of 2701 animals used during the year, 277 had a temperature of 104° and above.

When the same 2701 animals are classified according to temperature variation 477 showed a temperature variation of three degrees and the rest 2224 a temperature variation of 4° and above (vide table V) and among the latter 1522 (vide table VI) showed the characteristic signs of the disease. That is, instead of utilising 277 animals with a morning temperature of 104° and above, 1522 animals are available with the characteristic signs of the disease if the temperature variation is taken into consideration i.e., instead of getting only 10.6% of the animals for use 57.7% of the animals become available with definite signs of the disease.

The total death rate among the animals declared antemortem as rinderpest (1433 deaths among 1688 cases) is 85.2% (vide table VII). The death rate among the animals that showed a temperature of 104° and above is 71.5% and that of the infected with temperatures

TABLE IX.
Number of deaths on different days after inoculation among the animals with a temperature of 104° and above and those among the animals with temperature below 104° .

	5th		6th		7th		8th		9th		10th		11th		12th		13th		14th		15th	
	No. of deaths	Per-centage.	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
104° & above.	1	51%	5	2.5	5	2.5	18	9.2	33	16.8	30	15.3	43	21.9	13	6.6	9	4.6	7	3.6	32	16.3
Below 104° & rejected.	—	—	7	1.0	21	2.9	84	11.9	121	17.0	146	20.5	118	16.6	82	11.6	51	7.2	38	5.4	41	5.8

below 104° is 87.5%. (vide table VIII.) Further, most of the deaths in both these lots have taken place between the 8th and 12th days after inoculation (vide table IX.) Considering these points it is inferred that the animals had an acute attack of rinderpest and that the blood taken from them would contain a potent virus.

The present formula, therefore, for the selection of the animals for virus production is the difference in temperature between the lowest morning temperature during the incubation period and the maximum temperature during the pyrexial period. If the variation is 4° and above the animal is selected for bleeding. Out of 477 animals that showed temperature variation of 1° to 3° , only 146 animals showed distinct signs of the disease which can be neglected as with this temperature variation, it is difficult to say with certainty whether the animals have taken the infection. After bleeding, the signs of the disease are watched for, during the subsequent days while tests for sterility of the virus are also carried on. If the animal shows the signs of the disease antemortem, and if the laboratory tests prove that the virus is good, it is issued to the department for use. Should the animal die before any antemortem signs are observed, postmortem signs as distinct ulcers in the alimentary tract and bloody contents in the intestines and in the coecum, are taken into consideration. If antemortem and postmortem signs are not confirmatory the virus is not issued though the rise of temperature may be very good.

"NOTES ON THE DEVELOPMENT OF MEDICAL ART"

BY

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(Continued from Page 270, Vol. V, No. 3)

PART V

- (1) History of the bacteriological discovery and its development.
- (2) History of organo-therapy.
- (3) Other theories.
 - (a) Electro-therapy.
 - (b) Actino-therapy
 - (c) Radiotherapy.
 - (d) Radium.
- (4) Vitamin Theory.

(1) History of Bacteriological Discovery.

Anton Van Leeuwenhock a Dutch microscopist in 1683, discovered small moving objects in the tartar from teeth while he examined it under his crude lens. In 1786, Danish Zoologist O. F. Muller showed

many structural details and classifications of organisms. Ehrinberg (1795--1876) further differentiated bacteria from the protozoa. A broad biologic importance to the study of bacteria was due to the effects of Pasteur's investigation (1822-1895). At this same time Lord Lister was also connected with the triumphs of antiseptic surgery. The further discoveries of Robert Koch put the bacteriology on the basis of an independent biologic science. In 1876, Robert Koch convinced the medical world that a specific bacteria—*B anthracis* was the cause of a specific disease in cattle (Splenic Fever). He also worked successfully how to isolate single species of bacteria and obtain them in impure culture.

Prof. Jenner made his logical and scientific crucial experiments on vaccination in 1796.

Pasteur found out the prophylaxis for hydrophobia in 1883. With the help of Roux and Chamberland, he worked out the details of the method now in practice in 1885.

In 1905, Schandiyn discovered the cause of syphilis. In 1910, Ehrlic gave the world salvarsan a specific and synthetic spirocheticide.

Tetanus.—Carle and Rattini in 1884, demonstrated the infectious nature of tetanus. In 1889, Kitasato grew by the use of special anaerobic method the organisms in pure culture and was able to produce specific disease. Behring and Kitasato in 1890, laid the foundation of antitoxins and serum therapy.

Typhoid Fever.—Thomas Willis in 1643, described an epidemic of typhoid fever. Bretonnean in 1826, described the clinical characteristics and called it "dothienenteritis" or abscesses of the small intestines. Louis in 1829, named it as typhoid fever to distinguish it from typhus fever. William Gerard of Philadelphia a pupil of Louis showed the difference between these two fevers. William in 1856, pointed out that the disease is transmitted by the patient's excreta. Eberth in 1880 saw the bacillus typhosus and 4 years later Gaffky grew it in pure culture. Pfeiffer, Kolle and A. E. Wright gave subcutaneous inoculations of dead typhoid bacilli and established the prophylactic value of Typhoid vaccination in 1894-1904.

Bacillus enteritidis was found out by Gartner in 1888 and is also called Gartner's bacillus.

Cholera.—Koch in 1888, discovered Coma bacillus.

Diphtheria.—In 1826, Bretonnean wrote a book on diphtheria. In 1878, Dr. Thrushfield published a paper illustrating the way in which diphtheria hung about damp horses.

Nuttall and Graham Smith wrote "The bacteriology of Diphtheria" probably in 1909. Loeffler in 1884, cultivated for the first time the *Bacillus* of diphtheria and described it also. Behring in 1890, prepared diphtheria antitoxin. Side chain theory of standardization of antitoxin was established in 1897, by Ehrlich.

Whooping Cough.—The cause of whooping cough is a small bacillus described by Bordet and Genron and recognised by agglutination and complement fixation tests.

Malaria.—Malaria parasite was found out in 1880, by Laveran. Ronald in 1895, found out its relation to mosquitoes. Reed, Carroll and Lazear in 1900 to 1902 found out the causation of yellow fever. For infection particular type of mosquitoes are responsible.

Filariasis.—Demarquay in 1883, and Manson in 1899.

Dengue fever.—Braham in 1903.

Sleeping sickness.—Trypanosoma—Tryp. gambianis by Dutton in 1901. **Nagana**—Tryp. Brucei by Bruce in 1895.

Surra in horse—Tryp. Evansi by Steel in 1885. Treatment for the same by Dr. Edward with Bayer '205' in 1924.

Texas fever in cattle.—Babesia begemium by Smith and Kilbourne in 1893.

African Tick fever.—S. Duttoni by Dutton and Todd in 1904.

European relapsing fever.—S. recurrentis by Operma in 1873.

Indian Kala-Azar.—Leishmania Donavani by Rose in 1904.

Typhus Fever by Nicolli in 1909.

Plague.—*Bacillus pestis* by Kitasato and Yersin in 1894, simultaneously.

Influenza.—Influenza bacillus was discovered in January 1892, by Pfeiffer, Cannon, and Kitasato independently but Pfeiffer's observations were accurate.

Contagious conjunctivitis.—Koch-Weeks bacillus first observed by Koch in 1883, and in 1890, the bacilli were successfully cultivated by Weeks in New York.

The Tubercle Bacillus.—Tuberculosis was shown as a specific inoculable disease in 1865, by Villemin. The tubercle bacilli were seen under the microscope by Baungarten in 1882. Robert Koch established the etiology of tuberculosis on solid basis by (1) Special staining, (2) Pure cultures (3) Inoculation experiments.

Bacillus leprae.—Hansen in 1872, announced his discovery of small rods within the lepra cells which after staining showed rod like bacilli.

Bacillus mallei (glanders)—Loeffler and Schuetz in 1882, discovered the specific germ of glanders but before this period Rayer in 1837, showed by experiment that the horse could be infected with the material of human glanders.

Coccidiosis in cattle caused by *Coccidium Zurni* discovered by Zurn in 1878.

Johne's disease.—In 1895, Johne and Frothingham discovered the causative acid fast bacillus of this disease in cattle.

(2) History of Organo-therapy

The investigation of organotherapy dates very early but however this theory was not altogether omitted in the past works. The Indian Ayurveda of 1800 B. C. contains reference to it.

Borden, a French, I think, was probably the first to clearly formulate a general theory of internal secretion in 1775. He held the same kind of theory as that held today. The substitute theory viz. administering the organs of the healthy animals for the diseases of those same organs in man.

In 1805, Bernard coined the words "internal secretion" as distinguished from, "external secretion." In 1856 the first work by Schiff of thyroectomy in animals was performed and suggested the internal secretion effects. In 1889, the experiments of Brown Saguard with the internal extracts drew the attention of the medical world.

It has been proved that the internal organs (glands) which were supposed to be ductless have all internal-secretions and hence have ducts. It has also been proved experimentally that each gland has some important relations with other glands.

Internal secretion is defined as a specific chemical substance, which is secreted by special glandular tissue and passed into the blood or lymph and which influences the functional activity, growth, or development of other distant organs.

How the internal secretions act

Two methods as to how internal secretions act are :—(1) Direct action on the cell metabolism. (2) Through the vegetative nervous system. (Langley has described).

The action of glands themselves may be divided into two groups (1) stimulating the sympathetic system and (2) inhibiting.

(3) (A) Electrotherapy.

Forms of electrotherapy.

1. The galvanic current.
2. The faradic current.
3. The sinusoidal current,

4. The high frequency current.

5. The static electricity.

Electrolysis is the application of galvanic current to the body by means of a needle electrode and the concentration of the current on a very small area with the intention to produce a localised necrosis. Superfluous hair and warts are removed by this means.

(1) The action of galvanic current is to produce contraction of voluntary muscles.

(2) The faradic current also has the property of producing muscular contraction but unlike the above method the current is rapidly cut off. It is used in cases of weak and paralysed muscles.

(3) The sinusoidal or alternating current is used in cases of infantile paralysis and chronic constipation.

(4) The high frequency current as its name implies, the cycles per second are extraordinarily rapid and the skin becomes flushed and congested in the treated area. It is used in cases of pruritus ani, alopecia etc. Diathermy is a form of high frequency and is used to raise the temperature of the body.

(5) The object of the treatment by static electricity is to produce a charge of electricity in the patient. It is used in cases of neurasthenia, general debility, chronic dyspepsia, pruritis etc.

(B) Actinotherapy.

The sunlight is made up of the following types of rays :—

- (1) The heat ray.
- (2) The light ray.
- (3) The chemical ray.

The following are the common ways in which light is used as a therapeutic agent.

- (1) The sun or Heliotherapy.
- (2) The finzen lamp.
- (3) The mercury vapour lamp.
- (4) The tungsten arc lamp.

(1) The sun or heliotherapy in which the patient is exposed to the sunlight for some time and then removed to the shade. To begin with feet and ankles are first exposed for 5 minutes and then up to the knee, for ten minutes until the whole body is exposed. The full dose of exposure being half hour to one hour. This increases the metabolic process. It is indicated to tubercular patients. The length of time for a cure depends upon the strength of the disease.

(2) The finzen light is produced by a large carbon arc lamp. The light is focussed on the skin on a small area.

(3) The mercury vapour lamp is an artificial sunlight and is rich especially in the amount of ultra-violet rays. The conditions applicable for sunlight are also applicable to this.

(4) The tungsten arc lamp produces a light which is very rich in the ultra-violet rays and its application is same as mercury vapour lamp.

(C) Radiotherapy.

During the past few years X-rays have been used as a therapeutic agent in the treatment of malignant diseases. The dosage depends upon the amount of rays the skin will bear as "Erythema dose" "Carcinoma dose" etc. This therapy is made use of in cases of malignant growth, cancer, bad cases of eczema, acne vulgaris, warts and psoriasis.

(D) Radium.

Radium is used just as X-rays, but it is not advisable to use it if the case is operable.

(4) Vitamin Theory.

John Pryde in 1912, worked out scientifically the definite proof of the existence of vitamins.

Up to the present time, six vitamins have been discovered, Mr. Pryde's "A", "B", "C" and "D" vitamins.

(1) Vitamin "A" soluble in fat occurs in liver, oil, butter, yolk of egg and many kinds of vegetables. It is a growth-promoter and essential to young creatures.

(2) Vitamin "B" soluble in water occurs in nuts, tomatoes, vegetable yeast, yolk of egg, liver, brain, kidney and sweet-bread. It works against nervous disturbances.

(3) Vitamin "B2", companion of "B". It is a promoter of growth and works well in serious diseases of pellagra.

(4) Vitamin "C" soluble in water occurs in most fresh fruits and vegetables. It works well against scurvy and is essential to our health at all ages.

(5) Vitamin "D" soluble in fat, companion to vitamin "A." It has a peculiar importance to young creatures.

(6) The sixth known vitamin is a fat soluble "essence" found in some vegetable oils such as that formed in sprouting wheat. It is said to counteract sterility.

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SULFARSENOL

Veterinary uses of "SULFARSENOL" from the French Book, kindly translated by the Anglo-French Drug Co., (Estn) Ltd., P. O. Box 460, Bombay.

Posology of Sulfarsenol in Canine Practice :—It is difficult to establish the posology of Sulfarsenol and to fix the exact dose of medicament per kilo of animal. At the beginning of our researches we were impressed by this fact: that a dog of small breed such as Pekingese weighing 1800 to 2000 grammes supported at the first injection a dose equal to half that which is suitable for a German sheep dog of 15 kilos.

As for all arsenicals, the reactions of the medicament do not bear directly with the injected doses, the size or the weight of the dog. It appears distinctly to us that the degree of intensity of the reactional phenomena depends above all on the idiosyncrasy of the patients.

The humoral reactions being very variable according to the organisms, the correct doses of the arsenical ought necessarily to vary with each patient. All Veterinary Surgeons who use arsenicals frequently, under the form of cacodylate or of Methylarsinate already know how to estimate and judge the different reactions of their patients; they will easily and quickly initiate themselves into the usage of Sulfarsenol.

The following table shows the doses which we generally use and which give us satisfactory therapeutic results without danger of intoxication. Whether the injections are subcutaneous, intramuscular or intravenous the average doses for the first injection are as follows:—

Dogs from 1 to 3 kilos	2 to 3	centigrammes.
Poodle, Setter from 3 to 15 kilos	3 to 6	"
Sheep dog, Dane 15 to 25 kilos	6 to 10	"

The following injections are made at intervals of 48 hours, increasing the dose each time by a quantity equal to that of the

first injection. For example, let us suppose that the use of Sulfarsenol has been decided for a dog of 3 kilos weight :

1st	injection dose injected	0	Gm.03
2nd	„ dose 48 hours after	0	Gm.06
3rd	„ dose injected on 4th day	0	Gm.09
4th	„ dose injected on 6th day	0	Gm.12
5th	„ dose injected on 8th day	0	Gm.15
6th	„ dose injected on 10th day	0	Gm.18
7th	„ dose injected on 12th day	0	Gm.21
8th	„ dose injected on 14th day	0	Gm.24
9th	„ dose injected on 16th day	0	Gm.24
10th	„ dose injected on 20th day	0	Gm.24

With regards a patient having an infection which has a rapid course however, the injections ought to be given at intervals of 24 hours.

If however, the dog shows some signs of idiosyncrasy at the beginning of the treatment, the practitioner should defer giving the injections every 24 hours and should not increase the first dose so as to enable the dog to recover and to enter into a period of leucocytic regeneration. We have seen patients, tolerating these progressive doses badly, benefit even when having recourse to injections of a dose equal to the initial dose or sometimes less than half. This knowledge of the resistance and reaction on patients is quickly acquired in practice.

When on the 5th or 6th injection, the troubles having completely disappeared and when recovery seems assured, it is necessary, above all for nervous affections, to continue the treatment and to complete a series of 8 to 10 injections in general, so as not to render the patient liable to a relapse which may appear in 15 or 30 days. These relapses are frequent in practice, their cause is generally attributed to the owners of the patients who often for the sake of economy tell the practitioner that they wish to stop the treatment which seems to them useless after the symptoms have disappeared. Then the patient being still only imperfectly impregnated with the bactericide is exposed to a recrudescence of infectious agents. The doctors Duroeux, Lehnhoff Wyld and Cousergue have shown (*Progress Medical*, 23 Fevrier 1920) that the curative action of arseno benzenes depend less on the absolute quantity of medicament used than on the frequency with which the injections are repeated. In numerous cases we have observed in reality that the treatment is much more active, much more efficacious when the injections of Sulfarsenol are in small doses but sufficient injections are given at shorter intervals. In this way this procedure enables us to reach a certain concentration

of medicament in the organism and to maintain this degree of concentration during the necessary period of time.

To obtain this object, the best way will be to divide the doses, to give three injections in 24 hours, a way which the practitioner can have recourse to only sometimes in practice, but easily carried out in hospital.

Degree of Toxicity of Sulfarsenol in comparison to other Arseno-benzenes.

From their experiments. M. M. Levy-Buig, Lehnhoff-Wyld and Gerbay proved in 1919 that Sulfarsenol was four times less toxic than 606, twice less toxic than Neosalvarsan and half less toxic than Galyl.

Actually, according to Dr. Lehnhoff-Wyld here are the statements of toxicity.

	Doses tolerated	
	For 20 grammes mouse	For 1 kilo rabbit.
With 606	1.88 millig	7 to 8 ctgr.
With Neosalvarsan	3.20 „	12 to 15 „
With Galyl	3.50 to 4 „	10 to 15 „
With Sulfarsenol	16 to 20	25 to 30 „

Without having investigated the maximum dose tolerated by 1 kilo of dog, we injected in patients by chance up to 20 centigrammes per kilo, without noticing any toxic phenomena.

