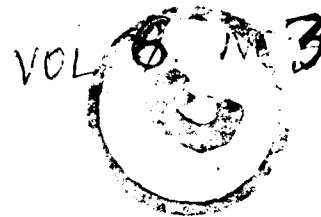


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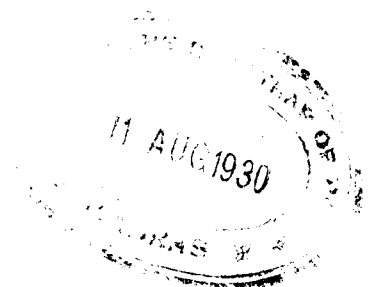
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(The Journal of The All-India Veterinary Association)



Editor

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

Veterinary Surgeon, Madras.

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

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The Indian Veterinary Journal

A quarterly record of Veterinary Medicine and Surgery
devoted to the cause of the Veterinary Profession.

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EDITOR:

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

*Veterinary Surgeon and Proprietor, Dr. Pangal's Veterinary Institute
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THE INDIAN VETERINARY JOURNAL

(The Journal of the All-India Veterinary Association)

Vol. VI.]

JANUARY, 1930.

[No. 3

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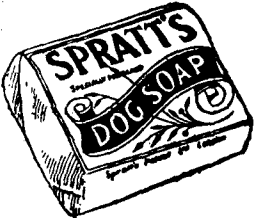
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THE Indian Veterinary Journal

Vol. VI]

JANUARY, 1930

[No. 3

Editorials

THE SIXTH ALL-INDIA VETERINARY CONFERENCE.

When last we issued the Journal we had not the least idea that Madras will come forward to invite the All-India Veterinary Conference for a second time at such a short notice. Finding, the response to our call from other presidencies and provinces was not forthcoming, Madras, true to her traditions, came forward and hardly with three week's time before her she decided that she must hold the Conference this year in Madras. The prospect was gloomy. Everyone was nervous; money and men had to be found; the co-operation of all had to be enlisted; the other presidencies had to be informed in time. Arrangements had to be made during the busiest season of the year. Tremendous work indeed! She did all that she could do and came out successful.

We publish in this issue the several addresses delivered at the Conference with its other proceedings. The fact that the Hon'ble Minister in charge of the Veterinary portfolio came forward to open the Conference should indicate to what extent the Veterinary profession in India has enlisted the sympathy of the non-official public. We remember the days when the powers-that-be were afraid to have anything to do with the activities of the Association in Madras. Happily the days have changed; there is a change of heart and hearty co-operation is what is obtainable in Madras to-day. We should think that it is the righteousness of the cause, the absolutely *bona fide* intentions of the honest workers in Madras that are responsible for this achievement. It is the triumph of right over wrong and truth over its opponent.

We are thankful to the Hon'ble Minister for Development for the clear conception of the utility of the profession in India as indicated in his speech when he said :

"I have not made any secret of my partiality for this department. Myself a humble landlord, I know what valuable and humanitarian service men of your calling are rendering to the dumb animals, who are essential factors in the agricultural development of this country. * * * Those of you who are taking a genuine and lively interest in your profession, permit me to say, are doing a real national and humanitarian service for which the vast agricultural population of this country should feel grateful."

We venture to expect a good deal from the sympathetic Minister when he said :

"I am inclined to think that progress so far achieved is not enough and more advance in that direction is necessary in the best interests of our cattle."

Again when he said :—"I assure you of my abiding interest in the department and my willingness to do all that is possible under the limitations under which we live towards placing the department on a better footing so as to be attractive."

We could only consider it as a great fortune that the profession was able to secure the services of a gentleman of the type of the Hon'ble Minister Mr. M. R. Sethuratnam Ayyar to open this conference. It is our earnest prayer that his hopes and promises be accomplished facts in the near future.

Of Mr. Kylasam Ayyar, the Chairman of the Reception Committee, we need hardly say anything as he is well known to the profession. To such of those members who are impatient over the achievements of the All-India Veterinary Association, we would invite their attention to a statement of Mr. Ayyar. He said :

"Seven years is a negligible period in the history of an Association which has set itself a task of such magnitude, for similar associations in other parts of the world have struggled hard through long and laborious years to achieve any tangible result.

But we regret the fact that neither in the chairman's address nor in the presidential address we find even a word about the inadequacy of the pay and prospects of the profession as existing to-day. However there was no dissentient voice in the discussion on the resolution regarding the present unsatisfactory nature of the pay and prospects.

ONE MORE DEPARTURE TO GREAT-BRITAIN.

Mr. M. K. Garudacharya, G. B. V. C. Veterinary Assistant Surgeon I/c Veterinary Hospital Dharwar, Bombay, sailed to Great-Britain and joined the Royal (Dick) Veterinary College Edinburgh for obtaining further training in Pathology and Bacteriology, early in October 1929. One remarkable feature of his adventure lies in his being a pioneer in voluntarily undertaking such an arduous task, at his own expense. It needs no adding that his experience and increased knowledge will be utilised to the best advantage of the Department.

Notes.

The All-India Veterinary Conference has come and gone. Its unique success is unquestionable. But what we wonder at is the energy exhibited by those who have anything to do with the activities of the Association. May God bless them for their self-sacrificing work.

The success of the Conference is not a little due to its President. In Mr. Saunders, it was the general opinion of the Conference, the profession found this year an ideal President. He was just without being harsh; he was courteous without being lenient. His promise of trying his best of continuing to be of some utility to the profession, if required, evoked the greatest applause. We thank him once again on behalf of the profession in India.

The help rendered by Professor V. Krishnamoorthy Ayyar, Principal of the Madras Veterinary College, and of

Mr. Kylasam Ayyar was indeed very great and we are grateful for their services.

Mr. M. S. Nathan, Senior Lecturer, Madras Veterinary College, has been gazetted to act for Mr. M. R. V. Panikkar, M. R. C. V. S., B. Sc., of the same college. He acted for four months on a former occasion. It is a case of well-deserved promotion. Mr. M. S. Nathan is hard-working and a capable officer.

The wrong done to Veterinary Assistant Surgeons of Punjab who had taken the short course yet remains unremedied. The newly passed-out men are put over the veterans in service. We don't mean the new men should not get the enhanced rate of pay. On the other hand, it makes our heart to jump in glee that at least they get a living wage.

But what we plead for is justice and nothing but justice to the short course men. Will some Punjab M.L.C's interested in our services interpellate the Government of Punjab on the matter and earn the gratitude of the profession !

One remarkable feature of this year's conference was that delegates were specially deputed from the far off Indian states of Indore and Travancore. This only shows that the states also have begun to feel the necessity of keeping up with the times even in matters Veterinary, to the best advantage of their subjects.

The paper that evoked the greatest discussion at the conference was the one by Mr. T. Vinayaka Mudaliar on 'some observations on Serum Simultaneous inoculation against Rinderpest.' Though practically full half a day was devoted to it, yet the regret of cutting short the discussion was unanimous.

'It is a pity the paper could not be printed in advance and circulated. Now that it is printed in this issue of the

journal, may we express the hope that we will be favoured with enough matters to publish a "Rinderpest Number" as has been suggested by 'A Delegate' under his article on "Some impressions of the conference."

Original Articles

STUDIES ON THE STAINING OF ACID-FAST BACTERIA.

BY

D.C. MATHESON, F.R.C.V.S., D.V.S.M. (Vic) EDINBURGH

AND

K. KYLASAM AYYAR, G.B.V.C., MADRAS.

From the Department of Pathology and Bacteriology, Royal (Dick) Veterinary College, Edinburgh, Scotland.

In view of the growing interest which is being manifested in India on the question of a pure milk supply (Srinivasa Rao 1) the demonstration of tubercle and other acid-fast bacilli in milk and other material possesses an interest for the Indian Veterinary practitioner and research worker, although the incidence of Tuberculosis among the stock appears to be, happily, comparatively low.

As pointed out by Klimmer (2) the number of methods advocated for the demonstration of tubercle and other acid-fast bacilli in smear preparations is at the present day considerable. For the demonstration of the tubercle bacillus the Ziehl-Neelsen process, modified or otherwise, is still the method mainly used in Great Britain.

As Klimmer (loc. cit) observes, the ingredients are readily compounded; the solutions are relatively stable and the method properly applied affords considerable security in diagnosis.

Nevertheless it not infrequently happens, as is well known, one may have considerable difficulty in demonstrating tubercle bacilli from a lesion that appears tubercular, at any rate so far as the naked eye and histological characters are concerned.

The difficulty may be due to various causes, for example (a) the lesions may be of long standing—the causal organisms

may have disappeared ; caseation and even calcification may be advanced.

(b) the lesion may be recent but the organism less acid-fast than normally and so readily decolorized by the usual methods employed for its demonstration.

(c) the organisms may be so scanty that even prolonged and repeated microscopical examination of smear preparations may fail to reveal them.

In the first case the demonstration of organisms may not be possible ; even animal inoculation may fail ; so far as that particular lesion is concerned, the disease is not merely quiescent, but arrested.

The foregoing statement does not imply that the disease is quiescent, far less arrested, in every lesion in which caseation or even calcification is advanced. Notably to the contrary is it often the case with tubercular lesions in the fowl ; in which caseation may be advanced and yet the lesion may contain the organisms in large numbers (M'Fadyean 3.) and even in cattle calcification may be demonstrable in a lesion from which tubercle bacilli can be demonstrated in smear preparations by appropriate staining. Nevertheless, in the case of tubercular lesions in the ox and pig, the more advanced the process of calcification is the less chance there is of demonstrating tubercle bacilli in them. Advanced calcification is uncommon in tubercular lesions in the fowl although the infection is frequently widespread in the body ; the lesions numerous ; and caseation established. (Matheson 4)

For the demonstration of the so called non-acid-fast forms of the tubercle bacillus special stains have been devised (Much, Klimmer loc. cit. p153 ; Spehl, Langeron 5) the present article is not concerned with that phase of the germ ; our present enquiry is : Where the organisms as demonstrated by the Ziehl-Neelsen process are few in number, will any of the other methods reveal an appreciably larger number in similar preparations ?

Klimmer (loc. cit) deals with this question and gives a very useful summary of recent work on the subject and Langeron (loc. cit.) also gives a number of methods alternative to the Ziehl-Neelsen process together with some useful

remarks upon them. A scrutiny of these publications appears to show however that the Ziehl-Neelsen process has not yet been displaced ; other methods may be as good ; several afford very useful alternatives : none is better.

For the purpose of submitting the question to further trial the present writers selected for comparison with the Ziehl-Neelsen process as subsequently detailed, two other methods ; firstly the so called "alkali-fast" method of Schulte-Tigges, and secondly the method of Spengler. The method of Schulte-Tigges was chosen because it affords a short contrast in the nature of the decolourising agent employed ; the method of spengler was selected, because it is generally well spoken of. (Langeron, Et al.) as a useful alternative to the Ziehl-Neelsen process ; moreover the greenish-yellow background produced by the use of picric acid as a contrast stain, serves not only to show up distinctly the red coloured tubercle bacilli but affords through its complementary action an agreeable rest to the eye, when the examination is prolonged or when a number of preparations are to be scrutinized.

Before discussing the results obtained it may be well to detail the exact procedure adopted by the writers since the Ziehl-Neelsen process, for example, is capable of various modifications although the major principle of differentiation by an acid solution and alcohol is retained. (See Klimmer loc. cit. p 148).

One of the most important modifications is the combination of the acid and alcohol in one solution : thus, for example, Moore and Hagan (6) mention three per cent solution of Hydrochloric acid in alcohol : Russell and Hastings (7) five per cent solution of Nitric Acid in 80% alcohol.

In our experience three per cent hydrochloric acid solution in alcohol is very efficient ; but very exacting ; it acts rapidly and thoroughly but great care is needed or decolorization will be carried too far and even the tubercle bacillus loses its stain.

For the purpose of the present research the following Ziehl-Neelsen process was adopted.

Preparation.

Basic fuchsin 1 part.

Absolute alcohol 10 parts.

5% aqueous solution

of pure carbolic acid 100 parts.

Carefully dissolve the dye in the alcohol and then add the solution of carbolic acid to it.

Process.

- I. Prepare the film in the usual way.
- II. Fix.
- III. Flood the slide with Ziehl-Neelsen Carbol-Fuchsin.
- IV. Warm, but do not boil the staining fluid. Renew as required.—3 to 5 minutes.
- V. Wash in water.
- VI. Dip the film in a 20% solution of Sulphuric acid in water.
- VII. Wash in water, if the film still appears pink dip again for a moment and wash again in water.
- VIII. When only a faint pink colour remains after washing in water.
- IX. Dry with bibulous paper and treat the film with alcohol for not more than two minutes.
- X. Dry with paper as above. (Avoid heat)
- XI. Wash in distilled water.
- XII. Counter-stain with Loeffler's Alkaline Methylene-Blue solution for half a minute.
- XIII. Wash in distilled water; dry with bibulus paper (not with heat). The film is then ready for examination.

The "Alkali-fast" method of Schulte-Tigges is as follows:— (Klimmer loc. cit. p 151.)

1. Stain from a half to two minutes with heat, or for twenty four hours in the cold with Carbol-fuchsin.
2. Rinse in water.

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3. Differentiate with ten per-cent aqueous solution of Sodium sulphite. (This solution should be freshly prepared or not more than from two to three days old.)
4. Rinse thoroughly in water.
5. Counterstain with a saturated aqueous solution of picric acid for five to ten seconds.
6. Rinse in water.

The preparation is then to be dried, after which it is ready for examination.

Moore and Hagan (loc. cit. p. 66) advise exposure of the film for one minute to the picric acid solution and that time was employed by the writers.

Spengler's Method: (Langeron, loc. cit. p. 933.)