Twice however, following an intravenous injection of 25 ctgr. per kilo, the animal showed disquieting but short lived disturbances, such as vomiting, discomfort, etc.

This dosage was well tolerated however, when injected subcutaneously. We have not thought it worthwhile to investigate this experiment further. In the observations which we relate further on the required therapeutic dose is not higher than 15 centigrammes per kilo.

Sulfarsenol—Physical and Chemical Properties

Sulfarsenol is a new compound arsenical derived from Sulphurous acid—the arsenic content of which is about 19% It is the Sodium salt of the acid sulphurous ether of Methylaminoarsenophenol. It is a powder of a light yellow colour, with an odour resembling that of Sulphur, almost immediately soluble in water, and, something important endowed with great stability.

The Doctors Levy-Bing, Lehnhoff-Wyld and Gerbay, after a thorough study, determined the constitution and chemical properties of Sulfarsenol. In this work which was published in the ninth

annual of "Venereal Diseases in September 1919, it states that Sulfarsenol "is composed of the base of 606 for one part and two symmetrically placed molecules of Sodium Acid Sulphate for the other."

The following experiment, very easy to do, emphasizes the great stability of the product. Let us fill five tubes successively with an 8% solution Salvarsan, German 914, French 914, Galy and Sulfarsenol. 24 hours after preparing, one notices that the oxidation zone of the first four products is already greatly advanced. The toxicity of these products on the oxidised zones has for the moment become at least 10 times greater. Sulfarsenol on the other hand under the same conditions has not perceptibly changed its aspect; it remains clear transparent and uniform throughout the capacity of the tube and by injecting into mice one ascertains that the toxicity (16 to 18 mm) has not changed. On the other hand the other solutions killed the mice in less than two hours after doses (3 mm) which were harmless the day before. It is not necessary to lay stress on the importance of this experiment.

The stability of Sulfarsenol is remarkable and is made manifest in another work in a large number of chemical reactions which would be too long to enumerate here.

Cases

On the 2nd February 1921, there was brought to us a very fine Chow Chow bitch, brown in colour, of great value, and suffering from severe pharyngitis accompanied with fever, loss of appetite and debility.

With the usual therapeutic means, the bitch recovered in a fortnight.

Suddenly on the 20th February rythmical jerking appeared in the right front leg. The next day the jerking showed in the left front leg, in the neck and in the head which struck the ground with each choreic movement. We decided to try Sulfarsenol.

The owner, in the face of such a hopeless case, consented.

The bitch had the following injections :—

On 21st February	1st injection	...	.03	cgm.
" 23rd "	2nd "	...	.04	"
" 25th "	3rd "	...	.05	"
" 27th "	4th "	...	.08	"
" 3rd March	5th "	...	.12	"
" 6th "	6th "	...	.08	"

The first two injections were followed by a feverish reaction without importance. After the third injection, the rythmical jerk-

ings were slightly lessened and after the 6th injection there was an improvement of 80%.

With this unexpected result, we deemed it discreet not to continue this treatment—applied with success for the first time in such a case—on an animal of such a value. (This bitch had been bought in England for 5000 francs gold).

The owner gratified with this great improvement did not venture to risk the life of the sufferer in continuing this experiment.

The bitch which we saw again the following year had had no further relapse.

St. Vitus Dance was apparent, only when at rest, in the front right leg and very slightly in the head.

A fox terrier bitch, aged 10 months and weighing 10 kilos was brought for our examination as it was suffering from dermatitis generalized owing to distemper. A week after the 1st June 1921, the patient having become very nervous, excitable and sensitive, showed choreic movements in the head and front legs which made walking difficult and painful. The temperature was 40.5° the buccal and ocular mucous highly congested and the pupils widely dilated. All these symptoms made us fear meningitis.

Together with a sedative medication and rest in the dark, we commenced treatment with Sulfarsenol.

Intravenous injections were impossible, but the bitch received the following injections by the subcutaneous route :

On 8th June	1st injection	...	.04	centigram.
" 10th "	2nd "	...	.06	"
" 12th "	3rd "	...	.1	"
" 14th "	4th "	...	.12	"
" 17th "	5th "	...	.12	"
" 19th "	6th "	...	.18	"
" 22nd "	7th "	...	.18	"
" 26th "	8th "	...	.18	"
" 30th "	9th "	...	.24	"
" 8th July	10th "	...	.24	"

The first two injections were followed by a feverish movement, shivering and a torpor rather pronounced, but of short duration. The rest of the injections were well tolerated.

After the 3rd injection, the choreic movements became less frequent and weaker, walking became easier and the nervous system was less irritable. With continuation of the treatment, an improvement was maintained until a complete recovery resulted.

The bitch, which we often see, is now in very fine form.

A white Scotch terrier, aged two years, weighing 8 kilos, and which had been suffering with St Vitus Dance for 6 months, was brought to our clinic on 20th February 1922.

This St Vitus Dance was an after effect of distemper. The head, neck, vertebral column, and the front legs were apt to shake violently. With each movement, the dog fell on its breast bone, and its condition was so serious that I advised that it should be destroyed. The owner refused to have it destroyed, however, and asked me to attempt to cure it regardless of the length of treatment and expense even although it seems impossible.

The same day we commenced treatment with Sulfarsenol—

On 20th February	1st	injection	0 Gm'06
„ 22nd „	2nd	„	0 Gm'12
„ 24th „	3rd	„	0 Gm'12
„ 26th „	4th	„	0 Gm'18
„ 28th „	5th	„	0 Gm'18
„ 2nd March	6th	„	0 Gm'20
„ 4th „	7th	„	0 Gm'24
„ 8th „	8th	„	0 Gm'24
„ 18th „	9th	„	0 Gm'24
„ 28th „	10th	„	0 Gm'24

The dog tolerated this treatment well, showing only a feverish reaction the day after the 1st injection. After the 3rd injection there was no improvement and we were rather afraid of being unsuccessful. We had recourse to a supplementary treatment of injections in another region—5 c. c. Electrargol 6 hours after the Sulfarsenol injections. The dog tolerated this treatment very well.

After the 8th injection of Sulfarsenol, the symptoms abated slowly by degrees right up to the 30th of March. At that time we obtained an improvement which could be considered about an 80% cure. Three years have passed since this treatment and the dog has still a few slight jerks but only when at rest. To-day it is quite presentable, since it lives within an ambassador's house.

An airdale bitch, of pure breed, weighing 12 kilos and aged months was brought to our clinic at the commencement of bronchitis which finished favourably in 15 days. But on the 20th May 1923, symptoms of chorea appeared in the right shoulder, in the back and in the neck. Temperature was 39.5°, appetite was rather capricious and the general state very depressed.

Treatment with Sulfarsenol was commenced immediately. The bitch received intravenous injections as follows :—

20th May	1st	injection	0'06 ctgr:
23rd „	2nd	„	0'10 „
25th „	3rd	„	0'10 „
27th „	4th	„	0'16 „
29th „	5th	„	0'18 „
31st „	6th	„	0'18 „
2nd June	7th	„	0'25 „

The first injection of 0'06 centigramme was followed by a severe feverish reaction, rather pronounced prostration and complete lack of appetite.

On 22nd May, in spite of the weakness shown by the patient, we ventured to continue the treatment and an injection of 0'05 Sodium Cacodylate and 20 c. c. physiological serum was given.

On the 23rd, the general condition was distinctly better but the choreic movements were more pronounced. Treatment with Sulfarsenol was continued and an injection of 10 centigrammes was given. The next day there was another severe reaction, temperature was 40°, and there was lack of appetite. On 25th May we ascertained a lowering of temperature to 39° and an improvement in the general condition; we gave the third injection of 10 centigrammes which caused no reaction of any importance.

On 27th May, the choreic movements were diminished almost by half. An intravenous injection of 16 centigrammes was given which was well tolerated. The remaining injections also were borne.

On 2nd June, the choreic disturbance did not show and a last injection of 25 centigrammes was given by the subcutaneous route as the dog submitted less readily to intravenous injection. At this time the owner was satisfied and treatment was stopped at her request.

A month later, on 5th July, the bitch was again brought to us as it had had a relapse of St. Vitus Dance. We decided to recommence treatment which was given as follows :—

5th July	1st	injection	0'10 ctgr.
7th „	2nd	„	0'15 „
9th „	3rd	„	0'20 „
11th „	4th	„	0'25 „
13th „	5th	„	0'30 „
16th „	6th	„	0'30 „
20th „	7th	„	0'30 „
27th „	8th	„	0'30 „
3rd August	9th	„	0'30 „

This treatment was well borne and from 9th July, the choreic disturbances lessened, were much weaker towards the 13th and disappeared on the 16th. To avoid another relapse 3 injections of 30 centigrammes were given at weekly intervals to enforce impregnation of the organism.

We then obtained a complete and definite cure. The bitch which we often see is now quite well.

A Cocker Spaniel aged 12 months and weighing 8 kilos was brought on 8th March 1922, for our examination. The dog had been suddenly affected with cerebral congestion and meningitic convulsions following an attack of gastro-enteritis due to distemper.

After 48 hours, these convulsions subsided, but symptoms of St. Vitus Dance appeared in the four legs followed in 3 days by motor paralysis.

Fixation abscess, mustard plasters and injection of Electrargol gave no results. We decided to try, with little hope of success, a series of intravenous Sulfarsenol injections which was immediately commenced with the following doses:—

13th March	1st injection	0.06 centigramme
14th "	2nd "	0.10 "
15th "	3rd "	0.12 "
17th "	4th "	0.18 "
19th "	5th "	0.20 "
21st "	6th "	0.20 "
23rd "	7th "	0.25 "
25th "	8th "	0.25 "
27th "	9th "	0.25 "
29th "	10th "	0.25 "

All the doses were very well tolerated.

Our surprise was great on seeing the convulsions cease after the 3rd day, and a marked attenuation of the choreic movements.

The dog which had been taking no food, accepted and digested several pieces of raw meat. On the fourth day, the appetite still remained and the dog which we raised on its four legs was able to stand for a few minutes. On the sixth day, six hours after the 5th injection the dog got up by itself and walked a little. Chorea had disappeared.

During the next few days there was a gradual improvement and after the 10th injection the general condition was good. There remained only a slight palsy of the posterior quarters which completely disappeared the following month, during which time four injections of 15 centigrammes of Sulfarsenol were given by subcutaneous route at regular intervals.

This dog, which we saw one year afterwards, was in a very good condition.

A German Sheep dog, 15 months old was brought to the clinic on 15th November 1923, as it was suffering from nervous disturbance—an after-effect of Broncho Pneumonia. This dog showed signs of rythmical jerking in the head, neck and front legs.

Our colleague, who had treated the dog for Broncho Pneumonia gave in the face of the St. Vitus Dance complication a prognosis of incurability. The owner, who had been rather badly maimed in the war asked us to try everything in our power to cure his faithful companion. The only treatment to try, to our knowledge, remained in the immediate use of Sulfarsenol, although the symptoms had been apparent for 15 days. We made reservations on the result, however, fearing that some medullary lesions had already been formed.

The dog which was rather nervous gave a little trouble on the operating table so it was difficult to give intravenous injections. The contents of the syringe were therefore injected into the muscular mass of the shoulder without any immediate painful reaction. The next day the region where the injection was given was very sensitive, tumified, painful to contraction and caused rather a decided limp. The swelling treated with warm compresses disappeared in five days.

The following injections were given in the conjunctive tissue behind the shoulder in doses as below—

15th November	1st injection	intramuscular	0.36 ctgr.
16th "	2nd "	subcutaneous	0.12 "
18th "	3rd "	"	0.18 "
20th "	4th "	"	0.18 "
22nd "	5th "	"	0.18 "
24th "	6th "	"	0.24 "
26th "	7th "	"	0.24 "
28th "	8th "	"	0.30 "
30th "	9th "	"	0.30 "
3rd December	10th "	"	0.30 "
8th "	11th "	"	0.30 "
15th "	12th "	"	0.30 "
21st "	13th "	"	0.30 "

The first injections were followed by general weakness with high temperature and lack of appetite.

The owner was not alarmed about it. After the 3rd injection the general condition improved greatly and the remaining injections left the dog with no untoward after-effect.

The choreic symptoms increased till 18th November, then showed signs of stopping about the 22nd. They then started to become less violent and on 30th November completely disappeared.

In order to avoid a relapse injections of 0.30 ctgr. were continued during the whole month of December.

The dog which we often see is in very fine form, and has shown not even the slightest symptom of St. Vitus Dance.

VETERINARY RESEARCH IN THE UNITED PROVINCES*

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Introduction:—Although Veterinary Research is still in its infancy, undoubtedly, it has developed not only at the Imperial Institute of Veterinary Research, Muktesar, but also in the Laboratories connected with the Colleges and Departments in the United Provinces. I do not propose to trace the history and extent of its development throughout India but will confine my observations on the great possibilities of Research work in this Province. But before I proceed to do this the words 'Research and Experiment' need definition.

Research and Experiment:—'Research' means refined method to find out something, and 'Experiment' means a trial made in a refined and intelligent way to find out something in the light of previous experience. Claude and Bernard in the experimental medicine (English translation) have defined as follows:—"Considered in itself, experimental method is nothing but reasoning by whose help we methodically submit our ideas to experience—the experience of facts. An experimenter must be a theorist and a practical man. An experimenter reasons, compares facts, puts questions to them and by answers which he extracts, tests one by the other. This sort of control by reasoning and facts, is what constitutes experiments".

Observation and Experiment:—An observation differs from an experiment in this, that knowledge gained through observation seems to appear of itself, while that an experiment brings us, is the fruit of an effort that we make with the object of knowing whether something exists or does not exist. Cuiver puts it "the observer listens to Nature: the experimenter questions and forces her to unveil herself". Experimental method leans successively on the three divisions of that

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unchangeable tripod:—sentiment, reason and experiment. The three essential things an experimenter should possess are:—

(1) He must doubt. (2) He must avoid fixed ideas. (3) He must keep his freedom of mind.

Need of Research:—The urgent need of research in this province of great animal importance cannot be too strongly emphasised. The Royal Commission on Agriculture in their most interesting Report have said 'We agree with those witnesses who hold that in addition to the work at the Central Research Institution, investigation should be fostered in the provinces. We found, every where, evidence that the Officers of the Provincial Veterinary Departments take a keen interest in the work which is proceeding at Muktesar and we desire to see this interest continued among members of the enlarged Provincial Services. Our department has always watched with keen interest the work in progress at Muktesar and has lost no opportunity of helping the Institute with data, materials and facts for carrying out researches in some of the most important subjects such as Sterility in connection with Contagious Abortion in cattle—a subject which is attracting the attention of Veterinary Scientists throughout the world.

Classification of Research: Research may be classed under two heads:—

1. Laboratory Research: which requires advanced scientific training and laboratory equipment. Mr. K. Hewlett, Principal of the Bombay Veterinary College has said. "A vast field awaits the Research worker into Animal Disease, for up to the present, but the border line has been explored. Research in my opinion, is one of the chief needs of India to-day." There are three laboratories in the Province the principal one attached to the Office of the Director, and two others attached to the Offices of the Superintendents of Agra and Allahabad circles, where Research, Investigation and Microscopical diagnosis are performed. The equipment of the laboratories is by no means complete and the limited resources at their disposal have not permitted to undertake research work at any great magnitude. The success of any campaign directed towards Research necessarily depends on more men and money. We have only made a beginning, and in the right direction, and in spite of adverse circumstances we have made a considerable progress. We have carried out experiments on Piroplasmosis, Kumri, Bursati, Nasal Granuloma, Distomiasis, Fowl Cholera, Spirochaetosis, Skabies, etc., with success. We look forward with keen anxiety for generous Government grants for this important branch of our profession.

Field Research:—This calls for no more than the spirit of enquiry, faculty of observation and keenness for pursuing problems.

There is a popular impression among the members of the profession that research work can only be conducted in the laboratories and that they are free from all responsibilities in the matter. This impression is wholly incorrect and all of us can contribute a great deal to the advancement of our profession if we develop our faculty of observation, spirit of enquiry and perseverance of pursuing problems.

These two branches of Research are inter-dependent and without co-ordinated efforts on the part of both, any real progress in the field of Research is impracticable. Col. A. Olver, Expert Adviser in Animal Husbandry to the Government of India has said, "Field investigation must be the first step in all disease control. Without the knowledge of local disease conditions obtained from such investigations further research is impossible, and without an organised Veterinary Service, capable of applying this knowledge it is not possible to reap the benefits made possible by research." Therefore it behoves all members of this profession to rise equal to the occasion and keep abreast with the recent developments in the science and develop their faculty of observation, spirit of enquiry and perseverance to pursue problems and to be enthusiastic in collecting data, facts and materials for research work.

Scope of Research Work:—There is abundant scope of carrying out research work in the field. Diseases due to parasitic infestations have almost been left unexplored. The Royal Commission on Agriculture in their most interesting report have said, 'There are however, other wasting diseases which must cause great losses. Chief amongst these are diseases due to animal parasites, such as Round Worms, Flat Worms and Protozoa. It has been ascertained that such parasites are extremely common, but little is known of their economic importance. In countries in which this subject has received attention, the loss among live-stock, because of parasitic infection has been shown to be great. There can be little doubt that the condition of many of the waste animals to be seen on common grazing grounds all over India is, in part, due to parasitic infection: and, although in the absence of any extended enquiry into the damage done by such diseases, no definite statement can be made, it may be surmised that over the drier parts of the country the losses caused may be considerable and that, in the damper regions, they are probably heavy.' One of the commonest scourge of cattle in this province is 'Liver Fluke' disease and the mortality from it is by no means small. During the year 1929-30, a severe pestilence of "Distomiasis" or 'Liver Fluke' disease was reported from village 'Karhera' near Ghaziabad and over 100 animals succumbed to this disease. This outbreak afforded an opportunity for conducting research in the field. A thorough investigation and comprehensive

study with regard to history, causes, symptoms and treatment of the disease was undertaken by deputing the Veterinary Inspector and Veterinary Assistant Surgeon, Ghaziabad, and it is to their credit that they have so satisfactorily conducted the work under instruction from the Agra Laboratory. It will be interesting to note that the treatment which consisted in the administration of Carbon-Tetra-Chloride in gelatin capsules in doses varying from 2 to 4 drachms and undertaken in the nature of research, gave very satisfactory results, nearly 80% of the affected animals having been cured. Experiments are still in progress in some of the villages near Ghaziabad and the results so far reported are satisfactory.

Protozoal infestations:—There are diseases which run concurrently or independently and sometimes manifest symptoms which are similar to, if not identical with each other. I would quote one specific instance—and a most common one, daily met with by every Veterinarian—and that is 'Rinderpest'. In many cases this disease runs concurrently with protozoal infestations such as Babesia-Bigeminum, Theileria-Mutans, Coccidia and Trypanosoma. In many cases Coccidiosis manifests symptoms similar to Rinderpest. No systematic investigation has yet been carried out with regard to the incidence of diseases due to protozoal infestations and very little is known of their economic importance. There is much to study in every disease and we should all be enthusiastic and make a habit to be inquisitive, to take notes of cases, to perform post-mortem examination as far as possible and collect materials for laboratory examinations and investigation.

Danger of Limiting Scope:—There is abroad amongst the members of the profession the impression that their main duties lie in carrying out inoculation. Undoubtedly inoculation against diseases is one of the main functions of the department but that it is no reason why they should restrict their activities to inoculation only. The operation of the inoculation is not a difficult task but the judicious use of serum having regard to the virulence of the disease etc., and correct diagnosis are things which matter most. The above impression is detrimental not only to the department but to the person himself. In course of time he becomes a mechanical worker and loses all powers of observation, discretion and intelligence and loses all that he gained during his college career instead of adding more to it.

Scourge of ticks:—There is the scourge of ticks of various kinds which are by no means uncommon. The diseases conveyed and exhaustion caused by them is considerable. Up till now they have been left almost untouched. It is time that we should direct our immediate attention to this important problem and begin thorough investigation and try to find out means of cleansing

this province of this scourge. The greater part of the United States of America has now been cleansed of this scourge under the directions of Dr. Mohler.

Tuberculosis:—The subject of Tuberculosis is of very considerable importance in view of the fact that it affects the welfare of both animals and men and is worthy of exhaustive investigation. Major Oliver during the first meeting of Veterinary Officers in India has said "he thought he was safe in saying that no really scientific enquiry had yet been carried out in India as to the incidence of Tuberculosis in cattle. Veterinary Officers could duly express an opinion based on cases that had come to their notice and, considering the vast numbers of cattle in the country, any opinion could be of little value until a systematic investigation had been carried out. In the United Provinces, start had been made some years ago at Cawnpore, when three per cent of the cattle at the slaughter houses were found to be affected with Tuberculosis, but want of officers prevented the enquiry being extended to other cities. It was ascertained that Tuberculosis was much less prevalent than in Europe but no accurate details were at present available, and it was the duty of the department to study the question systematically."

Dr. M. B. Soparkar deputed by the Indian Research Fund Association to the Imperial Institute of Veterinary Research, Muktesar, worked upon the problems of Tuberculosis affecting cattle. He found 16% of the cattle slaughtered at Ferozepur and Lahore to be tuberculous. Dr. Soparkar's investigation on the incidence of Tuberculosis at Saharanpore Remount Depot is interesting. He in his own report has noted "A visit was paid by doctor Soparkar to the Saharanpore Remount Depot to examine some cattle there that were said to be in bad condition. Out of 40 animals, only 20 were available for examination on his arrival, the rest having been previously destroyed. The animals were subjected to double intradermal tuberculin test with both ordinary and avian tuberculin and out of this number 8 or 40% reacted to ordinary tuberculosis, 2 gave a suspicious reaction, 5 reacted to avian tuberculin and 5 were negative. The animals were destroyed and subjected to a careful post-mortem examination for evidence of tuberculosis and Johne's disease. In no case was a definite evidence of Johne's disease detected. In one case extensive tuberculosis of the lungs and the mesenteric glands was detected and smaller and more localized lesions with demonstrable tubercle bacilli were detected in 4 animals, one of which had given a negative reaction. 4 strains were isolated from these animals and all of these on investigation were found to be of the bovine type including the one isolated from an animal that had given a positive reaction with avian tuberculin." Therefore it would appear that the incidence of Tuberculosis is not uncommon as is

generally supposed. A thorough investigation is urgently necessary and members of the profession who are privileged to hold charge of the slaughter houses would do well to record the incidence of this disease amongst slaughtered animals and collect materials for laboratory examinations and investigation. It will be interesting to note that in the United States of America Bovine Tuberculosis campaign has made a considerable progress due to consistent efforts of Federal State and Country Veterinarians. Dr. Elmer Lash of the Bureau of Animal Industry has said that the infection of cattle has been reduced from 4% in 1922 to 1.7% on January 1, 1931.

Conclusion:—There are various other subjects which need investigation but gentlemen I do not propose to make my paper lengthy. I have touched only the important ones and endeavoured to impress the importance of Research work in this Province. I hope and request that you will take whatever good there is in this paper and forgive the short-comings.

AUTOVACCINE AND ITS PREPARATION.*

BY

S. GANAPATHI AYYAR, G.M.V.C.,

Assistant Lecturer Veterinary College, Madras.

Autovaccine therapy is the result of modern advance in science. It is nothing but a biological product prepared from an animal for use of the same particular animal. It gives immense useful results while several other remedies fail.

In veterinary practice autovaccine has given beneficial results. For curing chronic affections such as otorrhoea, suppurating sinuous wounds like fistulous withers, general bacterial infection of the circulatory system, rheumatism etc., the bacterial vaccine prepared from infected materials often proves a specific and could even be stored as stock vaccines for similar affections though it would be advisable in the interests of deriving the maximum effect, to prepare fresh autovaccines.

A laboratory for such a preparation requires proper collection of materials from the lesions, avoiding every chance of extraneous contamination. Test tubes fitted inside with copper wire and a piece of cotton wool swab and the mouth of the tube covered with cottonwool, all thoroughly sterilised in hot air at 160° C. or more; empty sterile tubes or bottles serve as useful receptacles for collecting pus or other materials for the preparation of autovaccine.

*Paper read at the 7th All-India Veterinary Conference, Bangalore, 1930.

If the receptacle is a sterile swab, dip the swab in a freshly opened lesion and transfer the same back into the test tube which should immediately be despatched to the laboratory with the history sheet.

When only sterile empty test tubes or bottles are available, a small quantity of the exudate or pus from the fresh lesion is collected on the blade of the scalpel, that has been previously heated and cooled and transferred to the receptacle which should be sealed at the mouth and sent to the laboratory. A field worker, when he finds no sterile receptacle available for the proper collection of infected material may as well take an empty clinical thermometer case which should be heated red hot and cooled.

Small bottles with narrow mouths may be boiled for about an hour and they may be used, to send samples of material for vaccine preparation, though not, with equal advantages.

The technique of the preparation of the vaccine. Inoculate proper media preferably the ordinary broth and 3% agar slants, that are in the daily use of a laboratory, for isolation of organism or organisms present. A preliminary smear of the material often indicates the nature of the infection and aids in the choice of suitable culture medium. It would be better to use agar plates in petri dishes if more than one organism is present in which case the one that is pure should be inoculated into fresh agar slants. All these cultures after sowing, should be incubated at 37° C. for 24 to 48 hours to facilitate the proper growth of the organisms.

A loopful of pus may be dissolved well in a tube of broth, a small drop of which is sowed on agar slants. This method of dilution is equally good for getting the causal organism of the affection with less contamination with other organisms. A thin platinum loop of about 1 to 2 m.m. diameter is used for the purpose.

When a pure culture of the organism is isolated, inoculate solid media with the pure culture. For freely growing organisms as staphylococci, use two agar slants. For slowly growing organisms as streptococci, use 5 or 6 tubes or better blood agar tubes. Incubate culture for 24 hours at 37° C. Make smears from culture to detect contamination. Cover the growth on one of the agar slants with sterile normal saline carbolised with 5 % phenol, the best preservative. Bring the organism into suspension by gentle shaking or with platinum loop. The suspension from the first tube should be poured or better pipetted to the second tube and then to the other tubes and the process is thus repeated until an emulsion of the growth of the organism from all the tubes is obtained. The emulsion is then shaken in a sterile bottle or tube containing glass beads to break up clumps of bacteria. If necessary the emulsion may be filtered through funnels with folded filter paper in position previously sterilised in hot air.

Estimate the number of bacteria per cubic centimetre in the emulsion by comparing the amount of opacity present in the emulsion to the opacity of the standard sealed opacity tubes numbering from 1 to 10 containing barium sulphate, the density of the tubes corresponding to the bacterial suspension. The above index of standard opacity tubes namely nephelometer is patented and is available for purchase. Necessary instructions and information for the use of the same are tabulated in the nephelometer.

This method is very suitable for vaccines, prepared from solid agar slants as staphylococcus, diplococcus and typhoid vaccines. Standardise the vaccine according to the nature of the organism isolated by diluting the emulsion with more and more carbolised saline.

For practical purposes, where no standard opacity set is available, it would be better to dilute the vaccine to such a faint opacity as would permit a printed matter to be read easily. This holds good especially when the vaccine is polyvalent. This means when no definite pathogenic bacteria are isolated a suspension of the different organisms is made for the preparation of the vaccine. After standardisation, the vaccine is sterilised in a water bath (60° C.) for one hour preferably by the intermittent method for three consecutive days. After heating, inoculate agar slants and broth tubes with several loopfuls or drops of the vaccine. The cultures are incubated for 24 hours and if not sterile, the vaccine should be heated again for another hour or better discarded and another fresh vaccine prepared. Place vaccine in sterile vaccine bottles or in ampoules properly labelled.

What is now prepared is autovaccine. As the name indicates, the animals after the injection of the autovaccine selfcombat and get rid of the affection. Some ryots have told me that fattening occurs after vaccine treatment. 100 to 500 million organisms per c.c. of the vaccine may be taken as an initial dose for most of the organisms. This would prevent the animal from getting severe reaction. It is often customary and advisable to give at least three to six injections of the autovaccine subcutaneously at an interval of about three days.

Clinical Articles

CHRONIC LUXATION OF PATELLA IN CATTLE.

BY

G. N. ROY CHAUDHURI, G.B.V.C.,

Professor of Surgery and Obstetrics, Bihar and Orissa Veterinary College, Patna

A peculiar disease of nervous character simulating stringhalt in horses is found among working bullocks in this province. It affects both hind legs and the animal in the act of progression brings the leg upward with a jerk. Sometime back an article appeared in the *Indian Veterinary Journal* regarding the treatment of this disease. It was the injection of Iodine, deep into the capsule of the joint in the groove of the patellar region: it was stated that this effects a cure: the same treatment was attempted with indifferent results in the College hospital; apart from the painful swelling it caused, the animal was laid up for some days hardly able to walk.

Nature of the disease:—On enquiry from the owners it was ascertained that the disease develops gradually, affects particularly bullocks, which, in course of a month or two become lame in one or both hind legs. The jerky movement is constant but diminishes with exercise. It affects bullocks of all age, specially older ones: on pressure over the gluteal region or the stifle no evidence of pain or tenderness is found. No rise of temperature or any other constitutional disturbance is seen. Locally it is known as 'Jhanak'. With the gradual progress of the disease, the bullock becomes useless.

Treatment adopted:—In the belief that the Sciatic nerve is irritated from some unknown reason (a statement which undoubtedly requires further investigation) a treatment by Sodium Salicylas Naturalis was tried and five cases in all stages of the disease were treated.

Technique of injection:—Instrument—One 20 c.c. Record syringe and a big needle i.e., 5" or 6" in length. In the poorman's groove some 3" to 4" away from the hip joint in a downward and backward direction the entire length of the needle is thrust in and the following Sodii Salicylas Nat. Solution is injected intramuscularly.

The 1st injection consists of 15 grns. of Sodii Salicylas Nat in 15 c.c. of sterile water, and subsequent injections are repeated every alternate day and in the course of the last two injections (3rd and 4th) the quantity of the drug was increased to 20 grs. in 20 c.c. of sterile water.

Eustrongylus Gigas in the Kidney of a Dog 45

Three or four injections result in a complete cure, but in advanced cases more may be necessary. An improvement is seen after the first injection.

Clinical cases:—

- (1) A grey C. B. bullock about 6 years old belonging to Dasharath Mahto of Ganj.

Date of admission	2-1-31
" " discharge	8-1-31 (Cured).

- (2) A mouse grey C. B. bullock about 7 years old, belonging to Tukhlal of Ganj.

Date of admission	2-1-31
" " discharge	8-1-31 (Cured).

- (3) A grey C.B. bullock about 10 years old, belonging to Ram Bujhawan Singh of Rupaspur.

Date of admission	22-1-31
" " discharge	28-1-31 (Cured).

- (4) A grey C. B. bullock about 9 years old, belonging to Saudagar Singh of Hindmu.

Date of admission	31-1-31
" " discharge	6-2-31

- (5) A grey C. B. bullock about 8 years old, belonging to Gajadhar of Hindmu.

Date of admission	31-1-31
" " discharge	6-2-31 (Cured).

Points of observation:—Injection of Sodii Salicylas Nat. does not cause any pain or local swelling—the bullock is not in any way put out of work and the results are very noticeable in a short time.

EUSTRONGYLUS GIGAS IN THE KIDNEY OF A GREAT DANE DOG.

BY

G. N. ROY CHAUDHURI, G.B.V.C.,

Professor of Surgery and Obstetrics, Bihar and Orissa Veterinary College, Patna.

Subject:—Great Dane Dog, age about two years, sex male, colour brindle, owner, Mrs. G.

History:—One day suddenly the dog left his food, looked dull, breathing was rather quick. Owner took the temperature and found it to be 105°F, urine and bowels normal.

On examination at the outdoor clinique in the College hospital, a thick discharge was noticed from the nostrils but no other diagnostic symptoms. Blood and nasal discharge proved negative. An ordinary alkali mixture was prescribed and owner was asked to report again. Between second and third day the temperature ranged between 103°F to 105°F, in the evening a noticeable gastritis was found, no other marked symptoms developed, he lapped liquid food that was offered, urine and bowels moved normally and nothing unusual was detected.

On the 4th day temperature remained steady, gastritis increased and was treated for the same, in the afternoon temperature came down to subnormal and the dog collapsed.

A post-mortem examination was held on the following morning, a quantity of sanguinous fluid was found in the peritoneal cavity and on cutting into the kidney, in its pelvis was found a parasite twisted round, which was immediately identified by the Principal, who was present there, as *Eustrongylus gigas*. It was blood red in colour and the affected kidney showed general hæmorrhage. No other organ showed any marked change.

Size of the worm :—50 cm. long and as thick as a lead pencil.

Points of observation :—It is always stated in text books that the affected dog will show signs of colic, emaciation, arched back, staggering gait, urine to be turbid containing blood, pus, etc. But this particular case in no stage gave any evidence of these symptoms, he was in best of condition and a fortnight before obtained first prize in the 'Dog Show' in Calcutta. During the acute attack all these characteristic symptoms hardly appeared to attract notice.

Parasite is preserved in the College museum.

FOREIGN BODIES AND THEIR SOJOURN.

BY

P. SUBBARAYALU, G.M.V.C.,

Veterinary Assistant Surgeon, Chicacole.

Case No. 1.

Subject :—A country bred bullock, aged 10 years.

History :—This bullock was reported to have developed a swelling in the region of throat ten months ago. All attempts to treat and cure it, including firing as a last resource having proved futile, the owner brought the animal for treatment to the dispensary on 10-9-29. The animal was said to have been worked until a week back when some difficulty in breathing was observed.

Symptoms :—A big fluctuating swelling down the throat, inclined more to the left about the size of a cocoanut. Temperature 101.4°F.

respirations laboured due to pressure brought upon larynx and trachea and pulse hard.

Diagnosis :—Presence of a foreign body.

Treatment :—Opened with the usual antiseptic precautions on 11-9-29, taking great care not to injure or damage any vessels or nerves about this area. Drained off thick inspissated sanious and foetid pus about a pint and extracted with some force what was felt to be a hard cord like string, a sewing needle $2\frac{1}{2}$ " long, the nucleus of the abscess. Antiseptics and counter irritants hastened sloughing of the cavity and the animal was cured and discharged.

Will any of my professional brethren kindly account for the needle's sojourn? Was it picked up when lying down and worked its way from without inwards puncturing the skin? Or could it have been swallowed along with food and stuck up over there?

In conclusion, when such cases with chronic abscesses come across, a diagnosis should be arrived at after a search for the presence of a foreign body.

Case No. 2.

Subject :—A country bred cow, aged about 6 years.

History :—While talking one evening with the local Sub-Divisional Officer, P.W.D., I was informed that his cow is having a small wound ever since he purchased her five months ago, on her chest wall, apparently closing and re-appearing now and then and discharging pus. Having seen the patient then and there, I centred my suspicions for the lodgement of a foreign body in the chest. Arranged for an operation the next day. The yield of milk was fairly good.

Symptoms :—Condition good. Palpation over the chest above the sternum on its right side immediately above the point of elbow, caused some pain which was found to be absent while the animal walked and turned from side to side of her own accord. A small wound evidently a sinus was found to discharge water. The silver probe was found to disappear in the sinus to its entirety, on being probed. Further palpation revealed thick cording about 5 to 6 inches in length leading from the opening.