Stain the film with Carbol fuchsin. Warm slightly. Treat without previous rinsing in water with picric-acid-alcohol for two or three seconds. Rinse the film in sixty per cent aqueous solution of alcohol.

Differentiate with 15% Nitric acid in water for half a minute; the film turns to a pale yellow.

Rinse again in 60% alcohol in water. Intensify the staining of the film by dipping again in the picric acid-alcohol solution till the background assumes a pale yellow colour. Rinse with water. Dry.

Composition of the Picric-acid-alcohol solution referred to above:

Mix equal parts of alcohol 95% and saturated aqueous solution of picric acid.

Care was taken to secure that all the material used in this research was authentic: diagnosis had already been made by appropriate methods; we could therefore survey our results with confidence. Sixty two specimens were examined: these were made up of material from tubercular lesions of the ox, pig, horse, cat, monkey, man (sputum) guinea-pig, fowl, Ibis, and Iguana; films from six cases of Johne's Disease in the Ox, (Chronic bacterial enteritis of cattle) together with a considerable number of cultures mainly of bovine origin derived from cases of tubercular mastitis in

cows, the milk having been inoculated into guinea-pigs and the cultures, recovered from these animals. The material also included cultures obtained from a guinea-pig inoculated with material from a tuberculous goat: cultures obtained directly from a tuberculous dog, cat, iguana and several fowls: two cultures of mycobacterium tuberculosis hominis; and a culture of mycobacterium paratuberculosis (Johne) (Bacillus of Johne's disease); a culture of Mycobacterium phlei, and preparations of Mycobacterium smegmatis and Mycobacterium leprae.

Film preparations were made, fixed by immersion in alcohol and after appropriate staining ten fields from each specimen were scrutinized for acid-fast organisms.

In the case of smears from lesions the number of organisms in each field was counted and recorded but in the case of film preparations from cultures the results were recorded as "equally good," "good picture," or "negative."

In the first place it will be noted, a considerable variety of material was examined; opportunity was given to each staining process to demonstrate its superiority if such existed; the use of one material which might be considered to favour one stain as against the others was avoided. Dealing with the material from tubercular lesions, we may say at once, the Ziehl-Neelsen process in our hands proved itself equal, and usually superior to, either of the other methods.

In no case in which the Ziehl-Neelsen process failed to reveal organisms in ten fields (four cases) were organisms demonstrated by either of the other methods; but in one case, that of a smear from a lesion in the cat, the Ziehl-Neelsen process revealed three organisms in ten fields while both the other processes failed to reveal any.

In four cases from the ox, and in one from the fowl, the Ziehl-Neelsen process gave a substantially higher count than in either of the other two processes.

In three cases only—two from tuberculous glands from the pig and one from tuberculous sputum from the human subject was a higher count obtained by the other two processes—in the first case from the pig the difference was negligible the total for ten fields being sixteen in the case of

the Ziehl-Neelsen process and twenty-one each in the case of the other two methods. In the second case from the pig the Ziehl-Neelsen process gave a total of six organisms in ten fields; the Schulte-Tigges method gave thirteen; but the film stained by Spengler's method in this case gave a substantially higher count—upwards of twenty organisms in each field; all three films were made from the same lesion and in view of the previous case and of subsequent cases—with one exception—in which the method showed no superiority it would appear that a particularly rich cluster of organisms was opened when this smear was spread.

The one exception alluded to was the smear of tuberculous sputum from the human subject. Eleven organisms in ten fields were demonstrated by the Ziehl-Neelsen process in this specimen; the counts for the other two processes being Schulte-Tigges, 37 and Spenglers 34.

On the other hand in three cases from the iguana, monkey, and guinea-pig respectively, where the films were rich in organisms all three methods demonstrated upwards of twenty bacilli in each field of the microscope.

In the case of films from the ibis, in spite of the avian origin of the material, the organisms were quite as numerous and well stained after treatment by the process of Schulte-Tigges as after treatment by either of the other two methods. The avian tubercle bacillus is sometimes said to be non—"alkali fast". (Shigiyu, Huttyra and Marek ?)

As however is the case with other staining processes of a selective character:—the method of Gram for instance—considerable variation is found in the staining results—depending upon the source and character of the material and upon other variable factors—several of our stains of avian tubercle bacilli in culture showed a marked tendency to retain the colour after treatment by the Schulte-Tigges process.

With regard to the results obtained with films from cases of Johne's disease the Schulte-Tigges method was uniformly negative. Film preparations from the culture however retained the stain in spite of the treatment with the alkaline solution and equally good pictures were obtained by each of the three methods under consideration.

With regard to the films from cultures the majority of these were of bovine origin in the sense expressed earlier in this paper: from these cultures equally good results were obtained by each of the three staining processes examined.

The culture of *Mycobacterium phlei* showed a good picture when examined by the Ziehl-Neelsen process, but not by either of the other methods.

The other cultures not already discussed showed equally good results when treated by each of the three processes.

We may summarise the results of this investigation by saying that in our hands for general clinical purposes the Ziehl-Neelsen process, is not yet displaced—the Schulte-Tigges method affords a useful differential stain especially in the case of the bacillus of Johne's disease but the non—"alkali-fast" character must not be considered invariable but must be taken in conjunction with other factors for purposes of diagnosis, and finally Spengler's method for films from tubercular material especially affords a grateful rest to the eye when a large number of specimens are to be examined.

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A PROBABLE NEW METHOD OF INJECTION AND UNNECESSARY DREAD OF ACCIDENTAL AIR-INTRODUCTION INTO THE VEINS OF DOGS.

BY

A. LATIFF.

Hospital Surgeon, Canine Clinic, Bengal Veterinary College.

(Read at the Sixth All-India Veterinary Conference December, 1929.)

Preamble :—For different therapeutical actions of medicines on the system, different channels are chosen for their administration, viz., oral administration, nasal inhalation, cutaneous massage, rectal enema, genital douche and urethral, intraperitoneal, intra-tracheal, intradermal, intra-muscular, intra-venous, intra-spinous, intra-theal, subsclerotic injections and so forth.

Of these routes, I shall deal here only with the intra-venous injection in the light of my short clinical experience with dogs.

This route is preferred for the purposes of :—

I. Putting medicines straight into the blood circulation for direct action on micro-organisms and their products infesting the blood.

II. For speedier actions of medicinal agents.

III. For administering bulky doses which subcutaneous, intra-muscular or any other space cannot accommodate nor can absorb readily, such as normal saline solution.

IV. For administering medicines of irritant nature, which when given subcutaneously, intra-muscularly or by other routes cause inflammation, abscess-formation and even sloughing of the part with agonising pain.

V. This is most handy and effective way of administering medicines in dogs.

Selection of Vein :—Following the existing practice and the technique given in books, I tried the Jugular and the internal saphena veins without much satisfactory result. The former slips badly, having no hard base below and

the latter can, of course, be got and fixed against the bone beneath, but, there is every likelihood of one's pricking the nerve and puncturing the artery, instead of the vein, on account of their close proximity. Thus we could not always avoid the local reaction of such irritant preparations, as Arsenobillon, Arseno-argentine, Novarsenobillon, Metarsenobillon, Tryparsemide, Ureastibimine, Sodium antimon tart, Trypanblue and red, and other arsenic, antimony and carbon derivatives which we are extensively using in Protozoal diseases, such as canine piroplasmosis.

In search of more suitable veins for the purpose, I found that the external saphena proved most convenient of all; puncture to be made at a point about 2 inches above the Tibio-tarsal articulation (in medium sized dogs). Musculo-cutaneous vein of the fore-limb stands second in respect of convenience. Puncture to be made at a point about $1\frac{1}{2}$ " above the radio-carpal articulation (internally). These veins can easily be fixed against the bony base beneath. Since we have chosen these veins we have been carrying out intravenous injections extensively without any mishap.

Injection of Air:—Accidental injection of air during intravenous injection was a dread to many practitioners including myself in my early practice. In course of discussion, my teacher, Khan Sahib Saiyid Sultan Ahmed, once remarked that entrance of air into the blood circulation is not attended with serious consequences as we supposed. Just to face facts practically, I undertook the following experiments, having a few dogs that were for destruction at my disposal, of injecting atmospheric air intravenously with the results noted below:—

Case I. A long coated Terrier bitch, aged about 2 years, weight 9 lbs. only, in moderate health. On the *1st August 1929*—injected 1 c. c. of air with a hypodermic syringe into the external saphena. No ill effect was noticed during or after the injection. She was normal till 6th August. On the *6th August*—injected one syringeful of Trypanblue sol. 5 c. c. of 2% strength together with 5 c. c. air into the external saphena without any marked reaction; excepting quick heart beats and accelerated respirations for a few seconds only after the injection. Next morning, the tips of the ears, tip of the

tail, interdigital spaces, conjunctiva, buccal membrane, etc., were examined and found stained blue. From this we may presume that the injected air probably did not cause embolism or thrombosis to obstruct the circulation. She was normal till 27th August. On the *27th August*—this third time, injected altogether 80 c. c. of air into the external saphena with the following reactions:—

After injecting 10 c. c. ... No marked reaction.

„ 20 c. c. ... Nervousness followed by urination and defecation.

„ 30 c. c. ... The animal fainted, heart-beat and respirations stopped altogether and she was apparently dead; but revived after 20 seconds of artificial respiration and in an hour she was perfectly normal again, when additional 50 c. c. of air was injected without any severe reaction. She looked quite lively when let loose after the last injection and remained quite normal till 5th September, when she was destroyed.

Case II. A terrier bitch, aged about 5 years, weight 20 lbs. rather in weak health. On the *23rd August 1929*—injected into each of the right saphena, left saphena and the jugular veins, 5 c.c. of air together with 5 c.c. of distilled water, i.e., altogether 15 c.c. of air and 15 c.c. of distilled water without any appreciable reaction. The animal was normal till 2nd September, when she was destroyed.

Case III. A Pariah dog, aged about four years, weight 33 lbs. in moderate health. On the *2nd August 1929*, injected 2 c.c. of air into the Jugular vein, immediately followed by Trypan-blue sol. 8 c.c. of 2% strength, immediately followed by 2 c.c. of air. No marked reaction could be noticed during the injections.

Next morning the animal was examined and was found normal in respect of temperature, stools, feed, pulse and respirations, and general appearance lively; only, urine was slightly bluish. He was stained blue all over the skin and visible mucus membranes. The animal remained quite normal till 6th August 1929.

On the 6th August 1929—injected 2 c.c. of saturated solution of Trypan blue into the external saphena, immediately followed by 8 c.c. of air. No ill effect was noticed till 27th August. On the same day injected into the external saphena 400 c.c. of atmospheric air with a 10 c.c. syringe, one syringe-ful at a time, at intervals of half a minute, and at the same time the character of heart-beats and respiration were constantly examined by a stethoscope. Up to 20 c.c.—no perceptible change in heart-beats and respiration, excepting the latter was a bit accelerated. Between 20 and 40 c.c.—quick heart beats and difficult respirations for a few seconds only after each injection. Between 40 and 140 c.c.—a sort of harsh frictional and gurgling heart-beats and stertorous breathing. Between 140 and 400 c.c.—heart-beats and respiration much easier, as if the system of the animal was accommodating itself to the exigency. The dog was normal till 10th September when he was destroyed.

Case IV. A Pariah dog, aged about 4 years, weight 25 lbs. On the 21st Novr. 1929 injected altogether 650 c.c. of air into the external saphena with a 10 c.c. syringe, one syringe-ful at a time, at intervals of half a minute. The animal stood the experiment quite well except cardiac and respiratory reactions at the middle stage of the course of injections, as occurred in other cases.

On these experiments, it was observed that,

(I) The quicker the injections the more violent the reaction on the heart and respiration.

(II) Injections slowly made produced no marked reaction at all.

(III) The animals gradually acquired a sort of tolerance to the increased amount of air injected.

Do these results indicate that the air injected into the blood circulation spit up into its component elements which

were used up by the tissues to their benefit? If further experiments establish this to be a fact, why should we not inject Oxygen or sterilised air intravenously in respiratory diseases where oxygen inhalation is indicated?

Discussion.

President :—You heard this paper and it is now open for discussion. It is a point of very considerable interest as we all have to do intravenous injections. I have not had any accident from this source. I should like to have your views.

Mr. K. Kylasam Ayyar. Though there is very little to fear, it cannot be denied that accidents do happen from this source. I know of an accident in S. S. Camp. The animal had Piro-complication and the assistants gave Trypan-blue injection intravenously. Five minutes later the animal was dead. We could only put it down to air getting into the vein, as there was no other cause for such sudden death.

Dr. Parthasarathy :—I know of cases recorded which required two pints of air to kill a calf. There was a doctor who whenever he wanted to kill a rabbit, used to prefer this method of injecting air. In about two seconds the animals died.

Mr. Janakiram Ayyar :—While I was at Hosur Cattle Farm, the then Superintendent of the Farm asked me to devise a cheap method of destroying very aged horses which were unfit for further use. I adopted this method of injecting air into the vein. I used a 20 c.c. hypodermic needle attached to Higgin's enema pump. I was not able to measure the quantity of air injected; but the animal died within two minutes.

Mr. Vinayaka Mudaliar :—I rise to support the statement of Mr. Janakiram Ayyar. The practice so well inaugurated by Mr. Janakiram Ayyar is to this day followed at Hosur Cattle Farm, for want of a Humane Cattle Killer. The animal gets into a sort of stupor, goes down on its haunches and dies without much struggle. The time in the case of cattle is about $\frac{1}{2}$ to 1 minute.

Mr. Sundaranathan :—I do not believe that very large quantities of air accidentally introduced into the vein

cause death. I injected into the vein of a bullock, certain quantity of air, just to watch how it dies. It died after 20 minutes but it struggled and suffered so much that I have made up my mind not to try it again.

General Articles

SOME OBSERVATIONS ON SERUM-SIMULTANEOUS INOCULATION AGAINST RINDERPEST.