Diagnosis :—Presence of a foreign body.

Treatment :—Operated and extracted a sewing needle, without its eye, $2\frac{1}{2}$ " long, and with the usual antiseptics fomentations and counter irritants the animal was cured and relieved of the trouble.

When the foreign body has not punctured the pericardium, during its sojourn from the rumen, reticulum, diaphragm, chest and thoracic wall, is it a case of true traumatic pericarditis?

The diagnosis in complaints of this nature must be, no doubt, arrived at for the presence of a foreign body and a thorough

search as far as possible without causing injury to the heart or pericardial sac is found necessary to get at the cause.

Case No. 3.

Subject:—A country bred cow, aged 8 years.

History:—This cow was brought for treatment on three occasions previously for a chronic sinus or wound on the left chest above the sternum on the inner aspect of the point of the elbow, said to be in existence for past six months. But the animal discontinued attending the institution on the two latter occasions after attending only for one or two days. Operation was performed twice. On both the occasions no traces of any foreign body were detected. As the owner was not prepared for a bolder operation on the third occasion, it was let go: and now the case was brought again after consideration, for a further exploration and a bolder operation.

Symptoms:—Temperature 101.4° F., respirations normal, pulse irregular. A chronic wound on the left chest, above the sternum on the inner aspect of the point of elbow discharging pus which was foetid. The wound is said to apparently get cicatrised and burst open now and then at intervals of 6 or 7 days. Palpation over the region caused severe pain and startling and jerky movements, the animal flinching when made to run or turn aside.

Diagnosis:—Presence of a foreign body especially sharp pointed needle or the like.

Treatment:—With all the usual antiseptic precautions a bolder operation was undertaken. The sinus on being enlarged deeply, deeper than on previous occasions, ticking sound was heard when explored with the whalebone probe. Shortly after this a sewing needle very similar to those of the previous ones was extracted from the chest wall. Antiseptic dressings and irrigations, fomentations and counter irritants promoted sloughing and healthy granulation tissue. Dressings such as B.I.P.P. and Hydrogen Peroxide helped in bringing about a speedy cure.

It may be inferred that in this affection also, the needle appears to have worked its way out of the thoracic wall and chest from the rumen without endangering the life of the patient by causing pericarditis.

A diagnosis in such cases as this, must be arrived at positively and unequivocally, for the lodgement of some foreign body.

A striking feature in all these three foreign bodies viz. sewing needles is, that they all bear a uniform resemblance to one another in size and shape, etc., thus driving one to believe that all of them are removed from one and the same case and from a single operation, though reverse is the case.

A CASE OF TETANUS IN A FEMALE ASS.

BY

V. B. DINKAR, G. B. V. C.

*Veterinary Assistant Surgeon, I/c Veterinary Dispensary,
Akola, Bombay.*

On 6th March 1931, a washerman came to the dispensary in the morning and told me that one female ass belonging to him was sick. From the symptoms told by him, I suspected it to be a case of Tetanus and asked him to bring the animal to the dispensary. He went away promising to do so at once, but did not turn up throughout the day. On the 7th, I visited his place out of curiosity and found the animal standing in a corner.

History:—The animal was found by the owner two days back standing away from other animals, stiff and off-feed.

Symptoms observed:—Jaw semi-locked, arched back, stiff neck, and consequent inability to feed from the ground. All the four legs spread and stiff, nictitation even on a slight touch on the head, nostrils distended and twitching of muscles. No wound was visible. Temperature 98.4°F.

Treatment:—Anti-tetanic serum being out of question in free veterinary practice, on account of its prohibitive cost, the following treatment was adopted and proved successful.

7-3-31. 12-A.M.

Extract Belladonna was administered as an electuary and 40c.c of saturated solution of magnesium sulphate was given subcutaneously, 20 c.c. on each side of the neck.

4 P. M. The injection was repeated.

Diet. Lucerne and hay and a bucket-full of water with mag. sulph added to it were placed in front of the animal on a raised platform.

8-3-31. 12-A.M.

Stiffness of the neck disappeared to some extent and the animal began feeding a little from the ground.

Injected 43 c.c. of the saturated solution.

4-P.M. Injection repeated.

10-3-31. 12-A.M.

Animal walking freely and feeding well, but back still stiff and the nictitating membrane slightly protruding. Injection repeated.

11-3-31 to 14-3-31.

One injection of 43 c.c. dose was everyday repeated.

The animal completely recovered and no signs of the disease were left.

(From the remarkably rapid recovery reported in this instance, we are inclined to doubt if the case was really one of *Tetanus*. Ed.)

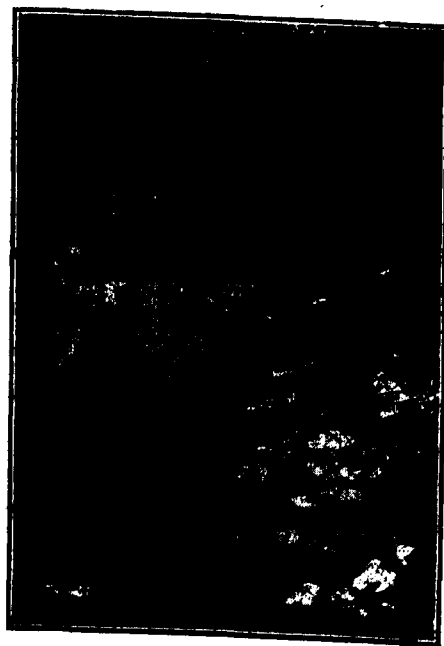
A SUCCESSFUL OPERATION FOR RUPTURE OF THE ABDOMEN IN A DOG

BY

K. S. NAIR, G. B. V. C., (BOM.)

Assistant Municipal Veterinary Surgeon, Singapore.

On 30-4-31 at about 8 P. M. a white Pomeranian dog, belonging to the proprietor of the famous Framroz Aerated Waterworks, was brought to my quarters with a cold swelling on the right side of the abdomen, result of a motor car accident three days back. On further enquiry, I learnt that the owner had tried his best to reduce the swelling by continuous fomentation and that this did not produce any effect.



On manipulation I could feel a few openings through which the intestines came out, and the noninflammatory swelling could not be reduced. The animal was off feed. Temperature was normal and there was difficulty in defecation.

The result of examination led me to suspect that it was rupture of the muscular wall of the abdomen with the consequent escape of intestines.

Just to relieve the animal an enema with warm water and soap was given and an operation was decided upon to be performed the next morning.

The operation was performed under general anaesthesia. Having made an incision on the skin of the abdomen about 3½ inches long a search was made along the abdominal wall and three irregular openings were felt. The protruded portions of the bowels were cleaned antiseptically and pushed back with the forefingers. The ruptured muscular portions were first sutured with catgut and the skin with silk.

The animal was then put in a clean and warm place and fed with liquid nourishing food, such as white of egg and essence of chicken. Warm water enema was given every day. Two injections of Strepto and Staphilococcus mixed vaccines were given at an interval of two days. As the external stitches were removed by biting, the wound had to be healed under granulation, and the animal was discharged from the infirmary safe and sound on 19-5-31.

It is rather surprising and peculiar to note in this case, how the animal escaped peritonitis, especially when the operation was done 3 days after the accident.

Finally I wish to express my thanks to Mr. J. T. Forbes, M. R. C. V. S., Municipal Veterinary Surgeon, Singapore, for the valuable suggestions given to me.

AN EXPERIMENT IN THE FIELD

BY

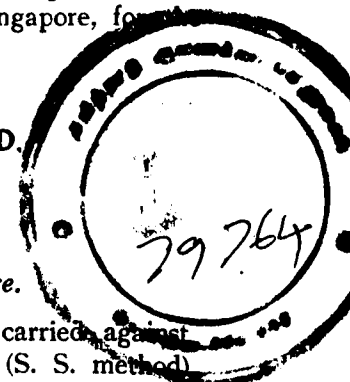
H. KHADAR KHAN,

Veterinary Inspector, Arkalgud, Mysore.

Three simultaneous inoculations concurrently carried against three common infectious diseases:—Rinderpest. (S. S. method) Black Quarter (B. Q. aggressin) and Hæmorrhagic Septicæmia (H. S. vaccine).

I put before my professional brethren an experiment tried in the field, for favour of their kind information and trial and publishing the result in our *Indian Veterinary Journal*.

1. In the village Magali, Mallipatna hobly, Arkalgud taluk Hassan district, Mysore State rinderpest was prevalent in December 1930: S. S. inoculation was conducted on 25-12-30,



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(i) Among these, three heifers from 2 to 3 years of age (S.S. inoculated on 25-12-30) were hyperred with virus on 21-1-31; and at the same time given 10 c.c. of B.Q. aggressin.

(ii) On 2-1-31, (a) one she buffalo, aged 4 years, pregnant three months.

(b) one cow, 4 years of age, pregnant six months, and

(c) one heifer, three years old,

were S. S. inoculated together with 10 c.c. of B. Q. aggressin at the same time.

(iii) On 5-1-31, 14 goats, young, old and pregnant, were S. S. inoculated together with 1 to 2 c.c. of B. Q. aggressin.

2. In another village, Kokondenhalli of the same taluk where there is only one house, practically isolated, twenty one cattle ranging from 2½ months to old age, were protected against R.P., B.Q., and H.S., by S.S., method B.Q. aggressin and H.S. vaccine respectively by conducting inoculations concurrently on 1-2-31. R.P., serum and virus were given on one side of the animal and B.Q., aggressin and H.S. vaccine on the other side.

This village was free from R.P., but reported to have H.S., and B.Q., on previous occasions.

All the animals were healthy and no bad results were encountered and there was no mortality among those inoculated in such a manner.

Association News.

PROCEEDINGS OF THE THIRD CONFERENCE OF THE MYSORE VETERINARY MEDICAL ASSOCIATION, BANGALORE.

The third Annual Conference of the *Mysore Veterinary Medical Association*, was held at "Mashie Lodge", Lalbagh Road, Bangalore City, on Thursday the 21st of May 1931.

The Conference met at 8 A.M., under the presidency of Dr. L. C. Coleman, M.A., PH. D., Director of Agriculture in Mysore.

There was exceptionally a very large attendance of members at this meeting as Major R. W. Simpson was retiring from service and leaving Mysore.

The proceedings commenced with invocation, and Major Simpson welcomed the members in a short speech, as follows:—

Dr. Coleman and Gentlemen,

I have great pleasure in welcoming you to this, the Third Annual Session of the Mysore Veterinary Medical Association.

This is the last session on which I shall, as ex-officio President, take part in your deliberations, but I shall still take a keen interest in watching your progress.

It will not be out of place here for me to remark that the Association is very fortunate in having Dr. Coleman as its Patron. His personal interest for the advancement of the profession has done much to earn for the Association its recognition in the State as well as throughout India. It was solely due to his ready help and the very kind interest he took, that it was possible for the Association to invite the All-India Conference to hold their session in Bangalore, last December, and that the Conference was such a great success.

I am glad to be able to state that your proceedings have always been sensible and tempered with judgment, and so we have been successful more or less in achieving our aims and in this short time I can safely say that we are ahead of our sister Associations in India.

Gentlemen, before proposing Dr. Coleman to the Chair, I entreat you to still maintain the prestige of the profession and continue to evince the enthusiasm and good judgment which are so essential for the progress of the Association.

To you, the younger members of the profession, my advice is, join the Association and seek to advance with interest and enthusiasm the aims of the profession, as it is you, the young members, who will reap the benefit in the future.

In conclusion I must thank you, one and all for the valuable assistance and co-operation.

I now request Dr. Coleman to kindly take the Chair.

This was seconded by Mr. K. Krishna Iyengar and carried unanimously.

Dr. Coleman took the Chair amidst cheers.

The Secretary then read the report and the financial statement and appealed to the members to enroll as many honorary and life members as they can to enable the Association to form a nucleus of a fund for the Association.

The report and the financial statement were adopted.

The following agenda was then taken up.

Resolutions :

1. Resolved to request the Government to change the designation of Veterinary Inspectors to Veterinary Surgeons.

Proposer : Mr. K. Ramachandra Rao.

Seconder : Mr. K. Srikantiah.

In moving this resolution Mr. Ramachandra Rao said :—
“Inasmuch as we are doing professional work in the State, not merely administrative work, it is a misnomer to call us Veterinary Inspectors. So, I propose that the designation may kindly be changed and as I presume that this change of designation costs nothing to the Government, I hope the President will support this.”

Mr. K. Srikantiah, in seconding the change of designation said :
“I beg to state that we are entitled to call ourselves Veterinary Surgeons by the diploma given to us. It does not sound well to call ourselves Inspectors, such as Revenue Inspectors, Police Inspectors and Panchayat Inspectors. We have taken up this because we want to raise our prestige, as we think that it is most essential.”

Dr. Coleman :—Is there any precedent?

Mr. K. Krishna Iyengar :—There is a designation like Veterinary Assistant Surgeon in Madras.

Dr. Coleman :—I do not remember this question was ever taken up before.

Major Simpson :—I sent a copy of this particular resolution to you. But on the last occasion, we did not frame all the resolutions as they should have been.

Dr. Coleman :—I do not remember the circumstances that have led to the delay. Of course, I appreciate your point and the consideration of this question. If such a term as Veterinary Surgeon is used in other parts of India for officers of your status, then there are grounds for your moving for a change of designation. I must say, personally, that it is not a matter of life and death to you or to any body else. After all, I do not attach much value to the name and I honestly can say that I do not believe that your work is being seriously affected by the fact of your being called by the present name. A man's personality and ability are the things that mainly matter. I however do not want to understand that you will be confounded with the Panchayat Inspectors. I do not think, personally I would even object to Government calling me Superintendent as long as they give me my salary. I do not think it would take my prestige away, if I were called Superintendent.

Cries of No! No!

Dr. Coleman continuing said “As you know Government works by precedents, they must be convinced that such and such a thing is being done in such and such a place.”

Major Simpson :—There is a feeling in British India and I too feel it very keenly that the M.R.C.V.S., is trying to reserve certain appointments for itself, even in private practice. Here is a man attached to the Turf Club. He insists that no one who does not hold the title of M.R.C.V.S., is qualified to be Veterinary Surgeon. But, I believe it has been overcome in Western India, i.e., in Bombay. There has been a hard fight there and Western India Turf Club has had to recognise the Indian Diploma. But so far, the Bengal people have not been very acute in this matter. But, I think with the Swaraj Government the tide will turn.

Dr. Coleman :—I hope it will be very soon.

Major Simpson :—People would like to have a certificate from an M.R.C.V.S., that has a value attached to it.

Mr. K. Krishna Iyengar, Assistant Superintendent :—There is no term like Veterinary Surgeon in British India in the official world.

Dr. Coleman :—I have personally no objection to a change of designation. But I should say that this is not a matter of vital importance. The Government probably would not agree to any designation, which is different from or higher than that found in British India, and therefore I do not think I would make this, a matter of life and death.

Mr. Ranganatha Rao :—As we are Graduates and as there is no higher qualification than this in India at present, we do not like to be called Veterinary Inspectors. A spade should be called a spade and we are Veterinary Surgeons in private practice and should be called so by the Government.

Dr. Coleman :—I know that the term Veterinary Inspector has nothing to do with your profession at all. But the Government may say that men of your qualification in India are called Veterinary Assistant Surgeons, and therefore you should have that designation. You might therefore as a result of your agitation, get a designation which you will like less than the present one.

Mr. Ranganatha Rao :—In spite of our requests, if the Government is not going to change our designation, we are prepared to remain as Veterinary Inspectors.

Major Simpson :—I will make the matter plain to you. Dr. Coleman is not pleased to alter the designation.

Dr. Coleman in putting the resolution to the vote said:—You had better leave this question to my discretion and consultation with the member concerned. Now, I take it that the resolution is accepted.

Carried Unanimously

2. *Resolved that all the Municipalities in general and Bangalore and Mysore Municipalities in particular, be requested to employ a whole-time Veterinary Graduate to inspect the jutka ponies and to supervise the meat and milk inspection.*

Proposer:—Mr. K. Ramachandra Rao.

Seconder:—Mr. K. Srikantiah.

In moving this resolution Mr. Ramachandra Rao said:—Especially in Mysore and Bangalore, Salustries are doing this work. They are not qualified and it is not done satisfactorily. Especially in the interest of meat eaters, it is best to have a fully qualified man for this work. A Graduate must certify whether a horse is fit or not, as the Salustri is not empowered to give any such certificate as that.

Mr. K. Srikantiah:—The inspection of jutka ponies, which we have been conducting is only formal. We do it every half year and submit the results of the inspection to the District Magistrate through the Superintendent. A copy of the inspection note is forwarded to the Police Inspector. But we find that the Police Inspector has taken no action to prosecute a man using a disqualified pony. In Cantonment, there is the Society for the Prevention of Cruelty to Animals but in the City, there is so called inspection but it is useless. We have been seeing every day several jutka ponies which are unfit. The Municipality is not going to benefit by the job unless it is entrusted to Veterinary Surgeons.

Dr. Coleman:—May I ask a question? You mean that the Municipality should employ a man for their work and that he is to be restricted to it? That means that he is not to have any other duty. Is that what you mean?

Mr. K. Srikantiah:—Yes.

Dr. Coleman:—Do you mean that this man will not have anything to do with the Veterinary Hospital?

Major Simpson:—I do not think it has been made quite clear. At present both the Bangalore City Municipality and the Mysore Municipality have got so called Veterinary Inspectors attached to their staff, but the man in Mysore has had no training. He is only the son of a Major. These people will not confine their work to meat inspection. Examination of animals, I think, is given to other people, i.e., to some one in the health department or the Hackney Carriage Inspector, who has no qualification and in Bangalore they do not resort to our assistance or ask our assistance very much.

Dr. Coleman:—I think the case is strong. The only question is how we are to do this.

Major Simpson:—We will send a resolution with a letter to you to be represented to Government.

Dr. Coleman:—Government will not take action without consulting the Municipality. I was wondering whether the Government has ever discussed this question with the Municipality.

Major Simpson:—I have not taken much interest in this matter as there has always been a shortage of Veterinary Inspectors. But this year we shall probably have a lot of qualified men who will not find appointment in the State. I think, it is a great pity to allow qualified men to seek appointment outside the State. It will be history repeating itself. In olden days, Mysoreans not finding appointments in Mysore found them in other parts of India and we have had in their places a lot of non-Mysoreans.

Dr. Coleman:—I quite agree with the general principle, that, for this sort of work qualified men must be taken. I do not know that I have very much influence with the Municipalities. But a lot of these things can much better be done by a little ordinary conversation with the people concerned. If it goes up in the ordinary official routine through me to Government, nothing will be done. Unless the ground is prepared in the Municipal Councils there is not much use in these pious resolutions. But on the other hand, if the officers of your Association can get into touch with the Municipal Commissioner or the President of the Municipality and various members of the Municipality in persuading them to support this resolution, there is a greater chance of getting it through. This, I find to be the case out of my long experience. These are democratic days and the Government would not do anything without referring the matter to the Municipality.

Mr. K. Ramachandra Rao:—Then we shall try to enlist the sympathy of the Municipal Councillors.

Dr. Coleman:—You should plan a campaign and work it out.

Mr. T. V. Monick Raj:—Then it will be better to send a copy of the resolution to the Presidents of the Bangalore and Mysore Municipalities.

Dr. Coleman:—That will all be done.

Mr. B. Lakshmipathy:—About 15 years ago, the Bangalore Municipality had employed a qualified man to do this work. But when that man had to go, they could not get a qualified man to take his place and the present man who is unqualified was employed and is going on.

Dr. Coleman:—I would advise you to make note of precedents like that. It is very important that you should deal most tactfully in a case such as this. I take it that the proposition is accepted.

Carried unanimously

3. Resolved that a fund should be started on a Co-operative basis for mutual benefit of the members of the Association.

Proposer:—Mr. B. Venkatesiah.

Seconder:—Mr. K. Ramachandra Rao.

In moving this resolution Mr. Venkatesiah said:—It is quite essential to prevent unhappy things that occur under accidents and to make somewhat adequate provision to the members and their families. Such a thing exists in the Postal Association and I hope it will be followed by this Association. I beg to bring to your notice that there is such a fund as Victoria Benevolent Fund in England. The members subscribe to the fund and at premature death or accident a sort of help will be given to the members of the family by the Association through that fund.

Mr. S. Ramakrishna:—It is high time that such a fund should be started on account of various difficulties and inconveniences that occur unexpectedly. Especially it is necessary in this department. And more, especially is it necessary for youngsters who might not have much of their own to depend upon but who totally depend upon their profession. This is a necessity of the times and I think no more emphasis is necessary.

Mr. K. Ramachandra Rao:—The number of members is too small at present. Therefore, an effort should be made to increase the number of members and unless this is done, it is not practicable to open a fund of this kind.

Generally an Association is begun by a handful of members, but as time goes on, it grows to thousands. So we cannot leave the question on account of the number being small.

If necessary, this may be extended to other provinces.

Mr. B. Venkatesiah:—It is meant only for us in this province.

Mr. K. Srikantiah:—If its extension to other provinces is considered, then All-India Association may move in the matter. It was a sorry sight to see Mr. Narain Iyer on his death bed, so also any veterinary doctor who is exposed to dangerous accidents.

Mr. K. Ramachandra Rao:—This fund is to be confined to Mysore State.

Dr. Coleman:—So, you are all in favour of this. I hope you will place it in the hands of the Managing Committee to investigate

the matter and take necessary steps. They may even co-opt members if necessary.

Resolution was carried unanimously.

4. This Association resolves to represent to Government the difficulties of Veterinary Inspectors and requests the sanction of advanced increments due to them.

Proposer:—Mr. K. Ramachandra Rao.

Seconder:—Mr. K. Srikantiah.

In moving this resolution Mr. Ramachandra Rao said:—As Dr. Coleman is taking necessary steps towards this, I propose that a Committee be appointed to represent this to Government or to approach Government with this resolution.

Dr. Coleman:—I think it is very unwise for you to do anything on this line. It is really a departmental matter. You are not officers of the Mysore Government. This is a professional Association, not an official one. Even your Vice-president is not employed by the Mysore Government. You have two people connected with this, Major Simpson and myself to look after the interests of Veterinary Department in the State. If you pass this resolution to have a Committee to go to Government on deputation, what position we will be in? If this matter is taken to Government by you, they say these men do not consider, we are just and honorable, and I may say, then the effect will always be opposite. Therefore, you can change it in such a way as to bring it to the attention of the Director of Agriculture and to urge that early action should be taken in this matter. Lot of work of this sort I do with my personal contact with the member concerned. I am supposed to meet the Dewan and the Member of Council every month to discuss important questions. I can assure you, then if Major Simpson reminds me, I shall put this down as the first subject to be taken up with the Dewan and the Member concerned.

The resolution was altered to read as follows:—“This association resolves to represent to the Director of Agriculture, difficulties of Veterinary Inspectors and to request the sanction of advanced increments due to them.

Carried unanimously.

5. This meeting urges the Association to represent to the Government through the Director of Agriculture the most pitiable condition of the Compounders and Salustries.

Proposer :—Mr. K. Ramachandra Rao.

Seconder :—Mr. C Nanjundiah.

Dr. Coleman :—Better say, urges the Association to draw the attention of the Director of Agriculture to take action to improve the pay and prospects of Compounders and Salustries. But you must understand that there cannot be a more unfavourable time than the present one to take the matter of increase of pay and improvement of prospects to Government.

The resolution was by leave withdrawn.

6. *This meeting resolves that the Association should represent to the Director of Agriculture that irrespective of general educational qualification, all the Veterinary Graduates should be treated equally as all of them undergo same training and pass the same standard of scientific examination and are required to do the same sort of work in the service.*

Proposer :—Mr. K. Ramachandra Rao.

Seconder :—Mr. K Srikantiah.

In moving this resolution Mr. Ramachandra Rao said :—

I beg to point out that in the year 1920, when I took a scholarship it was said that I would be started on Rs. 60/-. But after training, I was not given that. But the Superintendent said, I ought to serve the Government on the conditions laid by the Government. I readily accepted it. But later on, I was given Rs. 60/-. Scholars have been sent to Lahore. Since their return, there is a rumour that they are going to be appointed on higher salary. There should not be anything of this sort. For example, a B.A., B.A.G. ; a B.A., B.E.; or a B.A., M.B.B.S., is not given more salary than an ordinary graduate of the profession. I believe everyone will support me in this matter and that the President will think of our feelings in this matter.

Major Simpson :—I would like to say a few words here. In Madras, Bombay and Calcutta Veterinary Colleges, students are admitted with the S.S.L.C., qualification. A man can obtain this certificate at the age of 18 and the course is only of three years and so he is able to qualify at the age of 21. In Lahore, the minimum general educational qualification is intermediate, and then the man has to put in four years. It will be 24 years, when he is fully qualified. If he has to enter service just below, say three or four young graduates of 21 years of age, he will be at a disadvantage all through his life. In government service, it is not possible to award a man for special ability.

Mr. K. Ramachandra Rao :—As regards this proposition, I beg to point out that all the students that are selected by Government as

scholars are asked to get up to a standard of education in the profession, whether the student is a B. Sc., or M. Sc., Government wants neither more nor less. But when they select a candidate, they select one who is academically highly qualified. It is not the fault of ours or it is no fault of Government that a B. Sc. student should go to the Veterinary College or that a student having passed his M. B. B. S., had the misfortune to go to the Veterinary College. Moreover, this is a professional matter and not a matter of academic qualification.

Mr. K. Krishna Iyengar :—The distinction proposed is rather very invidious. Academic qualifications are not prescribed and moreover B.A's and M.A's are not always earnest about their work.

Mr. T. V. Venkatachalam :—A man may have better academical qualifications but yet he will have to show his ability in the profession and therefore, the distinction introduced is out of place. Efficiency is more important than anything else.

Mr. K. N. Subba Rao, B.A., L.V.P. :—The present resolution has been brought up by a majority of Veterinary Inspectors and the Veterinary Graduates that have returned from Lahore form a very small minority. I do not refer to the academical qualifications. Lahore College considers four years as the full course and if some of my colleagues here know the syllabus of the Lahore College, then they will either revise the resolution or drop it. The intrinsic difference is this, i. e., it reduces itself into a higher grade of training. When Mr. C. S. Balasundaram Iyer was asked about the efficiency of Veterinary Colleges, he referred to it like this :—The Lahore Veterinary College is the most up-to-date College, and perhaps Madras stands next. If Madras converts the course to four years, then probably there will be no difference between Madras and Lahore.

Mr. K. Srikantiah :—In the Agricultural department, a man who has passed out of Hebbal School, is started on the same salary as a man coming out from Poona or Coimbatore College. So, also no preference need be given to Lahore men.

Mr. K. Ramachandra Rao :—If there was any necessity for raising the course in the other Colleges, they would have done that. But as there is no necessity they remain the same. But what we have to consider is whether there is any practical utility of the knowledge that has been derived, in the other colleges. If there are two grades in Lahore, it is because formerly the course was of two years and it was in Vernacular, but now it is of four years and is in English. If two persons are deputed, one to Lahore and one to Madras, then it is no mistake of the Government. A man who goes to Lahore will have got one more year's scholarship. If this thing is carried, then there will be a clamour from people already in

service to get preferential treatments. This is purely a technical department and the utility point of view is the most important one to be considered.

Mr. K. Krishna Iyengar :—Since the competition is very unequal I would like to request the president to drop the proposition altogether.

Dr. Coleman :—The matter has been brought to my attention by Major Simpson and as is usually the case, I think in connection with differences of opinion of this kind, there is something to be said on both sides. I am not prepared to express my views here. There is something to be said on both sides. If we are sure that in the future promotions would be made on merit, the question would solve itself for the efficient man whether he had undergone a four year's course or a three year's course would receive his due recognition. I fear, however that with the development of democracy, many other factors may enter into the question of promotion and it may become necessary to award promotion almost entirely on generosity to avoid a worse evil. Most of the arguments that have been advanced on both sides of this question have already passed through my mind. All I can say now is that if and when I take this matter up with Government, I shall try to the best of my ability to do justice to all of you.

The proposition was, by leave, withdrawn.

7. *Resolved to request the Director of Agriculture that a legislation should be formed to register the Veterinary practitioners of the Association, and to request the Director of Agriculture to represent to the Government not to appoint non-graduates to the Government Hospitals and Dispensaries.*

Proposer :—Mr. K. Ramachandra Rao.

Seconder :—Mr. B. Venkatesiah.

Mr. K. Ramachandra Rao in moving this proposition said :—I beg to state that we find quacks everywhere practising Veterinary Medicine. I had a sad incident to see in one of the places. By the time, I visited the spot the quack in charge of the Dispensary had brought a big *Vanake* (a big pounding instrument) and was pushing it into the vagina of the animal. Further, dismissed compounders are also practising. In the Medical Department, a non-graduate is not appointed to be in charge of the dispensary. So also we wish that legislation to this effect be formed in the Veterinary Department.

The word "quacks" means those who had no training. But not those who have not been able to finish their course successfully.

Dr. Coleman :—On this question, I certainly agree with you. But, I am afraid it cannot be avoided when graduates are not

available. Until such time as graduates are available, non-graduates have to go on. I know it is a serious mistake to take men who are untrained when trained men are available. I appreciate the desirability of this legislation. But if I may be permitted to say so, please do not expect the practicability of it at the present time. If the Government is not prepared to make legislation regarding Medical practitioners, do you think that they would do it regarding Veterinary practitioners? I do not think that the Government will feel this so important as to form a subject for legislation. You can represent it to me, but I do not want to send it to Government. We shall see what the Medical Council being formed, is going to achieve.

The proposition, was by leave, withdrawn.

8. *This meeting records with great regret the untimely demise of Mr. Narayana Iyer and conveys its heartfelt sympathy to the members of the bereaved family.*

This was passed unanimously, all standing.

Dr. Coleman said in conclusion as follows :—I have to preside over a conference this afternoon and I have had already to carry on half an hour's of my office work before coming here this morning, and I did not get to bed early last night. I have very heavy work tomorrow and therefore you will excuse my absence for the rest of your session. I think, I can safely say that Major Simpson or the officer who follows him will, in future as in the past, be able to ventilate your grievances. I am always glad to meet individually every man of the department. I think, I can safely say that no one has ever come to my office or having come, has been turned away without an interview. He may have come but may not have been courageous enough to break through the portals. I do not think, I have ever refused an interview to any member of the Veterinary staff.

I wish to compliment you in conclusion, on your very sane discussions this morning. It is extremely important to bring questions which are of real interest not only to yourselves but to the State as a whole. You have used sound judgment in the expression of your opinion. I think, this is a matter on which you have to congratulate yourselves. You are not men trained in public speaking. But this morning your remarks have been governed for the most part by sound sense. God gives everyone a certain amount of common sense. Unfortunately, so many people in this world seem to allow it to be submerged under a lot of nonsense.

I have been brought up as a democrat. I do realise the shortcomings and the difficulties of democracy and I have many misgivings for the next few years of this country. I fear India is going to pass

through very trying times. I am not referring to anything that is going to happen to the community to which I belong. With the introduction of democratic government into this country, the agriculturist in general is likely to pass through very trying times, a very bad time. He is the man that will have to pay money to keep the State going.

It has happened so in Canada and it is going to happen in India.

My only regret is that I do not see much of you in the field. All I can say is that I appreciate the effort you have made under Major Simpson's guidance to improve the work of the department. I am personally proud to be associated with you in your work and I think that Mysore Government may well be proud on account of you.

With a hearty vote of thanks to the Chair, the meeting adjourned for the day.

Second day.

22-5-31. 8-A.M.

The Association again met at 8-A.M., to read and discuss professional papers under the presidency of Major Simpson.

The whole of the morning was taken up for the discussion on the use of 'Goat Virus' in R. P. outbreaks, as a single vaccination against R. P. The experience of the officers of the Scientific section who started this work in two villages in Bangalore Taluk in Kone-nagrahar and Jaksandra at the scene of an outbreak was then discussed, and it was resolved that a more extensive trial should be undertaken before adoption of virus alone method on a large scale as 5% of the vaccinated animals in these two villages showed a severe reaction, probably due to their having had the infection at the time of vaccination.

Dr. Parthasarathy of the Mysore Serum Institute then explained his difficulties in the care taken for the manufacture of R. P. goat virus, just providing fixed virulence that would be safe for use in all R. P. outbreaks. He also explained the type of reaction he was noticing in his experimental batch of animals at the Institute and with the help of the experiment on Government cattle that he proposes to conduct, we will be able to say whether it would be safe to practise it universally.

As it was very late and as all the members had to meet at 'Daly Hall' for the Agricultural Union Meeting, the election of office bearers was taken up. The statement of receipts and expenditure was read and adopted.

The following resolutions were passed unanimously:—

1. That the financial statement presented by the Reception Committee of the 7th All-India Veterinary Conference be approved, and the balance outstanding should be met by subscription among the members.
2. That Messrs. S.D. Achar and K. Srikantiah be elected as members of the Managing Committee of the All-India Veterinary Association to represent this Association.
3. That a contribution of Rs. 50/- be sent to the All-India Veterinary Association.

The following members were then elected for the Managing Committee for 1931-32.

Major R. W. Simpson	Ex-officio President.
Mr. M. R. Chengeri.	Vice-President.
„ S. D. Achar.	Hon. Secretary.
„ P. U. Nair.	Hon. Treasurer.
„ K. Ranganatha Rao	} Members.
„ K. Krishna Iyengar.	
„ K. Srikantiah.	
„ K. R. Ramachandra Rao.	
„ K. N. Sreenivasan.	

Mr. S. D. Achar, on behalf of the meeting, thanked Major Simpson, and voiced the sentiments of the entire profession on the eve of his departure to England. Major Simpson was overwhelmed and thanked one and all, and expressed the hope that the profession will maintain its place in the great economic department of the State, and continue to hold its own. He said he will always watch the progress of the profession and shall be glad to meet the members whenever he may return to India or any of the members should cross the seas.

Three hearty cheers were then proposed to H. H. The Maharajah and to Major R. W. Simpson, the retiring President, and this was heartily responded.

The meeting then adjourned *sine die*.

**PROCEEDINGS OF THE FIRST CONFERENCE
OF THE BOMBAY PRESIDENCY SUBORDINATE CIVIL
VETERINARY OFFICERS' SERVICE ASSOCIATION, HELD IN
THE AGRICULTURAL COLLEGE, POONA ON 4-4-1931.**

Members present.