BY

T. VINAYAKA MUDALIAR, G. M. V. C.

Vety. Asst. Surgeon, Hosur Cattle Farm.

(Read at the sixth All-India Veterinary Conference December, 1929.)

Mr. President and Gentlemen,

Hosur Cattle Farm is a well known place to the Veterinary Surgeons of this Presidency. For the information of our colleagues from outside, I may mention that it is about 27 miles from Bangalore and is the biggest Cattle Farm owned by the Government of Madras in this Presidency.

Due to prevalence of rinderpest in and around that place, S.S. Inoculation has become a matter of annual affair and sometimes biannual. We have different breeds of cattle there, such as, Cross-breds, Scindhies, Kangayams, Montgomeries and Ongoles. Naturally in a place like that one has ample facilities of noting and recording the results of one's labours with greater certainty than when he is moving about from village to village or is in charge of a mofussil hospital. My intention in presenting this paper at this conference is merely to lay before you a few of the observations that I have noted during the S.S. Camp in May and June of this year and to have the benefit of your opinion, counting as it does the experience of the whole of India.

326 Animals were inoculated and the dose of serum given in the case of countrybred animals was at the rate of 10 c. c. for every 100 lbs. body weight; while the crossbreds

got according to the amount of foreign blood in them at the rate of 50 c.c. per 100 lbs. body weight of pure-bred foreign animals. Considering the valuable nature of the stock and to err on the safe side with regard to the pedigree of each animal, and as susceptibility to rinderpest was noticed to be high even in inoculated animals in previous years, a slightly enhanced dose of serum was given only in the case of cross-breds. From experience gained on this very same farm in previous years, it has been found necessary to re-inoculate every year all young stock below 3 years of age at the time of first inoculation until they reach that age and then to re-inoculate them only once in three years. Thus, there were on the farm nearly 200 animals more which were not included in this year's camp, as they were over 3 years when they were last protected by S.S. inoculation.

Two days prior to the day of inoculation we began recording the temperature of all animals just to note the diurnal variations in each individual and to eliminate even the remote possibility of any animal incubating the disease, as there was no outbreak of rinderpest on the farm then, though villages beyond five miles suffered heavily from this dire disease. The animals were all inoculated with usual precautions necessary and their temperature noted down daily. 1 c. c. of virus was the dose given for adults and $\frac{1}{2}$ c. c. for suckling calves. The serum used was class I serum from Muktesar. The very same serum was used even for country-breds as class II serum that is usually given them was not available then.

Now, the first difficulty we were faced with, as we were going on with our inoculations, was the number of cases of anaphylaxis. No less than 52 animals showed more or less severe symptoms of anaphylaxis which were characterised by early signs of uneasiness, excitement, sneezing, constant lying down and getting up, swollen eyelids, vulva, anus and perineal regions, a general urticarial condition of the body, difficulty in breathing, coughing, staring coat, rigors, increased salivation and micturition in small quantities. The excitement in a Scindhe Bull (No. 124) was

terrific. He behaved like a rabid bull scratching his head and eyes with his hind legs violently unmindful of consequences. His large black eyes were rolling and he behaved as if he would not be satisfied unless he removed his eyeballs from their sockets or laid open his cranium. After such a storm there is always a calm. The animal is dull and listless and is inclined to remain lying down. During the stage of excitement the action of the heart is tumultuous and the temperature is raised by one or two degrees. As the rashes on the body were going down the skin went into folds and the animal evidently felt uncontrollable desire for scratching. They either rubbed themselves against walls, manger shafts etc or began licking the body until raw sores appeared all over the body. Fearing we were giving too much serum as per our enhanced rate, we reduced it to the barest minimum prescribed in circulars on the subject. Even then the animals suffered from severe anaphylaxis. It was left to one Ongole Cow (No. 116) to manifest these symptoms to a finish. With the usual onset of symptoms above described and after a spell of quietitude and nearly 6 hours after inoculation, the animal began going round and round and falling down suddenly in a violent manner and injuring itself all over the body, grunting and showing abdominal pains. The pulse was rapid and weak and the temperature fell down to 99.4° F. The animal died in the early hours of the next morning i.e. about 14 hours after inoculation.

The post-mortem lesions were very interesting. There was intense injection of abdominal veins. The lungs were oedematous and emphysematous with a few hæmorrhagic spots here and there. It was the abomasum that showed the great lesion. There were large areas of hæmorrhages underneath the mucous coat, charred and black-spotted in some places and scarlet red in some other places. The same sort of sub-mucous hæmorrhages were present in the small intestines and in some portions of the large. Brain was slightly congested.

Judged from the severity of anaphylaxis we ought to have lost at least 3 animals more but their escape was Providential. Our line of treatment was nothing specific. We merely applied cold water to the head. Wet towels were

laid on the head and spinal column and we wiped the entire body with cold water. This shock was neither confined nor more pronounced in any one particular breed than in another. All were equally affected. We had to protect certain animals on the same farm by serum alone method as they were nearing parturition as well as the new births after the date of inoculation. No anaphylaxis was noticed in serum alone method. The serum used was the same class I serum. Again the Touring Veterinary Assistant Surgeon was sent with the same virus and serum we used on the farm to a village close by and a few animals were inoculated amongst village cattle and the results watched. There were no cases of anaphylaxis. We hyperimmunised the animals on the 7th day and there were reactors as late as the 19th day also.

Tiding over these cases of anaphylaxis we were faced with cases of severe reaction. There were as many as 27 cases which showed typical symptoms of rinderpest. From cases of mere rise of temperature and mouth lesions to pronounced cases of foul smelling blood tinged diarrhoea with passing of necrotic epithelial casts and characteristic rinderpest grunt and cough we had. And what more: we had as many as 3 deaths from rinderpest—one of them with Piro-complications: this, in spite of the massive dose of serum given. Two of these 3 animals were protected once before by S.S. method only the previous year and all the three were cross-breds with $\frac{1}{2}$ foreign blood in them.

It must be stated here that all the farm animals suffered from Foot and Mouth disease 2 months prior to S.S. inoculation and in the case of animals below 3 years of age, aggressin inoculation took place about a month in advance of the S.S. camp. Again, four months after this S. S. camp, I inoculated these young stock with aggressin in accordance with a standing order of the Director of Veterinary Services. There were no cases of anaphylaxis after aggressin inoculation. In previous years when both Black-Quarter serum and aggressin were used there were very severe cases of anaphylaxis and one animal had died from the shock.

Now, I shall sum up the points on which I wish to draw your attention and seek the benefit of your discussion:—

- (1) Has anaphylaxis been noticed amongst village

cattle anywhere in field-work? If so, was there any history of previous inoculation in such cases?

- (2) If the severity of anaphylaxis on our farm was due to repeated inoculations and the consequent surcharged condition of the animal tissues with "antibodies" or what Vaughan calls as 'ferments' which bring about this upheaval on further introduction of substances of protein nature parenterally, then how to avoid mortality from anaphylactic shock when subsequent inoculations are found necessary either on a farm like the one under reference or out in the fields in future years?
- (3) Why has not anaphylaxis made its appearance when serum alone was used on animals which had previous inoculations? Here I beg to draw your attention to what Mr. A. M. Muthappa, Veterinary Assistant Surgeon at Ammatti in Coorg has reported to Dr. Edwards: He records anaphylactic shock in Scindhe Cows on inoculation with A. R. Serum alone and two of the cows had aborted after 2 days. The communication appeared in the January issue of this year in the Indian Veterinary Journal.
- (4) Have you ever tried "desensitizing" such animals with inoculation of small quantities of serum at the first instance and then following it up with the remaining quantity necessary or of heating the serum to 56° C. as advised by Basrodka? If so with what results? Here again the utter futility of such fractional doses as a guard against anaphylaxis has been recorded by two writers in Athens. The article appears extracted in the Indian Veterinary Journal of October 1928. May I seek your experience if any on the matter?
- (5) Will it improve matters if we were to inject all the serum required on the first day and the

virus the next day? We may try some of these methods at our next inoculation.

- (6) Again, will a change from the heterologous to homologous serum help us to avoid this anaphylaxis? There were 4 Delhi buffaloes which were inoculated in this camp and they were free from anaphylaxis.
- (7) Has any specific line of treatment been successful in anaphylaxis? Dr. Edwards has replied to Mr. Muthappa:

"There is no cure known and nothing so far as I am aware can be given to alleviate the symptom (of anaphylaxis) by artificial means".

So much for anaphylaxis.

Next:

- (8) How to account for the death from rinderpest above described, in spite of massive dose of serum given and the fact that some of them were protected in the previous year also? If a certain percentage of mortality is to be expected from S. S. inoculation then let all concerned be warned of it and let us know what percentage to expect ordinarily. On this farm at the last inoculation the percentage works up to less than 1%. What is your experience elsewhere? In Woolridge's medicine it is said "In spite of every care in regulating the dose of serum, a certain number of individuals will be encountered with abnormal susceptibility and these will suffer from severe and sometimes fatal attacks of cattle plague. This variation in susceptibility is greatest in those countries where cattle plague has previously existed or is enzootic".
- (9) Where are we with regard to the period of immunity we confer by this method? I remember the days when with one inoculation of serum alone method we very effectively put down outbreaks of rinderpest in villages. But now rin-

derpest seems to be never ending in the districts. Has this S. S. inoculation anything to do with its continuance in creating fresh centres of infection?

These are questions which we as a profession should not fight shy to face. The attention of the profession should be concentrated on this one subject even more than others. It looks to me that the utility of our profession in India will be assessed chiefly on the amount of success we are able to achieve in controlling this plague of cattle. The importance of the subject is my only excuse in coming forward with this paper and if it should evoke a full discussion and thrashing out of the subject in all its aspects, I should feel more than amply repaid for the little trouble I have taken.

Discussions will be continued in the next issue

THE ACTION OF THYMUS GLAND ON TESTES.

(Studies from a monarchid.)

BY

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Dharapuram.*

On the 24th June, a ryot, from a neighbouring village came to this Dispensary, and reported that his bullock was mulled about two years back, and that it was now covering cows successfully. He also stated that when he mulled the animal it had only one testicle.

The animal was about four years old and belonged to the famous *Kangayam Breed*. It was well built and had all the appearance of a good breeding bull. The apparent absence of one testicle made me suspect that the animal was a monarchid. The contents of the rectum were thoroughly removed and a rectal examination was made securing the animal in a *Dorso-recumbant* position. The left *inner abdominal* ring was examined by one hand; the other hand was used to exert pressure on the *external abdominal* ring towards the abdomen. A round mass was felt, which when pressed

gave pain to the animal. The case was diagnosed as one of *Cryptorchismus-Inguinalis*.

The owner of the animal was informed of the operation necessary for the removal of the testicle. As he was not willing to submit his animal for such an operation, the following treatment was resorted to:

On the 19th July, eight grams of dessicated Thymus gland of Park Davis & Co., was planted under the skin on the left side of the neck and the wound was sutured. (One grain of P. D. & Co.'s dessicated Thymus gland represents eight grains of fresh Thymus gland). For the following four days *four grains* of the same gland was given by mouth. On the 24th July, sixteen grains of dessicated gland was planted under the skin on the right side of the neck and the incision was sutured. For the following four days *six grains* of the same gland was given by mouth every day. On 29th July, the owner reported that the animal has completely lost all its sexual desire. The wounds healed by first intention and the sutures were removed. Thymus gland was discontinued till fifth August. On the fifth, the animal was again brought to the Dispensary and the owner reported that the animal had no sexual desire. The owner was supplied with thirty six grains of the gland and was asked to give the animal at the rate of six grains for six days.

I had the opportunity of meeting the owner several times afterwards, and he has always told me, that his animal has completely lost all its sexual powers.

The planting of the gland is very easy. The animal has to be cast and secured. It is quite *essential* to give a sub-cutaneous injection of *Adrenaline* before incising the skin. The skin has to be opened according to the amount of the gland that is to be planted under the skin. As adrenaline checks all the cutaneous bleeding, there will not be any chance of the gland being washed away as soon as it is put inside the opening. It is also *important* not to use any strong antiseptics when once the skin is opened. The antiseptic may act on the dessicated gland and destroy all its vitality. The instruments should all be sterile and sterile water or normal saline should be preferred for any antiseptic lotion.

In this connection, it will be interesting to note the action of the Thymus gland in normal conditions. Thymus gland persists in the animal body till the testicle has completely developed. After that it slowly disappears. If an animal is castrated when it is very young the Thymus gland persists. The internal secretion of the gland when once the animal has become an adult is either unnecessary or is detrimental to the functioning of the testes. The latter is found to be true by the case mentioned above.

REJUVENATION BY GRAFTING SECTIONS OF TESTICLES ON AN OLD GREAT DANE

PERFORMED BY DR. SERGE VERONOFF
AT THE BOMBAY VETERINARY COLLEGE

BY

MR. V. R. PHADKE, G.B.V.C.

Assistant Principal, Veterinary College, Bombay.

(Paper read at the sixth All-India Veterinary Conference, December 1929.)

Mr. Phadke before he read his paper made the following remarks :—

I am glad, Gentlemen, to take this opportunity, for I had no time to send in my paper until at the last moment.

When Dr. Veronoff was in Bombay, I requested him to perform his operation on a dog. I had the opportunity of watching the operation and I here describe what I did see.

As you may perhaps know Dr. Veronoff went to Morocco and started rejuvenating old sheep. He did not try to make the old sheep young, but wanted to make the young sheep more vigorous before it got old and he succeeded in increasing the weight of flesh by 9 to 10 pounds.

He came to Bombay and in our short discussion I told him that Veterinarians in this country would like to take up this work. I also said that, as far as India is concerned with relation to his rejuvenating operation, India is a country where people want to be castrated (Laughter). Because its soil is very fertile and its people are unable to give education to their children, and that the necessity for re-grafting does

not arise. There may be old people having plenty of money, they may like to be rejuvenated. That is, however, a small matter.