Messrs :—

- | | |
|---------------------|-------------------------|
| 1. P. V. Nagarsheth | 16. A. A. Chate. |
| 2. M. G. Kulkarni. | 17. E. R. Kulkarni. |
| 3. H. B. Shirsathe. | 18. T. R. Khaladhar. |
| 4. C. N. Desai, | 19. V. K. Chatuphale. |
| 5. M. P. Gandhi. | 20. S. B. Shimpe. |
| 6. A. A. Dave. | 21. G. R. Pathak. |
| 7. M. K. Jhavery. | 22. S. K. Damle. |
| 8. M. D. Vaishnav. | 23. T. N. Kulkarni. |
| 9. M. C. Parikh. | 24. N. G. Sahasrabudhe. |
| 10. F. C. Talathi. | 25. G. P. Balekundri. |
| 11. A. J. Patel. | 26. M. K. Garudachar. |
| 12. C. P. Vyas. | 27. G. V. Dadhe. |
| 13. K. H. Dwivedi. | 28. G. D. Bhagwat. |
| 14. M. N. Ronge. | 29. V. B. Desai. |
| 15. J. Z. Kalal. | |

In addition to the above members Khan Sahib J. D. Buxy, Messrs. B. B. Joshy, D. B. Sapre, N. I. Chopda were also present.

Welcome address was read by Mr. P. V. Nagarsheth, Vice-President. (Published elsewhere).

Mr. E. S. Farbrother, M.R.C.V.S., I.V.S., proposed to the Chair by Mr. M. G. Kulkarni and seconded by Mr. M. K. Garudachar, took the Chair amidst loud applause.

Letters of sympathy expressing inability to attend but wishing success for the Conference were read. Mr. M. N. Ronge, Secretary, read the report of the year and it was unanimously adopted.

The following papers were read :—

1. Tips on Rinderpest—by Mr. T. N. Kulkarni.
2. Rinderpest Virus, its destruction, natural and artificial—by Mr. M. K. Garudachar.
3. Necessity of Serum-simultaneous method of inoculation against Rinderpest—by Mr. M. C. Patted (Read in his absence by Mr. M. N. Ronge).
4. Value of Saline in Veterinary Practice—by Mr. G. V. Dadhe,



Group Photo of the first Conference of the Bombay Presidency Subordinate Civil Veterinary Officers' Service Association.
Mr. E. S. FARBROTHER, M.R.C.V.S., I.V.S., Supdt. C.V.D. Bombay, in the centre.

5. Peculiar case of abnormal egg formation—by Mr B. B. Joshi.
6. Urinary calculi in a bullock—by Mr. V. K. Chatuphale.
7. Nasal Granuloma—by Mr. M. M. Murgod, (Read in his absence by Mr. M. N. Ronge.)
8. Extravasation of Urine—by Mr. M. N. Ronge.
9. Extraordinary case of Picca—by Mr. M. K. Garudachar.

Interesting and lively discussion followed on all the subjects particularly on serum-simultaneous method of inoculation. The Conference then adjourned for lunch to 2—30 p.m.

The Conference then re-assembled at 2—30 p.m. at the College. The President having addressed the Conference, the following resolutions were put before the Conference and they were discussed and passed.

Resolutions

1. This Conference recommends that if the new posts as recommended by the Royal Commission on Agriculture be not created, the present grade of the Veterinary Inspectors should be revised.

Proposed by Mr. M. G. Kulkarni and seconded by Mr. M. K. Garudachar and carried unanimously.

2. This Conference recommends that a new selection grade be created for Veterinary Assistant Surgeons Rs. 150-10-200 and should be fixed at 10% of the total cadre and increase the annual increment of the Veterinary Assistant Surgeons from Rs. 4/- to Rs. 5/- per annum.

Proposed by Mr. C. N. Desai, seconded by Mr. G. S. Balekundri and carried unanimously.

3. This Conference recommends that a few experienced Veterinary Assistant Surgeons selected by the Superintendent, Civil Veterinary Department, should be engaged as early as possible on serum-simultaneous method of inoculation against Rinderpest in selected centres.

Proposed by Mr. G. V. Dadhe, seconded by Mr. M. G. Kulkarni and carried unanimously.

4. This Conference recommends that a virus depot should be opened at a convenient centre, so that virus can be supplied to any part of the Presidency at a short notice.

Proposed by Mr. M. K. Garudachar, seconded by Mr. T. N. Kulkarni and carried unanimously.

5. This Conference recommends that vacancies of Veterinary Assistant Surgeons and Lecturers at the Bombay Veterinary College should be filled up by persons from Civil Veterinary Department.

Proposed by Mr. C. N. Desai, seconded by Mr. M. K. Jhaveri and carried unanimously.

6. This Conference recommends that Divisional Conference should be held annually by the Department.

Proposed by Mr. H. B. Shirsathe, seconded by Mr. M. K. Jhaveri and carried unanimously.

7. This Conference recommends that Sundays and holidays should be allowed to be fully enjoyed by the Veterinary Department as in other departments.

Proposed by Mr. M. P. Gandhi, seconded by Mr. M. K. Jhaveri and carried unanimously.

8. This Conference passes unanimously a vote of thanks to the Principal, Agricultural College, Poona, for allowing the use of the College Buildings for the Conference.

Proposed from the Chair and carried unanimously.

9. This Conference resolves to thank the last Managing Committee of the Association for the work done and further resolves to appoint the following Managing Committee for the next year.

Mr. P. V. Nagarsheth	...	President.
Mr. M. G. Kulkarni	...	Vice-President.
Mr. M. N. Ronge	}	Secretaries.
Mr. A. A. Dave		
Mr. C. N. Desai	...	Treasurer.

Managing Committee :

Mr. M. K. Jhaveri.	}	...
Mr. M. P. Gandhi.		
Mr. M. K. Garudachar.		
Mr. T. N. Kulkarni.		
Mr. G. S. Balekundri.		
Mr. G. G. Chebbi.	}	...
Mr. H. B. Shirsathe.		
		Inspector.

The proceedings terminated at 4-30 P.M., with a vote of thanks to the Chair.

A group photo of the members present was taken.

Mrs. Farbrother was at home to the members of the Conference.

Under the presidency of Khan Sahib J. D. Buxy, on 5th April 1931, at 9 A.M., at Bhambarda Veterinary Hospital, a paper on "Hydrothorax" was read by Mr. M. D. Vaishnav and several demonstrations were given by Messrs. B. B. Joshi and G. V. Dadhe.

Poona,)
5th April, 1931.) (Sd.) E. S. FARBROTHER.
President.

Statement of Accounts of the Bombay Subordinate Civil Veterinary Officers' Service Association from

6th Sep. 1928 to 31st March, 1931.

Receipts.	Rs.	A.	P.	Expenditure.	Rs.	A.	P.
Admission fess in 1928, Rs. 69	138	0	0	Postage stamps in 1928	27	0	0
Fess for 1928 Rs. 69	10	0	0	" " 1931	11	0	0
Fees for 1930 ...	30	0	0	Printing charges 1928	25	0	0
Fees for 1931 ...				" " 1931	13	0	0
up to 31-3-31 ...				Miscellaneous ...	1	8	0
				By Balance ...	100	8	0
	178	0	0		178	0	0

THE BOMBAY PRESIDENCY SUBORDINATE CIVIL VETERINARY OFFICERS' SERVICE ASSOCIATION.

WELCOME ADDRESS

BY

MR. P. V. NAGARSHETH, G.B.V.C.,

Vice-President, Bombay Subordinate Civil Veterinary Officers' Service Association.

President and Professional Brothers,

As the Vice-President of the Bombay Subordinate Civil Veterinary Officers' Service Association, I esteem it a great privilege and honour to accord you all the most cordial welcome here. I trust that with your help and goodwill, our discussions, deliberations and decisions will prove fruitful in achieving the results which we aim at by holding such a conference.

In the first place, I have to express my sincere thanks to Mr. E. S. Farbrother, Superintendent, Civil Veterinary Department, Bombay Presidency, for kindly consenting to preside over our conference. His presence here is a proof of his great sympathy for the department and the Association. He is one of the oldest member of the Indian Veterinary Service and as such has held the high position of the Superintendent, Civil Veterinary Department of this Presidency for the past 10 years. He has rendered great service to the department in bringing to the notice of the Government the several changes and improvements in the organisation and expansion of the department, but due to the world wide depression, they could not be carried out by the Government. He is a very enthusiastic

and hard-working officer and we congratulate ourselves that the first conference of our Service Association is to be opened by him.

Secondly, I have to thank you—the members of the profession—who have come here from long distances and sincerely wish that on your return you may carry the pleasant and happy remembrances of your visit to this place.

The need of starting a Service Association was first recognised by passing a resolution at the second conference of the Bombay Veterinary Graduates' Association, held at Dharwar in the year 1923, under the presidentship of our sympathetic Superintendent, Civil Veterinary Department, Mr. Farbrother, but no action was taken about the matter for some time. During the year 1927, the Fifth Conference of the All-India Veterinary Association met at Bombay, when its President Mr. K. Hewlett drew attention to the fact that as it was not a recognised body, he was unable to take any part in discussing matters and methods which we wish to advocate for the advancement of the Association or its members' interests and he did not associate with any of the resolutions passed on the various subjects. At the same time he suggested to form a Service Association in each Province of India on the lines laid down by Government, for the advancement of our interests and for our protection. He also suggested that the All-India Veterinary Association should be kept wholly and solely for the advancement of the Veterinary Science. Accordingly some of the members of the Bombay Subordinate Civil Veterinary Department took up the hint seriously at that very time and met informally at once in the Bombay Veterinary College, under the presidentship of Prof. V. R. Phadke, Assistant Principal, and resolved to start a Service Association. Afterwards a circular letter was sent to all the members of the Civil Veterinary Department, and with their sympathetic support and co-operation this Association was started on 6th September 1928, at Surat. Rules for its management were then framed and passed at the General meeting of the Association, held on 18th November 1928, at Ahmedabad, and submitted to Government for the recognition of this Association.

Government proposed to make certain amendments to the rules which were made with the consent of all members and were resubmitted to Government. I am glad to say that the Association was fortunate enough in securing the recognition of Government by the resolution of 27th May 1930.

Although this is the first conference of its kind to be held in the Presidency, we have met frequently at various places in the Presidency, under the auspices of the Bombay Veterinary Graduates'

Association and All-India Veterinary Association. Hence, it is not necessary for me to go into the question of the necessity or utility of holding such a conference.

It is customary for the Chairman to introduce the proceedings by a short speech indicating the line and the nature of the work to be done at the Conference and I do so with great pleasure.

We are gathered here firstly to read papers on professional subjects and to discuss them, which will enable us to exchange views for our mutual benefit and secondly to debate at leisure how we can best benefit the profession itself and also the country at large.

The Bombay Subordinate Civil Veterinary Officers' Association has on its list 69 members. The Bombay Presidency with a population of $2\frac{1}{2}$ crores of people possesses about one crore of Bovines. There are only 105 Veterinary Dispensaries in the Presidency proper. Although applications for opening about 20 more dispensaries are received since good many years, Government is unable to give any grant-in-aid and so the proposals are abandoned. There are at present only one Superintendent, 1 Dy. Superintendent, 5 Inspectors and 123 Veterinary Assistant Surgeons in the Presidency proper on the establishment. Numerically the present cadre of Veterinary Service is totally inadequate to cope successfully with the problems presented in any one branch of the work either in research or executive. The establishment has increased by leaps and bounds in other provinces such as the Punjab, Madras, etc., while little progress has been made in this Presidency, during the last two decades.

Although research into animal diseases is still in its infancy, there are many avenues of Veterinary Science that have yet to be explored. Though horses in towns are replaced by motor cars, there is no fall in Racing, Polo and Hunting ponies and cattle for agricultural work are increasing. Canine practice which was nothing previously is increasing to-day in many towns. Also, if the Milk Inspection Act is enforced, it will increase the consumption of pure milk and this means more cows and possibly the appointment of more Veterinary Officers for this purpose. Therefore, if we see motor cars, trollies and tractors increasing everyday, it is not to be inferred that the horse, the bullock, the Veterinary Surgeon and the Veterinary profession are going to be extinct. Not at all. We should therefore take great interest in the live-stock problems. It should also be remembered that the eradication and control work of contagious diseases is most essential for the preservation of live-stock industry.

The ignorance of farmers on Veterinary matters is still immense, especially about contagious diseases and it is for us to continue to enlighten them on these matters. We must take trouble to explain

to them the benefits of inoculation in various contagious diseases and when they see the sense of it they would appreciate our efforts and make up their minds to have it done. If suitable subjects were selected for lecturing to the farmers, it is sure to benefit the profession. The lectures if possible should be made interesting and instructive by Magic Lantern slides and when once appreciated by the farmers, they will do more than anything to show the farmers that Veterinary Surgeons are not asleep but are advancing with the times.

We must try to eradicate Glanders and Rabies from India as is done in Great Britain through the aid and application of Veterinary research and thus confer benefits on man as well as animal world. Anthrax and Tuberculosis should be equally eradicated. Rinderpest, Foot and Mouth Disease of cattle and Distemper of dogs—each supposed to belong to ultra visible group and which has baffled the brains of our best scientists—and Cancer which is also prevalent amongst animals as in man require to be investigated and for all these our Department lives in hopes and I trust that before long these desires will be realised.

Of all the contagious diseases of live-stock, rinderpest is the most widely prevalent and most dreadful disease. All possible steps are required to be taken to eradicate it. Serum alone method of inoculation is found most costly and not quite useful as it confers only 9 days immunity. When hundreds of cattle are affected at a time with rinderpest, the only effective method for eradicating the scourge is S. S. Method. Although the Mysore Veterinary Service is small, it has saved more than five hundred thousands of cattle by the method in Mysore State.

In the Madras Presidency more than a lakh of cattle were protected by S. S. method during the last year. There is already a Serum Institute at Mysore and one is to be opened in Madras. At present, there is only one Research Institute for the whole of India at Muktesar. This is out of all proportion and inadequate to meet the needs of a big country like India. Hence, I suggest that the Government of Bombay be prevailed upon to provide a Research Institute for the Bombay Presidency and to institute field Research work also, as Bombay is the biggest province in the whole of India. At present in the presidency, S. S. inoculation is undertaken on Government farms and dairies only. It has given very good results was undertaken in the year 1922 and not a single inoculated animal suffered from rinderpest since the last 9 years. Also one cow inoculated in the year 1922 with this method was given virulent blood of rinderpest in February last by our worthy President for

testing purpose and she is found to be quite immune. Besides about 600 cattle have been protected by S. S. method in Village Turkiwade in Belgaum district, under the supervision of Mr. V. N. Kulkarni, Veterinary Inspector, by taking virulent blood from the actual outbreak of rinderpest and it has proved a great success. Hence, the necessity for the S. S. method is to be strongly advocated and all of us must try to induce people for it on a wholesale basis and the energies of the department be wholly concentrated for this work. South Africa, before the last South African War was a most unhealthy country for live stock and as a result of critical investigation of diseases under scientific direction it has been completely cleared of rinderpest and other contagious diseases by the brilliant research work carried out by Dr. Sir Arnold Theiler. Also Col. Olver the present Adviser in Animal Husbandry to the Government of India completely eradicated rinderpest from Sudan and has got big reputation for a successful campaign against it there. Accordingly, I wish that our worthy and sympathetic President, Mr. Farbrother will take steps for eradication of it by organisation and expansion of the Veterinary Department.

The Royal Commission on Agriculture has made proposals for the expansion of the Veterinary Department and these proposals require to be carried out by increasing the staff and pay of Veterinary Assistant Surgeons. More provincial posts require to be created. A selection grade of Veterinary Assistant Surgeons requires to be introduced, more Dispensaries require to be opened at once to cope with the epizootics and other dispensary duties and more Veterinary Assistant Surgeons be employed for propaganda work. Also a Post Graduates Course requires to be opened at the Bombay Veterinary College, to raise the professional standard of employees. Also the subject of cattle breeding requires to be introduced in the syllabus of the Bombay Veterinary College, so that Veterinary Graduates can do much for the improvement of breeds of cattle.

Another important subject which I wish to impress on all of us is to try to institute Annual Veterinary Conferences in each Inspector's Division which may be attended by all Veterinary Assistant Surgeons employed in the division and to be presided over by the Superintendent, Civil Veterinary Department and professional papers on interesting subjects be read and important ones may be published as "The Bombay Presidency C. V. D. Year Book" as proposed by Col. Walker, the then Superintendent, C. V. D. Bombay Presidency in the year 1919.

Last but not the least, I shall say one thing more and shall then finish. Vacancies of lecturers at the Bombay Veterinary College,

whether permanent or temporary are hitherto filled up by Government on the recommendation of the Principal, from the men of Glanders and Farcy Department, which is under his control. It is no wonder, if the Principal's eyes naturally fall upon men serving under him, as he is more acquainted with them. But it is no exaggeration if I say that the men serving in the Glanders and Farcy Department are not in close touch with the Profession in general as their activities are confined mainly to the diseases scheduled under the Glanders and Farcy Act and so they have usually few opportunities to know more of the ordinary diseases of cattle, Sheep and Goats, and also of the various contagious diseases widely prevalent among them. The knowledge of this branch of the Veterinary profession is one of the essential qualifications for a teacher at a Veterinary College as there are certain diseases both contagious and non-contagious which are of more common occurrence in some tracts than others. Members of the Subordinate Civil Veterinary Department are in daily touch with these matters and so if any of them be selected for those posts, they will prove more useful at the College than men of the Glanders and Farcy Department. If the matter be seriously taken up by our worthy Superintendent, it will provide a new opening for brightening our future prospects whereas under the existing conditions where a Veterinary Assistant Surgeon has, in an ordinary course, to remain contented by reaching the maximum pay of his grade till his retirement, however competent and energetic he may be.

In conclusion, I have to say that I have touched many points requiring attention of the Conference and I trust that with your hearty co-operation, Gentlemen, our deliberations, discussions and decisions will, I trust, benefit the profession and earn for it, its due share of recognition. The papers that are to be read are of a high standard and the discussions are sure to be of high order.

I have to thank the Principal of the Agricultural College for kindly allowing his premises to be used for the Conference. I have also to thank Mr. M. G. Kulkarni, Veterinary Inspector, Poona Division, and Messrs. M. K. Garudachar and B. B. Joshi for making all arrangements for the Conference at Poona.