As to the other sort viz., in trying to raise the quantity of meat, I want to get more flesh—at least in my Province. In Punjab, you may find people with plenty of animals, sheep-rearers and breeders who may welcome your proposal. The question of meat in India does not affect us much. The cow goes to the butcher because it does not yield sufficient milk; the sheep goes to the butcher because it is weak or sick.

I describe nothing except what I have seen and done. I will just read my paper.

The famous Rejuvenation expert, Dr. Serge Veronoff, Director of the Department of Experimental Surgery of the College de France, Paris, visited the Bombay Veterinary College on the 10th of December, 1929, and at my earnest request, rapidly undertook to give us a practical demonstration of his grafting methods on the 12th December, 1929.

Arrangements had to be made to secure two male animals of any species and we preferred to purchase two male sheep for the purpose. However, one of the professors who owned an old Great Dane was very anxious to get his animal rejuvenated and thus take advantage of the opportunity.

The only thing left for us was to secure an adult pariah dog to serve the purpose of the donor. The grafting operation was performed by Dr. Veronoff, members of the staff helping him at every stage.

The Great Dane and the Pariah dog simultaneously were placed on separate tables. First the Pariah dog was anaesthetized. Its scrotum and upper portions of the thighs were shaved and thoroughly washed with soap and water, then washed with alcohol and lastly painted with Tr. of Iodine and in the same way the Great Dane was prepared. Chloroform was employed for general anaesthesia.

The operation on the Pariah dog was a short one and it consisted in the incision of the scrotum and removal of one of the testes through tunica vaginalis reflexa, the spermatic cord being clamped as for castration. The *epididimus* was removed and the enucleated testes was kept wrapped up in sterile lint.

After treatment of the animal was as follows:—The spermatic cord was ligatured by a catgut and the clamp removed. Dartos and fascia sutured interruptedly and lastly the skin sutured with silk and flexible collodion painted on the wound and a bandage applied.

Meanwhile the Great Dane was anaesthetized and with all due sterile precautions just as in the case of the donor the scrotum was incised covering one of the testes nearly parallel to the median raphe. The skin receded exposing the connective tissue enveloping the dartos. At this stage the connective tissue and dartos were held by a pair of artery forceps on both sides, and incision made longitudinally exposing the tunica vaginalis reflexa; now the dartos coat was separated from the tunica vaginalis by blunt dissection forming a cul-di-sac round the testes and each lip of the wound (dartos) was held at both the commisures by artery forceps.

The enucleated testicle was now cut into two halves each half being again divided into two portions in its entire length. The tunica vaginalis was now scarified on either side of the testicle of the Great Dane, and a section (1 c.m. in breadth and about 1 c.m. in thickness) of the graft was placed on the medial and another on the lateral side of the testicle, the glandular substance of the graft facing the tunica vaginalis.

Now the extreme ends of the graft and the sides were sutured on to the tunica vaginalis with four interrupted catgut sutures. The lips of the dartos coat forming the cul-disac were now brought together and sutured with catgut continuously and lastly the skin of the scrotum was treated similarly with silk suture.

The other testicle was operated in a similar manner. The external wounds were now covered with collodion and bandaged.

The animal is under observation and the results would be communicated later.

Discussion.

Mr. Mushtaq Ahmed :—I too would like to say something on this paper. We had a horse, an Arab—old and debilitated, on which we performed this operation. Slices of

testicles were grafted underneath the stem in four places, on the sides of the umbilicus and wounds sutured: After about three weeks the animal began to pick up condition, fatten up and is now in a much better condition. *Mr. K. Krishna Iyengar* :—Mr. Ahamed's experiment is really very interesting. It simplifies matter. It will be well if further experiments are conducted and results recorded.

Mr. Chelva Iyengar :—Did the gland so grafted keep the same size?

Mr. Mushtaq Ahmed :—For 10 days it was of small size and then disappeared.

Mr. Chelva Iyengar :—Are you sure they are absorbed?

Mr. Mushtaq Ahmed :—Yes, it has become invisible altogether later on.

Mr. Phadke :—What I understand from Mr. Mushtaq Ahmed is that the graft does not remain as a graft but gets absorbed. But in the beginning what I thought was that it remained there. Whatever it may be, I think, it is time to get on with some more experiments.

SHAVING THE HORNS OF CATTLE AND THE DANGERS: TO WHICH THEY ARE EXPOSED.

BY

(MR. T. KRISHNASWAMI IYENGAR)

Veterinary Asst. Surgeon, Chengalput.

It has been a practice long in vogue in these parts to shave the horns of bulls and cows exposed for sale. It is for purposes of show and to make the animals appear young, the horns are shortened and shaved smooth obliterating the grooves on them. There are special men for the purpose who do the work with a very sharp scythe, in no time, at annas 6 to 8 per head. Such a barbarity assuredly makes the horns weak and their utility injured. While doing this piece of business, it is not uncommon to find that the workmen injure-

the sensitive structure of the horns by :—

(1) *Paring off the hard covering too deep.* The poor animals thus injured could not bear the direct heat of the sun and are found suffering a good deal, to mitigate which, the merciless trader ties up a wet bandage over the horn or smears a paste of dung for a day or two.

(2) *The accident of inflicting an incised wound to the sensitive horn, while shaving the hard covering in a hurry,* is also quite common. Such showy animals are purchased at a high cost by the ryots and utilised for their work. The animal while attempting to keep off flies or attack another animal with its head horns, occasionally meets with the accident of its horns (with the very thin hard covering), coming in contact with a hard object, and thus breaking at one stroke.

(3) Such injuries to horns of animals are found quite common in these parts with the result that the horns are lost in many cases and the value of the animal is also almost lost.

Thus we perceive the folly of the trader, who, to gratify a whim, mutilates so important a part, thus, sacrificing safety to a false notion of improved appearance.

Clinical Articles.

SUSPENDED ANIMATION IN NEW BORN CALF

BY

L. S. JOSEPH, G. B. V. C.,

Cattle Superintendent, Imperial Institute Agricultural Research, Pusa

While going through the young stock register, one frequently comes across records of calves still born, or born dead. Such births are by no means confined to primipara cows, that is cows calving for the first time, whose generative organs may not have fully developed. They also occur in mature cows who had their foetus displaced either through running, or turning abruptly or through other cattle butting or tossing them. In both cases, delivery is generally brought

about with manipulative aid and where the expulsive effort is unduly prolonged, the calf presents all apparent signs of being dead. My experience of eighteen years, at Pusa, shows that in more than half the cases, the calves are not actually dead, but are the victims of suspended-animation and by proper attention in time can be brought to life. In fact during the last eight years I have successfully tried artificial respiration and massage of heart in three out of four cases. More cases probably did not come to notice owing to the circumstances that 75 per cent of calvings occur during night from 10 P. M. to very early hours of the morning. This is probably due to the primitive instinct of self preservation still running into blood after so many years of domestication.

The last case I tried, with success, was bull calf and he, at the moment of writing, is a vigorous young bull (No. 473) with fully developed constitution.

The subject, a Sahiwal bull calf of a primipari cow born after its full intra-uterine time and after normal parturition, was reported by the attendant to have been born dead at 10 A.M., on 31st March, 1927. I saw the calf lying apparently dead an hour after birth.

When examined for the corneal reflex and heartbeat there was no response. After placing the calf on the right lateral recumbent position and clearing the oral cavity, nasal passage and eyes, of the thick viscid mucus, the following *modus operandi* was resolved upon.

Sitting at right angles to the fore legs of the calf, I held both the fore legs between the fingers of my left hand and continued moving the legs to and fro alternated with flexion and extension with smart jerks, while my right hand palm was engaged in massaging with steady pressure the seat of the heart, just behind the elbow joint between the third and sixth costal bones or ribs.

The men, chiefly gowallas, collected round the scene more out of curiosity than anything else, bore an air of sarcasm at my vain endeavours to give life to a dead calf. After ten minutes' efforts, when I was nearly getting disappointed and thinking of leaving the calf to the mercy of the chamars, I felt a very feeble vibration under my right palm. Being

encouraged at this happy sign, I continued my operations further till the throbbings of the heart were distinctly felt under the pressure of my palm. At first Nature's little watch was working by fits and starts, but soon the beats became rythmical and the calf stood up and walked, to the utter chagrin of the chamars. The calf took milk after six hours. The heart presumably responded to the stimulus because there was very little delay in applying it and secondly because the costal bones being tender and placid, acted as effective conductors. Whether this can be effectively done in cases of heart failure in adult animals is a point worth consideration. In my opinion, such massaging in the case of adult animals is likely to be of doubtful value owing to the rigidity of the costal bones and voluminous muscular appendages intra costal and supra costal and owing to the presence of the os-cardi-cardiac bone, which appears only in the adult stage.

CAESAREAN SECTION IN A COW.

BY

C. MADHAVAN NAMBIAR

Veterinary Assistant Surgeon, Veterinary Dispensary, Palghat.

A cow from Puthusseri village in fair condition, about 6½ years old was admitted as an inpatient in the Dispensary on 4-11-1929, for dystokia.

The animal has been labouring for about 24 hours previously and the owner has tried his best to remove the calf whose forelegs he has even fractured by traction.

This cow had an accidental fall into a well a couple of years ago which resulted in the fracture of the pelvis. The cow has since conceived.

On examination I observed that the original fracture has considerably narrowed down the pelvic cavity and removal of the calf through the vaginal passage was out of question. So the owner was advised about the removal of the calf by the above method and his permission obtained.

The animal was given seven drachms of chloral hydras at two intervals. Subsequently she was chloroformed,

half an ounce was quite sufficient to bring her under. The operation was performed as mentioned in the technique and a dead bull calf with all its membranes was removed, normal saline alone being used throughout. Necessary sutures were applied and the wound dressed properly.

The wound healed by first intention, excepting for a slight ulceration at the lower end, which also healed without any trouble. The animal was discharged quite fit on 28-11-1929.

There was no rise of temperature throughout.

I thank Mr. A. Moberly, Touring Veterinary Assistant Surgeon, Palghat for the best help and advice on the above operation.

A CASE OF MATERNAL AND FOETAL DYSTOKIA.

BY

ABDUL MAJID

Veterinary Asst. Surgeon, Veterinary Dispensary, Karachi.

On the 20th November, 1929, the manager of Karachi Pinjrapole Association informed me that a cow had probably calved in the night and the "after birth" was hanging through the vagina but the calf could not be found. The cow-man thought it might have been stolen away by somebody. Not believing the story of the cow-man, I examined the cow, fairly aged and weak in condition, and found that a portion of chorian and allantois about 4½ feet long was hanging but amnion containing the foetus was intact. The cow had a large ventral hernia on the right side of the abdomen which caused the deviation of the uterus obliquely downwards and the os-uteri upwards which was not fully opened, only three fingers going in. On further examination it was discovered that the foetus had transverse presentation and right cephalo-iliac position. No extremities, head or tail could be reached. Only a round ball-like mass could be felt. A most difficult position indeed. The cow looked dull and not straining at all. In view of the little opening of the os-uteri it was not possible to attempt the removal of the

foetus immediately. So I decided to wait and see and gave a dose of Spirit ammonia aromatised oz ii and pulv. ergot dr iv treacle and aqua Q. S, to be repeated in the night. Next morning the os-uteri was found more dilated and position of the foetus changed a little. Ribs and croup could be felt distinctly, 3 c. c. of pituitrin was injected to counteract the uterine inertia. The result on the next morning was hopeful, the os had dilated sufficiently. Consequently attempt was made to grasp any of the limbs. The foetus had changed into the posterior presentation and lumbo-sacral position, hocks bent inside. The tail was caught first, then one hock and both were pulled out and straightened. Further removal of the calf—of course dead he was—requires no details. Remaining placenta dropped down immediately. The uterus and vagina were douched with warm lysol lotion and as the cow was in weak condition before calving, she did not regain sufficient strength and subsequently got pneumonia and died after a fortnight.

In my opinion this was a case of maternal dystokia on account of deviation of the uterus obliquely caused by gravity of ventral hernia of large size, as well as foetal dystokia on account of most difficult presentation and position of the foetus. In conclusion, I would say that a cow having large ventral hernia is not a fit subject for calving purposes.

A SPORADIC CASE OF BLACK QUARTER.

BY

ABDUL MAJID

Veterinary Assistant Surgeon, 1/c R. C. Veterinary Dispensary Karachi.

On the 20th November, 1920, a dark-red, 15 years old bull of fairly big size working in cart was sent for treatment from Municipal Zoo Gardens. The animal showed the following symptoms.

Temperature sub-normal, shivering, foaming at the mouth, accelerated breathing, imperceptible pulse, dullness, total loss of appetite and constipation. As the animal could not walk, he was kept as an indoor patient and treated with

subcutaneous injection of half a grain of Strychnine and stimulating draughts. An opening dose was also given. The treatment was continued with no perceptible result. The temperature remained sub-normal and the animal prostrated.

On the evening of 23rd November, 1929, i.e. after 4 days' illness, he began to develop the emphysematous crepitating swelling around the hump and shoulders which attained enormous size by next morning, a characteristic symptom of black quarter. The bull died the same night. On post mortem examination, carditis, omasitis and abomasitis were noticed. Liver was soft and friable. Spleen congested but not enlarged. The muscles under the swelling were dark-coloured, very soft and friable, almost liquified giving off rancid odour. Smears prepared from the muscular exudate, stained and examined under microscope showed bacilli of Black Quarter. The diagnosis was confirmed by the Superintendent, Civil Veterinary Department, Sind & Rajputana, Karachi.

The peculiarities about this case are (1) the unusual length of illness, (2) continuation of sub-normal temperature, (3) appearance of emphysematous swelling after 4 days of illness, and (4) very old age of the patient i.e. 15 years.

A WONDERFUL FREAK OF NATURE.

"A CURIOUS BUFFALO-CALF MONSTROSITY."

BY

NAIR, BENGAL VETERINARY COLLEGE,

Calcutta.

Reluctant though I am to record, a case of the following type, a rarity of common occurrence at present, yet, the remarkable anatomical peculiarities, natural parturition, and, the short life of this monstrous being, prompted me to note it in "The Indian Veterinary Journal," with the hope that it will be of some interest to my young professional brethren.

A variety of monstrosities have been recorded in this Journal, from time to time, but almost all were reported to be a case of dystokia attended by a Veterinary Surgeon. The case which fell to my lot, to record, is not of the above type.

So I feel, I may not be trying the patience of my fellow-brothren—the readers of this highly esteemed Indian-Veterinary Journal.

Though a photograph of this strange being was out on the 29th of July, '29 in "The Riasith" an Urdu Daily, nothing was there to interest the professional men. Hence I thought, it my duty and privilege to draw the attention of Veterinarians to the matter.



Subject. A curious Buffalo-calf monstrosity.

History. Near about Delhi, at Bhogal, a Buffalo belonging to one Mr. Balakiram of Sitaram Bazar, gave birth to a strange buffalo-calf on the 26th of July, 1929. The Parturition was normal, but, there was slight post partum hæmorrhage due to the strange shape and size of the offspring and the buffalo was partially unconscious for a couple of hours. The only medication it had was a dose of rum (country liquor), after which she got up as if nothing had happened to her.

She is even now giving 14 seers of milk. This is her fourth parturition and she is about 8 years old.

How the foetus appeared. The two anterior limbs of part 'A'. of the body projected out, the muzzle resting in between them with the protrusion and movement of the tongue over it, then the head appeared and the calf had its first glance into the external world. Within a few seconds the body came out upto the sickle shaped seventh leg, when the animal began to show great anxiety, restlessness and marked straining; suddenly the peculiar leg and the two tails below it made their appearance with slight bleeding. The rest of the body came out slowly; by the time, the animal became partially unconscious due to exhaustion. The owner was surprised to see this wonderful monstrosity.

External appearance. This curious monstrous being had two separate heads with all the sensory organs two distinct well defined necks, a pair of four limbs behind each neck, one hind limb and a tail for each part of the body, and above the tails on the upper part of the body a common hind limb—the seventh sickle shaped limb—and just an inch and a half down from the tails a single anal opening and below that an illdefined vaginal opening with a minute hole through which urine dribbled during the act of micturition.

During its short existence of three days not even once it passed fæces. It was unable to rise up and maintain the standing position, for, the two legs on one side were quite insufficient to support its massive body. It never suckled the mother's udder and hence was spoonfed on milk through both the mouths. On the third day of its birth it tried its best to defæcate, but could not. The straining was well marked, and late in the evening it began to show signs of death. As there was no veterinary hospital near that locality the poor creature could not get any professional aid. That was the saddest part of the story. Death began to invade part by part. First part "A" expired, two hours after part "B" also ended its short life of three days.

The Viscera. There were two well defined thoracic cavities each containing heart, lung etc.; the abdominal cavity was single though it contained all the viscera of two separate animals. The anatomical peculiarity was in the pelvis which itself was peculiar. It was something like two

cavities fused together or rather placed side by side out of which one was quite undeveloped. The generative system was also quite ill-defined. The floating colons of the two parts of the body terminated in the single rectum. The opening into the rectum was very narrow and hence there was faecal obstruction which made the queer buffalo-calf unable to defaecate.

As I was not able to examine the skeleton the osteological peculiarities still remain dark to me.

The probable explanation of its death was, most likely this faecal obstruction together with its over-feeding. If there was any timely veterinary assistance, probably the life of this strange being could have been saved or at least prolonged for a few days more. At any rate it is interesting to note its short life of three days in the external world instead of the antinatal death common to such freaks of nature.

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Association News.

**THE SIXTH ALL-INDIA VETERINARY CONFERENCE
MADRAS, DECEMBER, 1929.**

PROCEEDINGS.

First Day : 27th December 1929.

The Conference met at 9-A. M. on 27th December 1929, in the beautifully decorated upstairs Central Hall of the Madras Veterinary College, Vepery, Madras. Over 150 delegates and visitors from the several British Provinces in India and Indian States, and many influential and esteemed citizens of the City and mofussil graced the occasion with their presence. They were received at the entrance by Mr. K. Kylasam Ayyar, G.B.V.C., Chairman of the Reception Committee. Mr. P. T. Saunders, O. B. E., M.R.C.V.S., I.V.S., Director of Veterinary Services to the Government of Madras and President Elect, was received by the Chairman and members of the Reception Committee. The Hon'ble Mr. M. R. Sethuratnam Ayyar, Minister for Development to Government of Madras who arrived exactly at the appointed hour was received by Mr. P. T. Saunders, Director of Veterinary Services, Madras, Mr. V. Krishnamurthi Ayyar, Principal of the College and Mr. K. Kylasam Ayyar, Chairman of the Reception Committee, and after a photo was taken, he was saluted by the Volunteers present on the occasion and was conducted to the *Dais* in the hall.

Mr. K. Kylasam Ayyar, Chairman of the Reception Committee, delivered his welcome address (Appendix-A.) welcoming the delegates and visitors. and requested the Hon'ble Minister to open the Conference.

Then the Hon'ble Mr. M.R. Sethuratnam Ayyar, Minister for Development, delivered his speech (Appendix-B.) and opened the Conference.

This being over, Mr. V. R. Phadke of Bombay in proposing Mr. P. T. Saunders, O.B.E., M.R.C.V.S., I.V.S., to the presidential chair, made the following speech ;—
Gentlemen,

I have great pleasure to propose Mr. P. T. Saunders to the Chair. It is not for me, a person who has come from Bombay to speak of the achievements of Mr. P. T. Saunders



The Sixth All-India Veterinary Conference
held at Madras in December 1929.

Presided by
P. T. SAUNDERS Esq., O.B.E., M.R.C.V.S., I.V.S.
Director of Veterinary Services to the Government of Madras.

to preside over the deliberations of this Conference to a Madras audience. I shall not take up your time and of the other speakers who have to follow me and as such I commend my resolution that Mr. P. T. Saunders be requested to take the Chair.

This was seconded by Mr. Udan Singh of Agra.

In further supporting the proposition, Mr. T. Vinayaka Mudaliar of Madras spoke as follows:—

Gentlemen, ever since the inception of the All-India Veterinary Conference at Lahore, six long years ago, through the strenuous efforts of those stalwart sons of that land of five rivers and their earnest confreres of the United Provinces, it was Bengal which held always the unique privilege and honour of proposing the President at each session. Madras has similarly been honoured to follow up Bengal. It was indeed a task for Madras to follow those accomplished speakers of Bengal. But whether it was in those stately buildings at Lahore so rightly described by a previous Viceroy as one of the best in the East, I mean the Punjab Veterinary College or in the Bennet Hall of the Caning College at Lucknow, or in equally imposing building in far off places like Calcutta and Bombay, Madras has always done the task allotted to her to the best of her ability. But it is a pity that to-day we should have missed the oratory of Bengal, as her delegates are arriving late in the day.

Gentlemen, perhaps we in Madras know Mr. Saunders more closely than our colleagues from other provinces and that is probably the reason why the two previous speakers have reserved for me the points to be touched upon. I suppose occasions like this demand an honest expression of truth however delicate the task may be. Mr. Saunders came here as Professor of Surgery and from there he rose to the position of the Principal of the College. Now he is the Director of Veterinary Services in this Presidency. When Madras has been honoured by the rest of India with a Conference of this nature for a second time and when a premier Veterinary Surgeon who holds the reins of our Department in this Presidency has been asked to preside over its deliberations need I say with what zeal, with what enthusiasm, with what fervour and with what love

Madras applies herself to the task. It may be, she has not been discreet and happy in the choice of her spokesman. But I assure you, gentlemen, that she is second to no other Province in rejoicing over the happy choice of this year's President.

His urbanity of manners, his easy accessibility, and his being absolutely free from any false sense of prestige have all made Mr. Saunders the popular head that he is. Those who have known Mr. Saunders will not dispute the fact when I say that he is the very incarnation of civility, a virtue which appeals to an Indian heart so much. Probably nothing appeals between hearts so much as being a little human. That Mr. Saunders is—human in thought, word and deed. Hence I have great pleasure to support the proposition moved and seconded by such distinguished gentlemen as Mr. Phadke of Bombay and Mr. Udan Singh of Agra (Applause).

Mr. P. T. Saunders, occupied the presidential chair amidst loud applause and delivered his presidential address. (Applause).

Then Mr. V. Janakirama Ayyar, on behalf of the Secretary, read out the telegrams and letters from absentee members and other prominent gentlemen from different parts of India and outside. Among many who sent telegrams and letters mention may be made of the following:—

Messrs. (1) M. C. Matheson, Royal (Dick) Veterinary College, Edinburgh, (2) Garudachar, Edinburgh, (3) M. Ananthanarayana Rao, England, (4) Major T. N. Watson H. E. The Governor's Body Guards (5) V. P. S. Mudaliar, Deputy Superintendent, C.V.D., Madras, (Retired), (6) Major R. W. Simpson, Supdt. C. v. D., Mysore, (7) Lt. Col. R. E. Wright, (8) C. V. Venkatramana Iyengar, M.L.C. (9) G.N. Roy Choudary, Bengal, (10) B.K. Badamie, Hyderabad (11) General Secretary, Assam Veterinary Association, (12) Hon'ble S. Muthia Mudaliar, Minister for Health, (13) Secretary, U. P. Veterinary Association, (14) M.R. Chengeri, Supdt, Government Veterinary Hospital, Bangalore, (15) Secretary, Bombay Veterinary Graduates' Association, (16) Secretary, Bengal Veterinary Association, (17) Rai Sahib P.N. Das, Cuttack, and many others.

Next item on the programme, being the election of the members of the Subjects Committee, the following were elected on the motion of the General Secretary, S. M. Raza Hussain Sahib Bahadur :—

MADRAS.

Messrs.

- | | | |
|----------------------------|---------------------------|-----------------|
| 1. K. Kylasam Ayyar. | 6. L. Subramania Ayyar. | |
| 2. T. Vinayaka Mudaliar. | 7. A. Ramalinga Mudaliar. | |
| 3. V. Janakiram Ayyar. | 8. P. Srinivasa Rao. | |
| 4. H. C. Sampath Ayyangar. | 9. K. S. Nayar. | |
| 5. R. Narasinga Rao. | | |
| 10. K. Krishna Ayyangar. | | } Mysore. |
| 11. K. Ranganatha Rao. | | |
| 12. R. Mudaliar. | | ... Indore. |
| 13. K. M. Nayar. | | } Travancore. |
| 14. G. Krishna Pillai. | | |
| 15. K. H. Karm Ellahi. | | } Punjab. |
| 16. Ch. Mushtaq Ahmed. | | |
| 17. P. Gartia. | | ... Behar. |
| 18. V. R. Phadke. | | } Bombay. |
| 19. Y. N. Marathe. | | |
| 20. V. N. Kulkarni. | | |
| 21. Sirdar Udan Singh. | | } U. P. |
| 22. Abdul Wahab Hamid. | | |
| 23. S. M. Raza Hussain. | | |
| 24. N. D. Dasan. | | } Hyderabad. |
| 25. Aziz Husan. | | |
| 26. Gangadhar Rao. | | ... Pudukottah. |

Mr. K. S. Nayar then proposed a vote of thanks to the visitors in the following terms :—

Gentlemen, this Conference has opened with a very large audience and in that we have the Hon'ble Minister to open the Conference. He, who is responsible for the Development Department in this Province, has been kind enough to come to this Conference. It is unnecessary for me to dilate on the heavy pressure of work the Hon'ble Minister had, and yet he has been kind enough to come here and give his advice and blessing to this Conference. It is my sincere duty to propose a hearty vote of thanks to the Hon'ble Minister (Applause.)

The presence of many gentlemen of the city as well as from the various parts of this Province shows the great public interest they take in this profession, and I have the pleasure of according to them our thanks. Various delegates from far off provinces have also come here at great personal inconvenience to give the benefit of their advice in our deliberations and I would offer our thanks to them also.

Lastly, I would be failing in my duty if I do not thank Mr. Saunders who has been kind enough to come here for the well-being of the session.

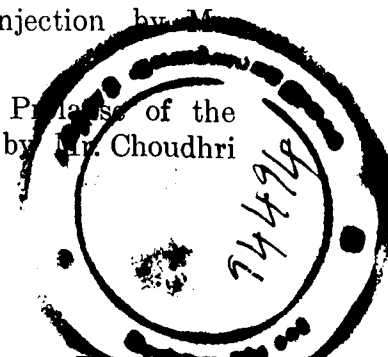
Then the morning function came to a close.

At 2 P.M. the Subjects Committee met and sat till 4 P.M. discussing various resolutions. At 4 P.M. there was a group photo and at 4-30 P.M. there was a grand Tea-party, the caterers being Messrs. Harrison & Co., Ltd. At 6 P.M. Professor V. Krishnamoorthy Ayyar, I.V.S., Principal of the College, gave a demonstration on Anthrax with lantern slides which was very much appreciated by the delegates. Mr. M. R. Ramasami Sivan, the ex-principal of the Agricultural College, Coimbatore, paid a glowing tribute to Mr. Krishnamoorthy Ayyar for the high propagandic value of the slides and on their originality.

SECOND DAY

The Conference met again at 9 a.m. on 28th Dec. '29, with Mr. P. T. Saunders, O.B.E., M.R.C.V.S., I.V.S., in the Chair. The following professional papers were read and discussed.