I now request Mr. Farbrother to take the Chair and to open the Conference.

THE BOMBAY PRESIDENCY SUBORDINATE CIVIL VETERINARY OFFICERS' SERVICE ASSOCIATION.

PRESIDENTIAL ADDRESS

BY

E. S. FARBROTHER, M. R. C. V. S., I. V. S.,

Superintendent, Civil Veterinary Department, Bombay.

GENTLEMEN,

I am really thankful to you, for selecting me as the President of this Conference.

I notice that there are 72 members of this Association i.e., about 50 per cent. of the total of the strength of the Department. I think you must try your utmost to increase this number to an appreciable extent in order to make your Association fully representative. Some of you this morning read papers on the contagious diseases among cattle. But they were read so hurriedly that it was found impossible to follow them up in some places. It would be better if you arrange to distribute printed copies of such papers before hand, which will prove better to take part in the discussions.

The present method of Serum alone method has its own advantage, but owing to the present financial condition of the Government, further progress seems difficult, however, in the near future. The so much desired improvements in Serum Simultaneous inoculation and in opening a Post Graduate Course will be taken up in to hands.

College News.

BOMBAY VETERINARY COLLEGE.

The following are the results of the Diploma Examination held in March, 1931 :—

Class A	54 appeared	34 passed.
Class B	53 appeared	32 passed.
Class C	27 appeared	20 passed.

In class A, best Studentship medal was won by Mr. Ghosh, (a C. P. scholar).

There is one supplementary student in Handling of Animals.

In class B, best Studentship silver medal was won by Mr. Jaw, (a Kashmir State scholar).

There are two supplementary students, one in Hygiene and another in Anatomy.

In class C, Mr. Mirza (a C. P. scholar) stood first and won the following medals :—

- (1) Best Studentship medal,
- (2) Medicine & Surgery medal, and
- (3) Operative Surgery medal.

Mr. Hardikar stood second, winning a medal in Soundness.

There is one supplementary student in Surgery.

LAHORE VETERINARY COLLEGE, THE PUNJAB.

The following students of the final year class of the Punjab Veterinary College, Lahore passed the Diploma Examination held in May 1931.

- | | |
|----------------------|-----------------------|
| 1. Amir Chand Gupta. | 14. Lakhshmi Singh. |
| 2. Feroz Din. | 15. Hukum Chand. |
| 3. Prem Nath Kak. | 16. Nahar Singh. |
| 4. J. S. Chatwal. | 17. R. N. Mohan. |
| 5. K. S. Sri Ram. | 18. Chet Ram. |
| 6. Bahadur Singh. | 19. Amarjit Singh. |
| 7. Allah Bux. | 20. Gulam Rasul. |
| 8. H. R. Joshi. | 21. Khan Mohamud. |
| 9. Bal Singh. | 22. Sudder Din. |
| 10. Tara Singh. | 23. Hamid Hussain. |
| 11. Jagat Singh. | 24. Mohamud Yahia. |
| 12. Putta Swamy. | 25. Sardari Lal. |
| 13. Sukan Singh. | 26. Mohan Lal Bhatia. |

The following students won the Medals for distinction noted against their names in the Professional Examinations :—

- | | |
|-------------------|---|
| 1. Prem Nath Kak. | 1. General Proficiency Gold Medal. |
| | 2. Ketwell Memorial Medal for Veterinary Medicine. |
| | 3. Professor Aggarwalla's medal for Meat and Milk Inspection. |
| 2. Gulam Rasul. | 1. Medal for Surgery. |
| 3. Allah Bux | 1. Captain Walker's Medal for Obstetrics. |
| | 2. Medal for Medicine. |
| 4. Sunder Singh. | 1. Col: Walker's Memorial Medal for Materia Medica. |
| | 2. Medal for Pathology. |
| 5. Mulkh Raj. | 1. Medal for Hygiene. |

- | | |
|------------------------|---------------------------------|
| 6. Sham Lal Kak. | 1. Medal for Senior Anatomy. |
| 7. Abdul Gani. | 1. Medal for Physiology. |
| 8. Kesho Nath Trichal. | 1. Medal for Animal Management. |
| 9. Atwar Singh. | 1. Medal for Riding. |

Notes.

From the proceedings published elsewhere in this issue of the Journal, it will be seen that the officers of the Bombay Subordinate Civil Veterinary Service formed themselves into a "Service" Association, on "the 6th of September, 1928, at Surat" and they held "their General Meeting on the 18th of November 1928, at Ahmedabad" and, "applied to the Government of Bombay for the recognition of the Association". After a lapse of about a year and half, the infant Association "was fortunate enough in securing the recognition of the Government by the resolution of the 27th of May 1930". The Association was also fortunate in having secured the head to the Civil Veterinary Department to preside over its deliberations—an unheard-of thing in the Southern Presidency. Our congratulations to the organisers of the Bombay Service Association on the successes in their first attempt.

The genesis of this Association is ably traced in the welcome address of Mr. P. V. Nagarsheth, G. B. V. C., Vice-president. As is usual with all such service organisations, this one also has been ushered into existence under the patronage, promise, and help from high quarters. Our readers nearer home in the Madras Presidency are quite familiar with the history of a similar Association amongst them. We do not wish to offer any remarks on such movements but we sincerely wish better luck to our brethren in the Western Presidency.

The Chairman's welcome address only recognises and regards the great service rendered by Mr. Farbrother, the President of the Conference and the Superintendent of the Bombay Civil Veterinary Department, and pays him high tribute. In spite of the presence, leadership and efforts of "such an enthusiastic and hard working officer" for over ten years, the great Western Presidency should have only 106 Veterinary Institutions with a staff of one Superintendent, one Deputy Superintendent, five Veterinary Inspectors, and 120 Veterinary Assistant Surgeons for the whole presidency for a popu-

lation of over thirty millions and bovines alone of over ten millions is a sad commentary on the progress of the oldest provincial Veterinary Department in India. We may here recall the fact that the first Veterinary College in India was started in Bombay about half a century ago and Bombay was also the first to organise a Government Veterinary Department in India. To-day it is such a Bombay which is backward in the Veterinary matters.

We are glad to welcome back into our midst our brother Mr. H. N. Chelva Iyengar, G. M. V. C., Assistant lecturer in Anatomy, in the Madras Veterinary College, who returned to Madras on the 19th ultimo after a very useful and profitable stay of about nine months in Great Britain, for the purpose of giving a finishing touch to his great proficiency in his pet subject of Anatomy. During his stay there, he took a post-graduate course in Anatomy, Advanced Histology and Embryology in the famous Royal (Dick) Veterinary College, Edinburgh, and worked under Dr. O. Charnock Bradley, M.D., D.Sc., M.R.C.V.S. We are also glad to learn that during his stay in that Institution he was appointed as a Demonstrator to the Students. We understand he prepared two models of foetal circulation in calves—one dry model and another wet—for the College Museum and thus enriched the Museum with these new models. He took advantage of his trip to the West and visited the great Veterinary Institutions in Glasgow, London and Paris. The Government of Madras, which did him a great injustice in the last reorganisation of the College staff, will, we hope, do him justice now that he has returned with the stamp of foreign education.

Our hearty congratulations go to Dr. L.C. Coleman, M.A. Ph.D., Director of Agriculture in Mysore, a recipient of "C.I.E." in the Birthday Honours. Our readers are quite familiar with this distinguished scholar who has rendered yeoman's service to the cause of Agriculture and Veterinary Service in India in general and Mysore in particular. He richly deserves this title and we are sure still higher honours are in store for him.

We congratulate our brother Khawaja Gulam Hassan the recipient of the title of "Khan Sahib". He is a Deputy Superintendent, Civil Veterinary Department, Punjab. Those who have met him will fully well realise how well he deserved it. A fine specimen of his race, full of enthusiasm, and devotion to duty, he is a model to many. Some of his speeches at various Conferences were marked utterances of sound common sense and independence. We most heartily congratulate him on this well deserved honour.

Another recipient of the Birthday Honour "Rai Sahib" is Babu Kripendranath Mazumdar, officiating Assistant Director, Civil Veterinary Department, Bengal. He has been well chosen for this distinction by the Government. Our hearty congratulations go to him on this happy occasion.

The temporary post of Special Rinderpest Officer in Madras referred to in the last issue of this *Journal* has been filled up, by the seniormost Veterinary Officer, who is well acquainted with every part of the presidency. His vast experience should stand him in good stead in this special and important post. This is the first time that the Government of Madras has been successfully persuaded to create this special post in the Civil Veterinary Department. If the officer contributes materially towards the knowledge on the subject already available, and helps to combat successfully this great cattle plague in the country, it will be an incentive to the authorities to create special posts for the investigation of several other diseases which are playing havoc among animals in the country. Therefore the responsibility of Mr. H. C. Sampath Iyengar is very great and we hope he will do justice to the post for which he is specially selected. The profession also watches with keen interest the scientific advancement made by the special officer.

An article under the caption of "Poultry Industry" by "Poultry" appeared in the columns of some of our local contemporaries in the last week of June 1931, and it is extracted in this *journal* for the information of our readers and the authorities concerned. The subject raised in the article is very important in the rural economics. We have repeatedly written in these columns pointing out the urgent necessity for investigation into the diseases of poultry, sheep and goats, whose mortality in great numbers are not being reported anywhere in this country, but all the same it is causing a great loss in this community. It is a good sign, people are gradually getting awakened and are voicing their needs as the "Poultry" has done in this case. The Veterinary Department in each province should take up this opportunity of making itself useful to the numerous owners of these birds, sheep and goats. We hope it will.

For the 40 seats in the first year class of the Madras Veterinary College, we understand there were 1070 applicants, of whom over 60 were full blown Graduates of the Madras and Andhra Universities, over 300 Intermediates and the rest all S.S.L.C's. 20 stipends of Rs. 15/- each are given to the S.S.L.C., passed candidates. These stipends are denied to the Intermediates and Graduates who will be

given if entertained in the department, higher start of pay by Rs. 12 and 20 respectively. Evidently, the authorities consider that the Intermediates and Graduates are better suited to receive the Scientific education in the Veterinary College, than the S.S.L.C's. When Graduates are available in much greater numbers than the College can admit, why should good money be wasted in stipends in these days of all round retrenchment?

The appeal from the General Secretary, regarding the holding of the next sessions of the All-India Veterinary Conference, appears elsewhere in this issue. We heartily endorse every word said therein, and join in the appeal.

Correspondence.

MAJOR R. W. SIMPSON'S PORTRAIT UNVEILED IN BANGALORE.

The Mysore Veterinary Medical Association, Bangalore, was "At Home" to Major R. W. Simpson, M. C., G. B. V. C., the retiring President of the Association, on the 21st of May 1931, at "Hill Side," Palace Road, Bangalore. The well laid out garden at "Hill Side" with its beautiful tennis courts and spacious grounds had been placed at the disposal of the Association by Dr. Coleman. A large and distinguished gathering of officials and non-officials of C. & M. Station and City was present.

After an enjoyable tea and pleasant tennis, the assembled guests met on the beautifully decorated lawn under the distinguished presidency of Rajakaryapravina P. G. D'Souza. B.A., B.L., Member, Executive Council of Mysore State. The following address which was neatly printed on silk and executed in a book form by the Bangalore Press, was read and presented to the chief guest, Major Simpson :—

MAJOR R. W. SIMPSON, M.C., G.B.V.C.,

PRESIDENT

Mysore Veterinary Association, Bangalore.

Sir,

On the eve of your departure from our midst, we, the Members of the Mysore Veterinary Association, Bangalore, beg permission to say a few words by way of acknowledgment of the immense services you have rendered towards our betterment and the improvement generally of the service to which we are all proud to belong.

We do not propose on the present occasion to detail the many steps by which you came to occupy the position you have so gracefully and with such conspicuous ability filled during a whole decade under the genial and friendly direction of Dr. L. C. Coleman, Director of Agriculture. But we would be failing in our duty if we did not mention the meritorious services you rendered to the Empire and to the State during the last great World War, services which won for you the coveted distinction of M. C. and added to the lustre of the work done by and in the State towards its ultimate success. Under your fostering care the Department has progressed in a manner that almost defies description. That this is no mere boast is proved by facts and figures. Against some 10 Veterinary dispensaries officered by about as many Veterinary Inspectors in the old days, we have to-day some 60 dispensaries and hospitals in charge of as many Inspectors, besides a mobile corps of 14 additional officers. More than even what is indicated by these numerical figures, is the striking achievement of the establishment of the Mysore Serum Institute at Bangalore, which, we have no doubt, before long will prove the Muktesar of Mysore, if not of Southern India, and the adoption of the even more important step of the Serum Simultaneous Inoculation, Mysore being the first country in the whole of the East to set a bold example in this direction. We will not expatiate on the cool determination you displayed in pushing these great steps forward, not merely to save millions of cattle lives but also to help the ryot in keeping his capital unimpaired. No better testimony to the efficacy of these measures adopted by the State at your instance need, we suggest, be quoted than that afforded by the declining cattle mortality we are witnessing to-day.

At the same time, the needs of the Department also received every care and attention during the period of your office. We need only state in this connection that we have had three successive reorganizations, resulting in the betterment of the prospects of the staff which has now the privilege of a time-scale. Opportunity has also been afforded to the more promising men to prosecute their post-graduate studies with the aid of scholarships, such as the Damodar Doss, which hitherto were not open to them. For all the privileges and advantages we have had during the past ten years, we feel we should express our gratitude for the sustained personal interest you have evinced in us and in our material and professional welfare. To say more, even on an occasion like the present one, would be like gilding refined gold or painting the lily, a task, which, in this particular case, seems, as the poet puts it, superfluous waste.

Before concluding we would, however, express our gratitude for all that you have done for us, for the Department which you have

given if entertained in the department, higher start of pay by Rs. 12 and 20 respectively. Evidently, the authorities consider that the Intermediates and Graduates are better suited to receive the Scientific education in the Veterinary College, than the S.S.L.C's. When Graduates are available in much greater numbers than the College can admit, why should good money be wasted in stipends in these days of all round retrenchment?

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At the same time, the needs of the Department also received every care and attention during the period of your office. We need only state in this connection that we have had three successive reorganizations, resulting in the betterment of the prospects of the staff which has now the privilege of a time-scale. Opportunity has also been afforded to the more promising men to prosecute their post-graduate studies with the aid of scholarships, such as the Damodar Doss, which hitherto were not open to them. For all the privileges and advantages we have had during the past ten years, we feel we should express our gratitude for the sustained personal interest you have evinced in us and in our material and professional welfare. To say more, even on an occasion like the present one, would be like gilding refined gold or painting the lily, a task, which, in this particular case, seems, as the poet puts it, superfluous waste.

Before concluding we would, however, express our gratitude for all that you have done for us, for the Department which you have

with such distinguished ability administered, and not least for the Association we represent, which again owes its very existence to your suggestion. Nor can we omit a reference here to the holding of the seventh session of the All-India Veterinary Conference in this City, the first of its kind in an Indian State, under the auspices of the Association which has given a fillip to Veterinary progress generally in this State. Beyond all, there is for us, each and every one of us, to imitate, if not, at least to emulate, your personal example of high endeavour, your purposeful pursuit of attainable ideals, and your courageous resolve to overcome difficulties however insurmountable they might at first sight look.

In wishing you *bon voyage*, we pray to God Almighty that you may be long spared to enjoy the rest you have so well earned and that every happiness may attend you and yours in the years to come.

We remain, Sir,

Your friends and admirers,

BANGALORE CITY, }
21st May 1931. }

**The Members of
The Mysore Veterinary Association,
Bangalore.**

[The address was printed on silk in a book form and presented. It was neatly executed by the Bangalore Press,—Ed. J. V. J.]

The address over, Rajakaryapravina P. G. D'Souza was requested to unveil the portrait of Major Simpson. In performing this pleasant function Mr. D'Souza said:—"No function gives me greater pleasure than the one at which you have so kindly asked me to preside. Major Simpson is a very old friend of mine. In fact, from the time I entered service, I have known him. So it is a source of very great pleasure to be able to offer to him on your behalf our best wishes when he is going away. All partings are full of regret. Though Major Simpson is not going immediately, you know he will have to leave us very shortly. The regret is intensified by the fact that an association of more than a quarter century is going to be terminated by a sort of permanent separation. We will not have the same opportunities of meeting him or benefitting by his experience or by his personal affection and good will as has been the case hitherto. There are some persons whose great fortune it is to have their names connected with some great momentous developments and it is the good fortune of my friend to be associated with a very important event in the history of Mysore. In the address presented to him this evening, reference has been made to his meritorious services to the Empire and to the State during the last great World War for which he has not coveted distinction. He has rendered a very great service to the Depart-

ment which has endeared him to the people of the State. As has been pointed out in the address, there were only about half a dozen Veterinary Dispensaries when he took charge, but they have multiplied since to sixty Dispensaries and Hospitals now. Also there are the Mobile Corps and the Serum Institute working for the prevention of cattle mortality. I hope the work of the Serum Institute will extend to the whole of India and will prove as effective throughout as has been the case in Mysore. It is needless for me to mention that Major Simpson has had no doubt the valuable assistance of Dr. Coleman in the realization of this achievement by way of taking charge of his cattle. It is due to Dr. Coleman's love to the Department that we owe the present position of the Veterinary Department in the State. In no part of the world is animal life so respected and loved as in this country."

After the portrait was unveiled, a solid sterling tea set of chaste workmanship, neatly executed by Messrs. C. Krishnayya Chetty, Jewellers of Bangalore City was presented to the Major by the Members of the Association, as a Souvenir.