1. Some observations on Serum Simultaneous Inoculation against Rinderpest by Mr. T. Vinayaka Mudaliar.
2. Experiences of S. S. Inoculation in Mysore State by Mr. R. G. Sathe.
3. New method of Intravenous Injection by M. A. Latiff, Bengal.
4. A successful method of treating Prolapse of the Vagina and Uterus in animals by Mr. Choudhri Mushtaq Ahmed.



The Conference met again at 2-30 p.m. with Mr. Phadke in the chair, and the following professional papers were read and discussed.

1. Rejuvenation by Mr. Phadke.
2. A visit to the Serum Institute, Bangalore by Mr. P. Margabandu Mudaliar.
3. 'Silage' by Mr. L. Subramaniya Ayyar.

The following papers were taken up as read as the authors were absent and for want of time. These will appear in the *Indian Veterinary Journal*.

1. Milk Therapy in skin diseases of domestic animals (both parasitic and non-parasitic) by Mr. S. Chinniah.
2. 'Clinical Notes' by Mr. S. Chinniah.
3. 'Poisoning of cattle by Green Stunted Jowari (Karbi)' by Mr. Abdul Majid, V.A.S., Karachi.
4. 'A sporadic case of Black Quarter' by Mr. Abdul Majid, V.A.S., Karachi.
5. Caesarian Section in a Cow by Mr. C. Madhavan Nambiar, V.A.S., Palghat.
6. A case of maternal and Fætal Dystokia by Mr. A. Abdul Majid, V.A.S., Karachi.
7. Tick Eradication by Mr. B. Theagaraj, V.A.S., Chintaladevi, Cattle Farm.
8. Yoke Gall treatment by the injection of Sterilized cow's milk by Mr. S. A. Razzaque, V. A. S., Bhadrak.
9. Multiple Warts, treatment with Formalin by Mr. S. A. Razzaque, V. A. S., Bhadrak.

The Subjects Committee met again at 3-30 P. M. and continued the discussion on resolutions till 5-30 P. M.

There was a large Dinner Party held in the night in honour of the delegates, in the spacious terrace of the Dobbin Hall, the College Hostel.

THIRD DAY, 29th December 1929.

The Conference to-day commenced precisely at 11 A. M. under the presidency of Mr. P. T. Saunders. Before the resolutions were taken up for consideration, the General Secretary Mr. S. M. Raza Hussain, presented to the Conference his report of the All-India Veterinary Association for the year 1929 (Appendix D.), which was unanimously adopted. Then the Office bearers of the Association for the year were elected. The same Office Bearers of the Association of the previous year were re-elected, except the treasurer. Mr. M. S. Sastry, (Madras) was elected as the treasurer of the *All India Veterinary Association*. This over, the President, took up the following resolutions for consideration, which were unanimously passed. Since it was decided that only very important subjects should be taken up instead of repeating the usual 'stock' resolutions, only four following resolutions were considered in Conference.

Resolution No 1. That this Conference places on record its thankfulness to the Almighty God for the happy recovery of His Majesty the King-Emperor from his recent illness and prays for his long life.

Moved from the Chair.

Carried unanimously.

2. That this Conference is of opinion that the recommendations of the Royal Commission on Agriculture should not adversely affect the period of training in the existing Colleges and resolves that the period of training in all the Veterinary Colleges in India be raised to 4 years so that the highest standard of Veterinary Education with facilities for Post Graduate Training be made available in all Colleges.

Proposed by Mr. M. Krishna Ayyangar.

Seconded by Mr. N. Krishnamoorthi. Carried unanimously.

3. That this Conference requests the Provincial Governments and Local Bodies and the Indian States to take early steps to improve the pay and prospects of the subordinate services, as the economic dis-

tress existing at present among the members is very acute and is likely to affect efficiency.

In moving the above resolution Mr. Mushtaq Ahmed (Punjab) made the following speech :—

Mr. President and Gentlemen,

I rise to move the resolution which is of vital importance to the profession. To be frank, the resolution on the improvement of pay and prospects to the profession should precede everything else.

As every one knows, the struggle of the subordinate services to keep body and soul together with the meagre pay they get, is indeed very great.

It is meet, therefore, that a Conference of this nature, comprising of delegates from all over India, should place before the Local Governments the discontent that is prevailing, and pray for an early redress.

I hope, therefore, that the above resolution will be acceptable to you.

Seconded by Mr. P. Gartia, (Bihar).

Mr. Parameswara Ayyar, (Madras.):—I suggest a scale of pay be incorporated in the resolution.

President:—I think that is not necessary. Conditions differ in different provinces. We can only submit our proposals in a general way.

The resolution was put to vote and carried unanimously.

4. That this Conference is of opinion, that the proposed recruitment to the Superior Provincial Service should not adversely affect the chances of promotions of the Officers already in the Provincial cadre.

Proposed by Mr. Syed Raza Hussain, (U. P.)

Seconded by Mr. Ranganatha Rao, (Mysore.)

Mr. Theagaraj, (Madras.):—I beg to move an amendment. The Province at present affected may be specially mentioned. For instance we have no such grievance in Madras and it is not proper to pass a resolution with regard to a non-existing condition in the majority of Provinces.

President:—The mover of the resolution has the choice of incorporating it in his original resolution or Mr. Theagaraj may move it as an amendment. It is for you to decide.

Mr. Raza Hussain:—I do not wish to accept it as a part of my resolution.

Mr. Theagaraj then moved it as an amendment, Mr. Govindasamy seconding it.

President:—It is now open for discussion.

Mr. K. Kylasam Ayyar:—If this resolution is a provincial question, I do not know how the question of pay and prospects was an All-India affair. All these resolutions are in the name of the All-India Veterinary Conference. As this All-India Veterinary Conference comprises of all Provinces in India, it is unnecessary to mention the name of any particular Province. It should be applicable to all Provinces or not at all. I am not in favour of the amendment.

Mr. M. S. Nathan:—What has happened to Punjab to-day may happen to other Provinces to-morrow. So the original resolution is sound and I oppose the amendment.

President:—I will take the amendment first which includes the name of the Province and I put that to vote.

Mr. K.S. Nayar:—Mr. President, I rise to a point of order. I should like to know who is eligible to vote and who is not.

President:—Every member has a right.

Mr. K.S. Nayar:—Every member of the Association?

President:—No, every member of the Conference.

Mr. M.S. Nathan:—I do not think any question of Association comes here. We are all assembled here in Conference. The resolution reads "This Conference is of opinion" and not "This Association is of opinion". I am a member of this Conference and not of the Association. I don't understand why I should be disallowed to vote.

Mr. K. Kylasam Ayyar:—I agree with Mr. M.S. Nathan.

Mr. Y.N. Marathe, (Bombay):—The General Secretary will please enlighten us as to what was being done in previous years.

Mr. Raza Hussain :—All members of the Conference are entitled to vote.

President :—Let me take the sense of the meeting. Are you all agreed that all members of the Conference are entitled to vote. No one objected.

President :—Good! It shows you have progressed. You are unanimous and so you have advanced. And now for the amendment of Mr. Theagaraj.

Mr. Theagaraj :—I did not think, Sir, that so much heat will be produced over my amendment. I request you therefore to record the vote by ballot.

President :—I have no objection. But I don't think there has been any heat. There is no need for any heat.

A Voice :—Let the vote be taken on paper.

Mr. K. Kylasam Ayyar :—It has not been the practice at this Conference to record votes in that way. I do not understand why this question alone should be voted in that way.

President :—This is a straightforward open question and has been discussed fully. I therefore rule that the vote be taken in the usual way, (Hear, Hear.)

The amendment was put to vote and lost.

President :—The amendment is lost. I will now put the original resolution to vote.

Carried unanimously.

PRESIDENT :—

Gentlemen, I think you are wise. In my opinion we have no right and no justification to make so invidious a distinction. The question of Provincial services and recruitments to-day is an interesting one. It is not clear what attention it will receive in the various Provinces. Speaking of Madras, I do not think there will be any question of unfairness at all. I realise that a big change is to come. Whether it be in the near future, in five or in twenty years, I cannot say, but it is bound to come.

You have two points to consider. On the one hand you have men who have worked for twenty years and who are experienced and who are reliable. They cannot be treated

with any unfairness. And, on the other hand, you have young men who have spent their money and time in foreign lands to equip themselves with better qualifications. I think, and I am sure you think too, that they are entitled to something in return. What provision do you intend to make for them? Is there any reason why these two factors cannot be run together? Life is made up of compromises. Life itself is nothing but a compromise (Laughter). I would wish, therefore, that there should be a compromise in this case also. I would say that, in my opinion, it is wise to continue these two elements, the tried, the trusted and experienced, with the new the energetic and the progressive. (Cheers).

After the resolutions were all passed the President Mr. Saunders, in bringing the Conference to a close, made the following speech :—
Gentlemen,

The business of the Conference has been brought to a close. Perhaps you would wish me to say, as my closing remarks, how this Conference has impressed me, and what has seemed to me to be its general tone.

You will remember that I have not been present at your deliberations since the Conference was last held in Madras, some five or six years ago. Changes of some importance have occurred in the interim to evoke the desire for a better and more efficient Veterinary service. Some of us have during this period changed our ideas and opinions, and I realise that perhaps the outstanding feature of this Conference is the general will to advance by co-operation and to put aside all differences of opinion calculated to oppose so desirous a result.

With regard to your resolutions, I would say that I am in complete agreement with your views that none but resolutions of importance should be passed. It has served no useful purpose in the past, and will serve none in the future, to put forward resolutions of a controversial nature, and I rejoice to see that such have been omitted. It is also gratifying to remark that your resolutions have not attempted to usurp functions or powers that you do not possess and that they have not attempted to impose on the authorities, views which

may not be in accord with the views of Government's paid advisers, in the persons of the Directors of Veterinary Services. As most of you are subordinates of these officers, the position is at once seen to be untenable. On the contrary, you have adopted the much more reasonable attitude that to obtain the sympathy of these advisers by just and fair requests, is the better means to the end. It is an acknowledged fact, I think you will agree, that to put up a succession of unreasonable demands, can only result in prejudicing your case in future.

It only remains for me to thank you for the honour you have done me in electing me your President, an honour of which I am very sensible and for which I offer you my sincere thanks. If I have been of service to you, I am gratified to know it, and you may be sure that so long as your present attitude continues, I will do my best to help you.

Then Mr. K. Kylasam Ayyar, in proposing a vote of thanks, spoke as follows:—

Mr. President and Gentlemen,

It is now my pleasant duty to thank you all for your presence during the Conference. I do not know how to thank adequately the delegates from the different Provinces and States who have been so kind as to accept the invitation at such a short notice. Of course it will be invidious to mention any Province or State by name.

On behalf of the Reception Committee of this Conference, I ask you to accept our hearty thanks for your kind response. I am only voicing on their behalf when I say that we have been extremely fortunate in having Mr. Saunders in the Chair. He told you a little while ago that we come to understand each other better by contacts of this sort. From your stay here during these two or three days, you might have found some practical proof of that. I say, we have been peculiarly fortunate, because I need not tell you of his extreme regard for other people's views and, in expressing his own views, he did it in such a manner as not to give offence to anyone here (Applause). This quality, Gentlemen, is rather rare and it is very difficult to come across ordinarily. For that quality alone, if not for anything else, our hearty thanks

are due to Mr. Saunders. Our thanks are due to him also for conducting the deliberations of this Conference very successfully this year (Applause).

He has sufficiently given expression to his views so as to indicate his sympathy and support towards the importance and object of this Conference and the various resolutions that we have passed. It is not necessary for me to dilate on the same. He has personally told you what he feels and on that account also we are extremely glad to thank him and also for what he has done during these three days.

Well, Gentlemen, this is the first time perhaps that some of you have met Mr. Krishnamurthi Ayyar, the present Principal of the College. You might have heard of him and his research work. I am sure, those who have had the opportunity of seeing the work that he has done in this Laboratory and the research he has made in matters of Veterinary interest, will, I am sure, carry with them feelings of high appreciation (Applause).

Most of the Indian graduates, I have no doubt, will be proud to think that one of their graduates has attained such prominence in the field of veterinary research (Applause). Of course I am sure it would be embarrassing to him to see this eulogy paid in his presence. So I do not want to embarrass him any more.

I thank you all, gentlemen, for your presence at this Conference. I would not forget the valuable co-operation which I have received from the members of the Reception Committee, but for whose enthusiasm and active co-operation it would not have been possible to bring this Conference to a successful termination, which I hope it has been.

I must thank the volunteers under the able guidance of Mr. Chelva Ayyangar (Applause) for the hard work they have done for the last seven or eight days and finally I should thank the representatives of the Press for having taken the trouble to come and report these proceedings.

I thank, on behalf of the Reception Committee, Maharajas and Rajas of the Presidency, who have helped us with their very generous donations.

Last but not least I thank Mr. S. M. Raza Hussain, Secretary of the All-India Veterinary Association, for the trouble he has taken. Gentlemen, I thank you all once again.

Mr. K. Ranganatha Rao of Mysore Veterinary Service thanked the Reception Committee, the volunteers and others who looked to the creature comforts of the delegates and thus made their stay in their midst a pleasant and happy one.

With three cheers to H. M. the King-Emperor the Conference terminated.

LIST OF DELEGATES THAT ATTENDED THE CONFERENCE.

RECEPTION COMMITTEE.

- | | | |
|---------------------------|-----|------------------|
| 1. Mr. K. Kylasam Ayyar | ... | Chairman. |
| 2. „ T. Vinayaka Mudaliar | .. | Asst. Secretary. |
| 3. „ V. Janakiram Ayyar | ... | Treasurer. |

MEMBERS.

Messrs.

- | | |
|-----------------------------|--------------------------------|
| 4. H. C. Sampath Ayyangar. | 18. P. S. Narayanan. |
| 5. W. J. DeCosta. | 19. L. S. Parameshwara Ayyar. |
| 6. R. Narasinga Rao. | 20. V. Krishnamoorthy Ayyar. |
| 7. G. A. Ajwanie. | 21. M. Adimula Mudaliar. |
| 8. A. L. N. Somayajulu. | 22. H. N. Chelva Ayyangar. |
| 9. K. S. Nayar. | 23. M. Sundaranathan. |
| 10. P. Srinivasa Rao. | 24. P. A. Parthasarathy Naidu. |
| 11. P. M. Thillanayagam. | 25. L. S. Subramania Ayyar. |
| 12. S. Krishnamoorthy. | 26. V. P. Subbayya. |
| 13. G. R. Visvanathan. | 27. K. V. Raghavachar. |
| 14. M. Noor Ahmad. | 28. B. V. Seshadri. |
| 15. G. Theophilus. | 29. A. Ramayya. |
| 16. R. Venkatrama Ayyar. | 30. L. Adinarayana Sarma. |
| 17. A. Margabandu Mudaliar. | |

MADRAS DELEGATES.

Messrs.

- | | |
|-------------------------|----------------------------|
| 31. P. Theagaraj. | 35. K. Ranganathan. |
| 32. K. Sundaram. | 36. J. D. David. |
| 33. R. N. Govindaswamy. | 37. V. Parameshwara Menon. |
| 34. S. Chandrasekharan. | 38. T. Seetharama Ayyar. |

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|------------------------------|----------------------------|
| 39. T.M. Narayanasamy Pillai | 42. K. S. Ramaswamy Ayyar. |
| 40. P. Subramanyam. | 43. C. K. Subbaraman. |
| 41. V. R. Narayanaswamy. | 44. Ramakrishna Pillai. |

Madras Corporation.

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|-----------------------|--------------------------|
| 45. S. Seshadri. | 48. M. Muniappa Pillai. |
| 46. A. Krishnaswami. | 49. Thangavelu Nadar. |
| 47. I. M. Maboob Ali. | 50. Rajamanikkam Pillai. |
| | 51. Krishna Rao. |

INDIAN STATES.

Messrs.

- | | | |
|------------------------------|-----|----------------------------------|
| 52. K. Krishna Ayyangar. | } | Mysore. |
| 53. K. Ranganatha Rao. | | |
| 54. M. N. Subba Rao. | | |
| 55. N. Krishnamoorthy. | | |
| 56. T. V. Venkatachalam. | | |
| 57. T. Asvatha Sastry. | | |
| 58. Parthasarathy Naidu. | } | (Serum Institute).
Bangalore. |
| 59. Gangadhara Rao. | | ... Pudukottah. |
| 60. N. D. Dasan. | } | Hyderabad. |
| 61. M. Aziz Hasan. | | |
| 62. K. M. Nair. | } | Travancore. |
| 63. G. Gopalakrishna Pillai. | | |
| 64. R. Mudaliar. | ... | Indore. |

OTHER PROVINCES.

Messrs.

- | | | |
|-------------------------|---|---------|
| 65. S. M. Raza Hussain. | } | U. P. |
| 66. Sirdar Udan Singh. | | |
| 67. Abdul Wahab Hamid. | | |
| 68. Mushtaq Ahmed. | } | Punjab. |
| 69. Karm Ellahi. | | |
| 70. V. R. Phadke. | } | Bombay. |
| 71. Y. N. Marathe. | | |
| 72. V. N. Kulkarni. | | |

countries are State problems. The report of the Royal Commission on Agriculture in India has helped a great deal to stimulate thought in this direction. Veterinary education and Veterinary research are subjects of considerable importance in the scheme of things. If the Association strives by responsible thinking to formulate opinion and gather support for the realisation of the ideals of Veterinary education and research it will have rendered a real service.

It may interest you to know that in this Presidency Veterinary work is making good progress. In the field of Research Mr. Krishnamurthy Ayyar's name deserves prominent mention. For the effective control and prevention of cattle diseases the staff has been increased. The campaign against Rinderpest, which still continues to be the most widely prevalent and dreaded of diseases, is making sustained efforts. Over 80,000 head of cattle were protected by the S. S. method during the last official year. This method of inoculation has practically superseded the Serum alone method in this Presidency. The opening of a Serum Institute is under consideration. Veterinary education also is on the anvil at the present moment.

The number of hospitals and dispensaries is being added to every year and it is hoped that before long every taluk will have at least one Veterinary hospital or dispensary in addition to the staff for dealing with outbreaks of contagious diseases.

I will be failing in my duty if I do not mention in this connection the name of Mr. F. Ware for all that he has done to bring the Veterinary Department in this Presidency to its present level.

I have no doubt that I am voicing the feelings of all present here and also of those members of the profession who are unable to be present owing to exigencies of service, when I say that the policy of expansion and reform so well inaugurated will continue to make sustained progress under the sympathetic guidance of the Hon'ble Mr. M. R. Sethuratnam Ayyar, Minister for Development.

I request you, Sir, to open the Conference.

APPENDIX B.

OPENING SPEECH

BY

THE HON'BLE MR. M. R. SETHURATNAM AYYAR, M.L.C.

Minister for Development, Government of Madras.

The Sixth All-India Veterinary Conference, Madras.

Held on 27th December, 1929.

Your energetic and enthusiastic Secretary surprised me one fine afternoon while I was at Pusa with a telegraphic invitation, calling upon me to open your Conference—the All-India Conference of Veterinary Surgeons. In the pressure of official work I was hesitating what to say. When I imagined that his choice must have sound reasons, I could not help wiring my consent. The fact I am now a citizen of Madras coupled with the other fact that I am in charge of the Veterinary portfolio of this Province ought to have been his guiding reasons to pitch upon me for this task. I was overwhelmed with a sense of duty which prompted me to yield to his call.

To you, members of the Veterinary profession who have come here from different parts of the country, I extend to you before the Chairman of the Reception Committee does so, my sincere and hearty welcome to this ancient and historic city of hoary memories. You have all gathered here for a noble and useful purpose. You will take this opportunity of knowing the members of your profession in the different centres, of getting yourselves acquainted with them and also of interchanging with them ideas, methods, etc., relating to the profession in which you are engaged. More than anything else, a conference of this kind has a value of its own. The educative and the practical side of it need your best attention. In the course of your professional work, you must have come across with extraordinary cases, and you should have adopted newer methods of handling them. To those of your brethren who have not come across with such cases, you will kindly give them the result of your experience, the successful methods you adopted in the treatment of peculiar cases so that they might be profited by

your experience. Mutual exchange of ideas would increase your stock of knowledge and professional experience. A conference of this kind besides helping and promoting social life, would also tend to develop professional knowledge. In this light I welcome congregations of this kind.

Gentlemen, by this, I do not mean that your annual gatherings have no other purpose. This is an occasion for you to compare notes as to what obtains in the different parts of the country in regard to pay, prospects, leave rules, etc., and to formulate your needs and necessities to be placed before your respective governing bodies for such relief as may be found feasible and possible by them. I quite appreciate the needs of conferences of this kind and I only wish that you carry on your deliberations with usefulness to yourselves and with moderation in your observations about others.

I have not made any secret of my partiality for this department. Myself a humble landlord, I know what valuable and humanitarian service, men of your calling are rendering to the dumb animals, who are essential factors in the agricultural development of this country. Ours is purely an agricultural country and agriculture is the mainstay of the population. Those of you who are taking a genuine and lively interest in your profession, permit me to say, are doing a real national and humanitarian service for which the vast agricultural population of this country should feel grateful.

In recent years we find epidemics among cattle levying a heavy toll. Such epidemics were not known in the past nor was mortality among cattle so high. Scientific methods are being adopted to combat the growing epidemics, and, in spite of all precautions, there has not been a very appreciable decrease in mortality. In ancient India treatment of cattle diseases might have been crude, but all the same it was very effective. In this connection, I would advocate research into the old system and the incorporation, wherever possible in the newer and more advanced scientific system of such of those specifics which were used in the treatment of cattle diseases. We find that in the system of Ayurveda there are certain specifics which experience has taught us to be effective in arresting the growth of certain diseases in the human system. My belief is that there is something valuable and worth copying in the

old system. Some of you who are enthusiastic in knowing the old methods would do well to do research work and I am sure your efforts would not after all be in vain.

In the face of so much advance the bulk of our people still remain conservative and they are slow in adopting new methods and scientific courses of treating their cattle when they get ill. I see that more patients are now going to veterinary hospitals than before, but I am inclined to think that progress so far achieved is not enough and more advance in that direction is necessary in the best interest of our cattle. Propaganda work is also essential and some of you who are enthusiasts in your profession would do propaganda work and convert conservative elements into liberal ones.

Gentlemen, more than prevention of diseases among cattle, you should devote your energies to the healthy growth of cattle in this country. Animal husbandry is very much needed. I was struck with the remarkable condition in which cows and bulls were kept in Pusa. Animal husbandry should be an important factor in your work.

Private practitioners should increase in number and each big agricultural village should have one.

The Government have a small dairy farm attached to the Agricultural College and they are encouraging those who keep good cattle by the award of prizes and medals during periodical cattle exhibitions. The Veterinary Surgeons can advance animal husbandry in their own areas by educating cattle-keepers in the scientific methods of breeding. This would be a step towards prevention of diseases among cattle and considerably minimise mortality.

By means of magic lantern lectures, you can educate the ryots and advise them about the upkeep of their cattle, fodder, stables, etc. With the growth of large cities, demand for milk is increasing. Unless we have good milch cows it is not possible to meet the growing demand.

The Government are always willing to render whatever help they can to encourage cattle breeding.

I have not gone into the technical side of your work. As regards the new methods you are adopting in combating the diseases by inoculation of serum, the Government are

doing their best to encourage such experiments as would minimise or arrest the spread of epidemics among cattle.

Gentlemen, I assure you of my abiding interest in the department and my willingness to do all that is possible under the limitations under which we live, towards placing the department on a better footing so as to be attractive. As I observed at the outset, you are doing a great humanitarian work tending to improve the agricultural prospect of your country. I wish you all success. I thank you, Gentlemen, for the honour you have done me by asking me to open your Conference. I have very great pleasure in opening the same and wish your deliberations all success.

APPENDIX C.

PRESIDENTIAL ADDRESS

BY

P. T. SAUNDERS ESQ., O.B.E., M.R.C.V.S., I.V.S.,

The Sixth Session of the All-India Veterinary
Conference, Madras.

Held on 27th December, 1929.

GENTLEMEN,

When I was approached by your Committee and asked to preside over this Conference, I did not at once accept, though indeed I felt the compliment was a great one, the greatest you could offer. The reason for my diffidence was that I felt my experience of India, a short ten years, hardly fitted me for so responsible a position. I remembered however the words of the poet "What can ye know of England, who only England know?" I would paraphrase this and ask "What can ye know of India, who only India know?" And it appeared to me that perhaps my experience of this great Empire of ours, embracing as it does, South Africa, the West Indies, Egypt and Palestine, and extending over another 10 years, gave me the requisite qualification. I persuaded myself therefore that you would find me not altogether unacceptable and I accepted, most gladly, the honour, for which I offer my sincere thanks.

It is customary for your President to pass, in review, over the activities of the All-India Veterinary Association, since its last Conference and to consider, in retrospect, what are the aims of the Association, and what are its hopes, its aspirations and its fears. What, we may ask ourselves, have we set out to do? And what have we accomplished? I do not think it necessary for me to do what has already been so well done. The Indian Veterinary Journal, the organ of your Association is itself a reflex of your work and a most valuable index of your vitality. Its usefulness and its popularity is a tribute not only to its editor, Mr. Srinivasa Rao, but to the interest and to the team-work of its members.

You are gathered together here to-day for reasons which are wholly laudable; firstly for the reading of papers of professional interest and the consequent discussions which lead to an exchange of views and a mutual benefit, and secondly to discuss the many questions which affect our profession and to speak, as a result of your deliberations, with the authoritative voice of an United India. And here team-work is essential, unanimity must be your aim, and the dissenting voice must be unheard.

As some of you are doubtless aware, I have but recently returned from England, and during my leave I was privileged to visit many of the Veterinary schools and institutions on the continent of Europe. It is said that travel widens the view and travel with a definite object must result in the acquisition of new ideas. It is of course admitted that many of the conditions prevailing in Europe do not apply to India, that many of their problems have no counter-part here, but the reverse is equally true and we have our own problems to solve, our own work to do. It will not be disputed, however, that a greater understanding of the larger, more comprehensive view, leads inevitably to a better grasp of the particular problem, and results in its being seen in its true perspective. It is said of all specialists that they magnify the importance of their own subjects to the exclusion of all others, but if we can take a broad conception of the views and the difficulties of other workers, it can hardly be said that we lay ourselves open to this charge.

If one is old-fashioned and if one is fond of animals, one regrets the passing of the horse, but, whether we wish it or not, the age of mechanisation has come. Here, in India, the working ox will not be ousted from his essential task for a very long time; perhaps he will never be replaced by mechanical methods of agriculture. In Europe, however, the case is different. I have in mind, the Veterinary College at Brussels, where the larger animals are seldom seen and their stalls and byres are almost always empty. Happily, this does not mean a cessation of Veterinary activities. The small animals clinic is very large and two important industries have sprung up in their stead. I refer to poultry and to rabbit breeding the latter being now-a-days of considerable magnitude on account of the value of the fur. It is of great interest to note, too, that the State supply of small-pox vaccine and anti-diphtheria serum is made at the College by Veterinarians, a fact which gave me considerable personal pleasure when it was brought to my notice, and which, Gentlemen, should be equally gratifying to you. I have instanced Brussels, but a similar tendency was to be observed in other places, and it was very evident that public health work was everywhere in the ascendant and that treatment of the individual was being relegated to the back-ground.