The following letter from Mr. M. S. Sastry, G. B. V. C., General Secretary, the All-India Veterinary Association, Anantapur, written on behalf of the Indian Veterinary Profession to the Secretary of the Mysore Veterinary Medical Association, was then read:

Dear Mr. Ranganatha Rao,

Many thanks for your kind invitation to me to attend to-morrow the pleasant function of unveiling the portrait of Major Simpson, the retiring President of your Association. Nothing could have given me greater pleasure than attending and participating in this pleasant function, which is an eloquent proof of the fact that the good Major has been held in high esteem and affection by all the members of the Mysore Veterinary Medical Association. As the General Secretary of the All-India Veterinary Association, it is my proud privilege to communicate to your meeting that your retiring President—Major Simpson—has equally won the respect and affection of the members of the Veterinary profession in India by his many good qualities of head and heart.

He is the first provincial head of a Government Veterinary Department who in response to the call of the profession took a personal interest, led and organised a provincial Association in this country. Again he is the first among the heads of the provincial Civil Veterinary Departments in this country who has taken a personal interest in the working up of the All-India Veterinary Conference and invited to your—nay our beautiful city, its Seventh Session, which was held last December under the distinguished Presidency of Colonel A. Olver, the Expert Adviser in Animal

Husbandry to the Government of India. The large number of delegates who attended the last Conference have carried with them pleasant memories of the splendid hospitality and carefully provided for their benefit by the Reception Committee under the Chairmanship of Major Simpson.

Soon after Major Simpson assumed the charge of the Mysore Civil Veterinary Department, the members of the Indian Veterinary profession came to know him as a great organizer with plenty of initiative powers and professive and farseeing ideas. The present size of the Department in Mysore which has grown beyond recognition both in numbers and usefulness is a proof of his capacity to organize big and useful schemes. The introduction, for the first time in this country, of S. S. inoculation against Rinderpest on a large scale, the establishment of Mysore Veterinary Serum Institute—the first of its kind in this vast country—excepting the Imperial Institute of Veterinary Research at Muktesar, appointment of two specially trained local officers to investigate into the diseases of sheep and goats and other animals, and the introduction of rules for regulating the movement of cattle within the State with a view to check the spread of contagious diseases among animals are some of the special achievements to the credit of Major Simpson. I am sure the State which has the good fortune of having such an officer as the head of its Civil Veterinary Department, is also proud of these achievements which have earned a great reputation for Mysore even in Veterinary matters.

Though Major Simpson has reached the age at which public servants are required to retire from service, still he has got plenty of enthusiasm and vigour of the youth. He is essentially a ryot's man. I dare say there are none who could excel him in the desire to serve the agricultural population to the utmost of their professional capacity. Many of us who had gathered at the last Conference at Bangalore hoped, the Durbar will grant an extension of Service to Major Simpson to enable him to complete his scheme of Veterinary work in Mysore. Even now this hope is cherished by many who know Major Simpson intimately.

On behalf of the All-India Veterinary Association, I wish the function every success. I only regret I am unable to attend the function in person owing to the exigency of public service.

On behalf of the Veterinary profession in India, it is my pleasant duty to wish Major Simpson peace and happiness in his well earned retirement.

Yours sincerely,
(Sd.) M. S. SASTRY, G. B. V. C.,
General Secretary. A.I.V.A.

MAJOR SIMPSON'S REPLY

Major Simpson who was found visibly moved received a big ovation on rising, replied and in the course of it said :—

I cannot express in words how greatly I appreciate the honour you have done me this evening and your very kind remarks and praise of my work.

I cannot in justice take all the praise to myself for what the Veterinary Department has achieved, and its position to-day in the State.

It has been built up through the suggestions from time to time of the different members of the staff, the initiative of individual members and their hard and conscientious work under most trying conditions. Few realise the conditions under which the staff often have to carry on their work. I have myself seen them living in unsavoury and insanitary surroundings and often with only a tree or stone slab for shelter. Their work is such that they cannot pick and choose the place to encamp, for unless they are on the spot, it is impossible for them to do their work.

The Veterinarian, though few realise it, really carries his life in his hands, and there are some here this evening who to this day bear the marks of injuries received while in the performance of their work.

I owe the staff a very deep debt of gratitude for their great assistance in building up the Department and making it what it is to-day. The valuable and hard work done by some of its officers will never come to light.

At the same time I must acknowledge with gratitude that nothing could have been achieved if Dr. Coleman, as administrative head, had not taken the deep and sympathetic interest he has always done in the welfare of the staff and in furthering the work. Though at times I have groused when he did not see things in the light I did, I nevertheless at the same time realised that, as administrative head, he had, while considering the needs of the people as far as Veterinary aid was concerned, also to act according to the wishes of Government, whose financial position had also to be considered.

Again we could never have achieved our objects if it had not been for the sympathetic consideration of our benign Government, whose officers have done all they possibly could for the ryot and stock owner, especially the officers of the present Government, who were responsible for establishing the Serum Institute, which has been of such great service.

Last, though not least, I must not omit to mention the invaluable help given to the Department by the several Presidents and

Members of the District Boards and Municipalities and the ryots themselves, who have done so much by their willing co-operation.

I must also not omit to thank the officers of the other sections of the Agricultural Department, who have often given us their valuable advice, and also the officers of the other Departments for their ready co-operation, more especially the officers of the Public Health Institute, who have given us much of their time in helping to investigate disease.

I shall always look back upon the years spent in the service of Government, as one of the most pleasant periods of my life, and especially to the last eleven years in the Civil Veterinary Department, which have been so full of interest to me.

I must thank you most sincerely and heartily, brother members of the Mysore Veterinary Medical Association, for your kind appreciation of what I have tried to do for your betterment and the welfare of the profession in the State, and also for your very valuable and handsome present, which I shall always value. I feel I could not have done less than I have done for you, as I have always considered it my duty as head of the Department to look after the interests of even its humblest member.

I thank you for all your good wishes and I wish the Association every success in the future."

After sweet music and distribution of flowers and pansupari, the happy function came to a close with three hearty cheers to H.H. the Maharajah and Major Simpson.

— "Correspondent".

"DRUG TREATMENT FOR CATTLE"

THE EDITOR,

The Indian Veterinary Journal, Madras.

Sir,

I invite your attention to the "Drug treatment for cattle" which appeared in the "Hindu" of Madras of 30th April, 1931, and request you to publish it in your valuable journal for the information of your numerous readers.

"Five subjects of interest, the Agriculture Advisory Committee considered at its meeting yesterday (28-4-31) presided over by His Excellency the Governor and attended by the Minister for Agriculture and a number of members including the heads of departments.

"The Committee then discussed the proposals of the Director of Veterinary Services for conducting research into the efficacy of indigenous drugs in the treatment of cattle.

A note on the subject circulated to the members reads as follows:—

Non-official members of the Legislative Council in the course of the debate on the motion for a supplementary grant and in the course of budget debates referred to the efficacy of the indigenous methods of treatment of cattle and suggestions were made that such of the methods as were considered effective should be utilised as far as possible. The Director of Veterinary Services who was asked to investigate into the matter states that it has always been the policy of the Veterinary Department to encourage the use of simple bazaar drugs whose composition and action are known but that as the Department has not sufficient experience of a large number of drugs it is necessary to conduct research into the Pharmacology and Toxicology of the drugs, commonly used as medicine, the utility and properties of which are at present unknown. A beginning was made in the investigation of certain reputed drugs through the help of the research staff of the medical department. The results were not encouraging. The Medical Department are unable to undertake the work as they allege that their hands are full and they are, besides, not aware of the full implications and applications of the problems from the Veterinary point of view.

The Director of Veterinary Services, therefore proposes to employ a special Research Staff for a period of five years to conduct a thorough investigation on scientific lines of the indigenous drugs from the Veterinary stand point. The investigation will be undertaken on the following points:—(a) A scientific study of reputed indigenous drugs of proved therapeutic efficiency, to assess their values and standardize them in possible cases, for use, (b) Examination of the pharmacopoeial drugs and their allied species found growing in India, in order to ascertain the possibilities of employing them in place of similar but more costly drugs. (c) A complete study and classification of the different cattle poisons met with and the discovery of remedies and antidotes to counteract their toxic effects. If possible to find out a practical means of exterminating the source of danger.

The staff will work in the Medical College Laboratory under the direction and guidance of the Medical Staff.

The cost is estimated at Rs. 73,080 and the committee recommended the scheme for sanction by the Imperial Council of Agriculture Research."

It is really encouraging to see that this important subject has been earnestly and favourably taken up by the authorities. What perplexes the readers of your journal is that when the Medical Department said that they are unable to undertake the work as they

allege that their hands are full and they are, besides, *not aware of the full implications and applications of the problems from the Veterinary point of view*", the Director of Veterinary Services Madras, should still propose "the investigating staff will work in the Medical College Laboratory under the direction and guidance of the Medical staff". It should be the ambition of the Veterinary profession to take up such work in its own laboratories and under its own direction and guidance, if necessary with the aid of the Medical staff instead of abandoning the whole thing to be done in the Medical College Laboratory under the direction and guidance of Medical staff. If the Veterinary department has not got trained workers in this field, it would be possible for it to select and depute suitable men among the staff for training, instead of forcing the medical men "to learn the full implications and applications of the problems from the veterinary point of view" and then work out such researches. If a beginning in this direction is not made now, the profession will always have to depend on other departments for investigating any important subject of veterinary interest which will lower the reputation of the profession in the public eye as it means we are not rising equal to the occasion but shirking our legitimate duties and responsibilities. If it is not too late now, I would request the Director, Civil veterinary Department to arrange for this work to be undertaken in the Madras Veterinary College Laboratory.

"Perplexed".

Extract.

"POULTRY INDUSTRY".*

SIR,

The readers of your valuable paper may be interested to know that there is a Poultry Commissioner attached to the Ministry of Agriculture and Fisheries in Great Britain. We do not hear of the existence of similar Government agency in this country. The Poultry Commissioner in Great Britain has delivered an address at a Poultry Conference held in that country a few months ago, giving several statistics of great value and interest to the poultry industry there. Some of these statistics from that address are given here for the information of your readers. The average consumption in 1913, was 115 eggs per head of the population in that country and of this 80 were imported. In 1928, the consumption went up to 132 eggs per head of the population and of this 75 were imported. Though the consumption of eggs has increased considerably, yet the imports have decreased, which indicates the increased production of over 100%, and this in its turn has again added to the national income over £7,000,000. In that country there was an increase of 20% of fowls in 1929.

* The Hindu 27th June 1931.

The approximate value of eggs and fowls produced there is about £ 24,000,000. This figure is equal to the total value of grain crops such as oats, barely, wheat, etc., produced in that country and is more than the total value of fruits, potato and other vegetable crops there. The average Britisher is said to consume less number of eggs than the average citizen in many other countries of the west. Still, the total value of eggs and fowls consumed in Great Britain exceeds £ 45,000,000 per annum.

It is a great wonder if any of the provincial Governments in this country have paid similar attention to this subject of economical and food value and collected similar statistics as in Great Britain. Of late, a large number of poultry both in the rural and urban parts died in this country owing to some infectious diseases among them and there is a great dearth for fowls and eggs everywhere, especially in several big hospitals where eggs are necessary for the diet of the in-patients and the contractors find it extremely difficult to secure and supply enough of this commodity. We do not see this fact reported anywhere either by Government agency or by others.

Will our representatives in the Legislative Councils see that the Government department or departments concerned take up this question, investigate into the causes of this great mortality among fowls, adopt remedial measures without much delay and encourage this cottage industry?

'POULTRY'

Notice.

I regret to inform the members of the profession that owing to some unforeseen circumstances and difficulties which have since intervened, it has not been possible for the Bihar & Orissa Veterinary Association to hold the Next Conference of the All-India Veterinary Association at Patna, during the ensuing Christmas holidays. I am not in full possession of facts which have led towards this unfortunate situation but I have been asked by that Provincial Association to make arrangements to hold the next session in some other province. I am, however, in further communication with the Bihar and Orissa Veterinary Association on this subject. But the prospects are not bright as yet in that province. I have individually addressed a few friends in other provinces to let me know if it is possible to arrange the next session in any one of them. Meanwhile I take this opportunity to request my professional colleagues in several provinces to try and invite the next sittings to be held in their midst so that it may not be said that for want of support in the provinces, the Association failed to hold the conference. If the senior members in the profession who have been to-day occupying high positions, give up their apathy and

extend their sympathy and co-operation towards this movement of this young and struggling profession in India, it ought to be possible for many provinces to come forward with an invitation for the next Conference. The responsibility of the seniors in the matter is therefore very great and it is expected they will rise equal to the occasion and give a proper lead in the matter. Appeals to this effect have been made many times in the past but not with much success. It is hoped this time at least there will be a good response.

The profession is keen and anxious to know which province comes forward inviting the next session.

(Sd.) M. S. SASTRI, G.M.V.C.,

*General Secretary,
A. I. V. A., Anantapur.*

Reviews.

Annual Report of Civil Veterinary Department Bengal and Bengal Veterinary College, for the year 1929-30.

"The year under review was marked by heavy mortality from outbreaks of contagious diseases. Rinderpest again was the most serious scourge, and it will appear from the interesting graph showing the issue and consumption of Serum, appended to the college report, that the disease becomes more virulent during the season when the cultivator is most in need of his cattle". Unfortunately, the veterinary aid to the Province has been greatly inadequate both in the matter of touring billets and hospitals. Financial stringency is put forth as the plea for this inadequate protection of the live-stock of the province. It is to be greatly regretted that only in the case of the Veterinary Department, this question of financial stringency should be trotted out so frequently, much to the arrest of the progress of the Departmental activities. Very often we begin to despair whether a time will at all come when our Governments will realise the importance of the economic value of the Veterinary Department to the Agricultural masses.

The activities of the Veterinary Department in spheres other than protective inoculation have been on a very restricted scale, and it is surprising that only 48 bulls were castrated during the year. This is extremely poor indeed.

The College, as usual, has been doing good work, the noticeable feature being the development of the agricultural section in which fodder, etc., is successfully grown mainly for the nutrition of the Hospital Patients.

The Veterinary Journal March 1931 Special Surgical Number.

The "Special Surgical Number" of the Veterinary Journal is a splendid issue of that Journal and gives us an idea of the enormous progress made in recent years in Veterinary Surgery. As the Editor aptly says, the Veterinarian is greatly handicapped as compared with his medical brethren, both "on the pecuniary side of the question and by the insanitary surroundings to which the operator has to return his patient", but still he is usually able to so arrange and improvise his resources as to effect an ultimate "cure".

The articles are very well chosen and illustrated, The X-ray problems and the invisibility of a "Composition ball" under X-ray are highly interesting and very well worth a perusal.

"The Veterinary Bulletin".

Published by the Imperial Bureau of Animal Health, Veterinary Laboratory, Weybridge, Surrey, ENGLAND. Annual subscription £1. Single copy 7s. 6d.

On the recommendation of the Imperial Agricultural Research Conference, in 1927, the publication of that useful publication Tropical Veterinary Bulletin, has been ceased and, in its place, a more comprehensive publication, 'The Veterinary Bulletin' has been issued by the Imperial Bureau of Animal Health, England.

The first issue of this Bulletin contains very useful extracts and includes "all aspects of Animal Health, in so far as they relate to original research and to administrative control". From the very comprehensive nature of the contents, it must appeal to the Profession in a better way than the Tropical Veterinary Bulletin.

ERRATA.

- Page 1 line 5 for *manning* read *running*
 „ 1 „ 14 for *reproach* to the *read* reproach on the
 „ 5 „ 39 for *constitution* read *construction*

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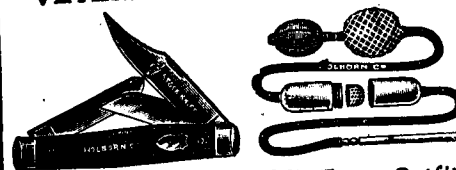
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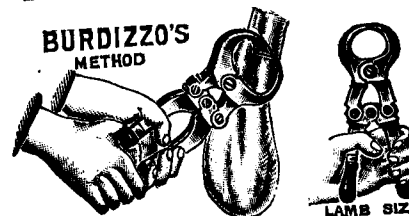
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The Indian Veterinary Journal, Madras. "Mr. Dasan deserves all praise for the production 'Notes on Bazaar and Indigenous Drugs.' This book comes in quite handy for an itinerating Veterinarian, who is generally handicapped for want of allopathic drugs. And for others it makes veterinary treatment fairly cheap. In a village a prescription containing indigenous drugs will be more readily taken. No other book on the subject seems available giving the necessary doses for Veterinary patients." "We commend this book to every Veterinary Practitioner and Student."

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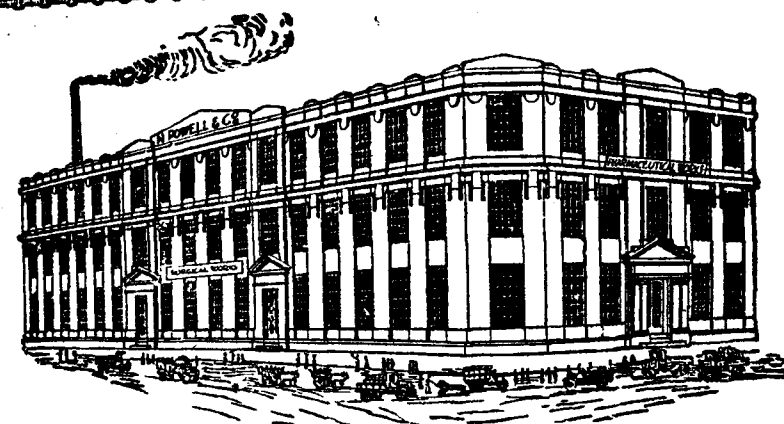
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