I would observe here that this is the present fashion in Veterinary Science, or rather, the present wave of thought. It will be remembered that in the old days of the barber-surgeon, medicine and surgery were the important subjects to which all others, such as anatomy and physiology, led. With the discovery of bacteria some forty or fifty years ago, a new wave of progress was begun and advancement followed on the lines of bacteriology. This wave was succeeded, or perhaps supplemented by what has been called the "infinitely small" the filtrable viruses, while a still newer line of thought has been opened up by the bacteriophage, which itself is said to prey on bacteria. One is irresistibly reminded in this connection of the old saying.

"Big fleas have little fleas
Upon their backs to bite 'em
And little fleas have lesser fleas
And so on—ad infinitum"

The present phase of advance in research is, if I may use a paradox, to go back, to physiology, as such subjects as endocrinology and vitamin-deficiency would seem to suggest.

In all these things, the danger is that we may be led away by our enthusiasm and in searching for results, may overlook the obvious. Particularly, perhaps, are we prone to see in every new discovery the panacea for all ills, and not to realise their limited application. Instances that spring to the mind in this connection, are to be found in radium and insulin both of which are extremely valuable in their limited spheres.

A very important avenue of future work is to be found in the Dairy Industry, and this subject receives much attention on the continent of Europe. The success of the Calcutta Co-operative Dairy movement is no doubt well known to you and the future may see its extension to butter and cheese production and thus provide a further means of livelihood. Closely bound up with this question, from the economic point of view is sterility in cows, a subject of prime importance in Europe to-day, and the menace of contagious abortion. It is unnecessary for me to say that disease prevention is the *sine-qua-non* of an efficient dairy, and as a result, the lessening of human, and especially infantile, mortality.

During my tour in Europe I was much impressed by the differences to be seen in the various institutions responsible for Veterinary education. Several of these are now Faculties of the University, while others rank as High Schools. In many the equipment is lavish and money has not been spared in the attempt to produce the best possible training for the Veterinarian.

Utrecht in Holland, and Leipsic in Germany are both very modern institutions and some at least of their buildings and equipment may well serve as models. The use of cinemas, for instructional purposes was, I found, quite common and the most up-to-date methods are used in the clinics, including X-rays. In Berlin, I was particularly impressed by an apparatus through which ozone is pumped into the post-mortem room, the resultant atmosphere being pure and clean with almost no smell. In other places, it is a matter for regret that financial stringency has prevented proper expansion and improvement.

Gentlemen, I feel I have detained you long enough, and as time is short, I will make room for other and more important subjects. It must be emphasised, however, that, look where we will for assistance in our work, the greatest help can come only from ourselves. Let us then continue to put forth our best efforts in our chosen walk of life, and let us remember always the words of Addison "Tis not in mortals to command success, but we'll do more—deserve it."

APPENDIX D.

THE REPORT OF THE GENERAL SECRETARY, ALL-INDIA VETERINARY ASSOCIATION.

Read at its Conference at Madras in December, 1929.

Mr. President and Gentlemen,

My task this evening is to report to you the well-being of the child, which was born eight years ago. The ceremony of christening him as "The All-India Veterinary Association", the bugle and the brass band, the conch and the timbrels, which announced it and the earnest prayers, high hopes which were made and cherished for its future, are all quite fresh in our minds. We may well recollect how ready we were to live or to die with him, but, alas! in spite of all this, at the end of the eighth year, we find the child to be stunted in growth and un-cared for, so much so that nobody was ready to claim him in the whole of the wide Indian Empire. Madras alone is the solitary instance which extended its hands towards the dying child, towards which the child had crawled and now lies on her lap in a hopeless condition. Only proper nursing and care might bring him back to vigorous life. Madras did what I fore-told in my first visit to Madras with the newly born child on my lap. The name of Madras will be handed down to posterity as the saviour of the child at the hour of need.

With the poet I may as well exclaim 'had I hundred mouths, hundred tongues, a voice of brass and adamant lungs' I should yet fail to describe to you in adequate terms the sad plight of our Association to-day. With the growth

of the child, unlike scientific men, we have been reducing its nourishment, with the result that we find the child in a condition of practical collapse. I raised my voice at the Calcutta Conference and warned of the danger ahead, but no heed has been paid to my distressing cry. The affiliated associations completely ceased to pay their contributions towards the Central Association. During the first five years of its life, Association had a net income of Rs. 552/8/-and without going into details of accounts, I may inform you that the Association to-day is running on minus balance. But how do you expect the person who has taken so much trouble to bring this Association into existence, to drop it altogether on account of these financial difficulties? So in order to keep it alive, I have been spending my personal money all the time.

Gentlemen, this stigma of inhuman treatment towards the little child of our Association will be handed down to countless generations as a mark of our apathy. Will you suffer being so remembered? Do you love to be accused of infanticide? I see signs of nobility and respectability in your eyes. I strongly hope that each and every member will rise equal to the occasion and try his best to remove this stigma. May your efforts be crowned with laurels!

I shall give you instances of how the utility of our Association has been impaired due to this lack of funds. The information for printing a Register of Veterinarians in the whole of India has been collected after much trouble and cost, but the register yet remains to be printed for want of finance. Secondly, the sending of a deputation to wait on the Government of India had also to be dropped on the same ground. Gentleman, our hopes, ambitions and desires are fruitless unless and until we equip ourselves fully with men and money. Money is the primary thing and without it we can never achieve what we desire. If we still do not wake up, to the seriousness of our situation, our fate is doomed.

Perhaps I have dwelt long on the dark side of the activities of our Association. The All-India Veterinary Journal, the mouth-piece of the Association, is winning more and more laurels every day even from far off countries. All this is due to its able editor, P. Srinivasa Rao, whose untiring zeal and

energy is praise-worthy. (1) The inception of the Journal is in itself a great achievement for the Association. (2) Through its efforts various Provinces have started Provincial Associations, (3) Some of the Indian States were approached with a request to open Veterinary Departments in their respective states. Thanks, to the enlightenment of the princes, most of these have organised Veterinary Service and others are taking steps in that direction, (4) The Association fought for the change in the designation of its members from Veterinary Assistants to Veterinary Assistant Surgeons and got it, (5) The views of the Indian Veterinarians were represented before the Royal Commission on Agriculture and Superior Services in India, an affair which was possible only because of the national nature of the All-India Veterinary Association, (6) It has been responsible to bring together all the Veterinarians of various parts of the vast Continent to exchange ideas, compare notes and discuss professional matters for the benefit of all concerned. These achievements have all been enumerated in the All-India Veterinary Journal. Had I the necessary funds, I should have given you a longer list of our achievements. Gentlemen, I fear our effort lack money and so lack in moral and material affairs. It is woeful indeed, that our hopes should come to this pass. I have enclosed the accounts of the All-India Veterinary Journal as an appendix to this report.

Let us try once more and raise the cry of '*Vis Unita Fortior*' and work for the development of the Association. Let me now finish with the warning 'Arise, Awake or be for ever fallen'.

RECEIPT & PAYMENT ACCOUNT OF THE INDIAN VETERINARY JOURNAL
FROM 1ST JULY 1928 TO 30TH JUNE 1929.

INCOME.		EXPENSE.	
	Rs. A. P.		Rs. A. P.
To last year's balance	... 403 0 9	By Journal Printing	... 1278 10 0
" Subscription	... 2771 12 0	" Blocks	... 47 7 3
" Advertisement	... 353 6 0	" Postage	... 466 1 6
" Donation	... 23 4 0	" Stationery	... 27 2 0
" Interest	... 40 6 0	" Subscription for Journals.	... 17 7 0
		" Establishment	... 960 0 0
		" Furniture (chair and table)...	66 8 0
		" Books	... 20 4 0
		" Binding of exchange journals.	8 4 0
			2891 11 9
		By Balance ...	700 1 0
			3591 12 9

Madras, }
9-8-29. }

P. SRINIVASA RAO, G.M.V.C.,
EDITOR,
The Indian Veterinary Journal.

SOME IMPRESSIONS OF THE MADRAS CONFERENCE.

BY

A DELEGATE.

"Rally round the Madras flag" was the call that came from the President of Madras Branch of the A. I. V. Association, one fine morning. It was the usual call when men and money were needed. But it had not lost its potency in the least through constant repetition, as was evident from the response made by the profession. Anyhow it was a bolt from the blue. The profession stood aghast and wondered if it could be true that the Conference was invited to Madras with barely three weeks before it! 'Yes it was true.' There was no time to be lost. Everyone began ransacking his purse for it can neither be too long nor too full, for obvious reasons. Despair was in every face. "Poverty! Have you no other home to reside!" exclaimed a colleague I met. But the Conference was to be presided over by no less a person than the Director of Veterinary Services. The Hon'ble Minister was to open it. Mr. K. Kylasam Ayyar had accepted the Chairmanship of the Reception Committee, and the whole function was to take place under the aegis of that first Indian Principal, Mr. V. Krishnamoorthy Iyer. What honour at stake! "Beg, borrow or steal." The Conference must be a success." Thus resolved Madras and she succeeded. God only should reward this great sacrifice on the part of the profession in Madras. All honour to them.

The expected day arrived. Quite a lively gathering met in the Central Hall of the upstairs at the Madras Veterinary College. From the imposing head-gear of a Sikh to a plain cap of Ghandian type could be seen in the hall. Smile was on every face. The hour struck nine and the proceedings commenced. Both the Reception Committee address and the Presidential address were well received by the audience. The Hon'ble the Minister's speech was received with great ovation. Candour and sympathy ran through his entire speech. The Hon'ble Mr. M. R. Seturatnam Iyer will long be remembered in Madras as the first Minister who willingly came forward to openly give expression to his sympathy with and appreciation of our work as a profession.

With the usual formation of the Subjects Committee and the vote of thanks proposed by Mr. K. S. Nair, M. R. C. V. S., the first day's proceedings came to a close.

In the after-noon the Subjects Committee met for nearly three hours and was able to adopt only one resolution after exciting discussion. It was decided that only very vital subjects should be taken up instead of repeating the usual 'stock' resolutions. The remaining subjects were reserved to be discussed the next day. A group photograph was taken in the evening followed by a grand garden party, when the famous Caterers Messrs. Harrison & Co., were in charge of arrangements. Next came the Lantern Lecture by Prof. V. Krishnamoorthy Iyer on "ANTHRAX" which was very much appreciated by the audience.

The second day was a day of professional papers. The marked feature of this year's Conference was that there were as many as 14 papers received even at such short notice of the Conference. I remember the days when one had to coax and cajole persons individually to "favour" the Conference with professional papers. But this year the Conference found it impossible to get through all the papers. So some were with-held to be published in the Indian Veterinary Journal. This, I should think, is again an achievement to the credit of the Association. And the day may not be far off when professional papers will be printed in advance and circulated and only discussions will take place at the Conference.

The discussion on "S. S. Inoculation against Rinderpest" was so interesting and instructive, I dare say, that everyone in the hall shared the regret of the President, when he said that it was painful to him to bring to a close such a useful discourse but that it was necessary on the face of the heavy agenda placed before him. Considering the many important issues raised at the discussion, it will be well, if the Editor of the Indian Veterinary Journal can arrange to bring out "Rinderpest" number and invite articles from all presidencies and provinces. Mr. Latiff's paper on the unnecessary dread of air embolism in intravenous injections created quite a lively discussion.

Mr. Phadke's paper on "Rejuvenation" clearly indicated that the profession in India means keeping abreast with advancement of science.

The Subjects Committee met again and after what may be described as much heated discussion adopted a few more resolutions.

The last day was the day of "Prayers" of the profession. The resolutions were very few and vital. These over, the Conference was brought to a close with a sympathetic speech by the President. The patience, good-humour and unfailing courtesy shown by the President throughout the proceedings can never be effaced from the memory of those who attended the Conference.

Mr. K. Kylasam Ayyar thanked the President, the Principal, the Volunteers and the delegates for their respective invaluable services rendered. Mr. K. Ranganatha Rao of Mysore Veterinary Service, responded on behalf of the delegates. Thus the Conference came to a happy conclusion amidst cheers and scenes of great exultation.

Review.

Notes on Bazaar and Indigenous Drugs, useful in the Treatment of Animals by N. D. Dasan, G.B.V.C., P.P. 177, Cloth Bound.
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Mr. N. D. Dasan deserves all praise for his production "Notes on Bazaar and Indigenous Drugs, useful in the Treatment of Animals".

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.

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Bovine Lymphangitis.

Apropos our notes on page 6, Vol. VI, No. 1, July 29 of our Journal, re the identity of the organism of Bovine Lymphangitis with *B. pestis*, the Director of Haffkine Institute, Bombay, writes to us as follows:—

The statement that "it has been accepted as such after proper test at a conference of Medical men at the Haffkine Institute, Bombay" is incorrect. No bacteriological study of the organism of Bovine Lymphangitis has as yet been carried out in the Institute, and as such its identity with *B. pestis* has not been established by any of the officers of this Institute.

We regret the error, Ed.

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OPINIONS.

W. TAYLOR, Esq., M.R.C.V.S.; D.V.H.; I.V.S. Principal, The Punjab Veterinary College, Lahore.

"In the first instance, I would like to congratulate heartily the author of this, on the trouble and pains he has taken in the compilation of the work...I have gone through the larger part of the work, and have come to the conclusion that with the few small alterations and additions mentioned above, the finished work will fill a long-felt want in the veterinary work...I would be pleased if you would convey my admiration for the work to its author."

F. WARE, Esq., F.R.C.V.S., I.V.S. AG. Veterinary Adviser to the Government of Madras.

The book "notes on the use of the bazaar and indigenous drugs in the treatment of animals by N. D. Dasan appears to contain much of interest, and should prove useful to those requiring a reference book on Indian bazaar drugs suitable for administration to veterinary patients."

P. SRINIVASA RAO, Esq., G.M.V.C., Editor, Indian Veterinary Journal, Madras.

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