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The Indian Veterinary Journal.

(The Journal of The All-India Veterinary Association).



Editor :

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MADRAS

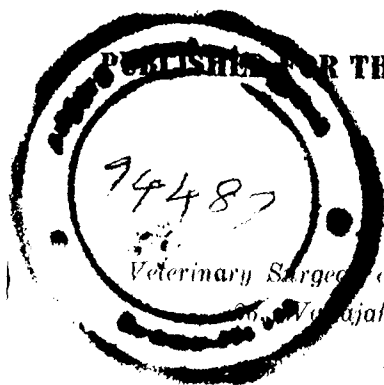
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NOTICE

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:

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

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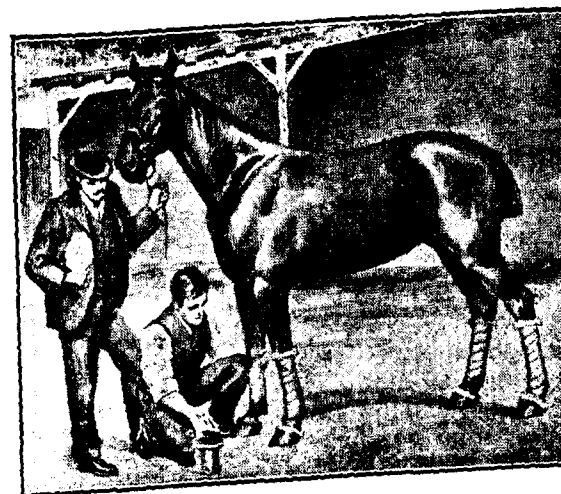
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THE INDIAN VETERINARY JOURNAL

(The Journal of the All-India Veterinary Association)

Vol. IV]

APRIL, 1928.

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THE Indian Veterinary Journal

Vol. IV] APRIL, 1928 [No. 4

EDITORIALS.

THE ALL-INDIA VETERINARY ASSOCIATION AND GOVERNMENT RECOGNITION.

AS early as November, 1924, we wrote in this Journal about the supreme necessity of getting the All-India Veterinary Association recognised by the Government. We fear, our advice has not received that amount of attention which it deserves at the hands of the management of the All-India Veterinary Association. We can well appreciate the difficulties in the way; but nothing short of sustained, strenuous and ceaseless efforts are needed to carry conviction to a Government, that does not easily appreciate sound reasoning.

Sometimes we hear the spurious plea that the Government of India may not care to go into the question of recognition of the All-India Veterinary Association, since Veterinary matters are now provincial subjects. No doubt, the control of the Veterinary department is now a provincial affair, but the right of recognition of professional associations still rests with the Government of India. It is an order of the Central Government that stands in the way of official recognition of associations like ours. It contemplates purely group associations of a "distinct class of Government servants" to set the seal of official cognisance. It is a general order for all-professional, clerical, judicial and magisterial branches of Government service. It

may work well in the case of Government servants not belonging to any particular profession. But, for the healthy development of a scientific profession, the need for coalition and collaboration of both Government and non-Government men is too obvious to need any vigorous plea. It is a very serious omission that no special provision is made in that Government order for professional associations.

Often the suggestion is held out that we can run two associations, one purely of Government servants to discuss only service questions and the other of both Government and non-government men to discuss only professional subjects. We question the wisdom of such an advice. As a matter of fact, we really know the fate of pursuing such a policy and we have seen it with our own eyes. Madras is a miserable example of a hapless victim of such a policy. Gone are the days of its robust activities. The "strongest limb of the All-India Veterinary Association" is now diseased and is fast undergoing a resultant natural decay and death. Its conferences are merely a memory of the past; its professional discussions so finely got up in booklet forms are no more heard of; its annual dinners have long ceased to be an event of social grandeur. This rot set in only after the opening of the much advised "Service Association". What of the latter? It is more a name than a reality. Thus, by a policy of 'division', either of the associations is not thriving.

The causes are not far to seek. The 'service' rules are so very strict, that one cannot freely express oneself without running the risk of incurring the displeasure of departmental heads. Secondly, it is the sweet will and pleasure of the departmental chief to forward or not to forward the requests of service associations. If *in his opinion* he finds them to be too 'ambitious' he says, he will not be a party to submit such 'absurd' proposals to the Government! There ends the help of the service association. We do not imagine any of these things, but say all these from personal knowledge. Again, the members of a service association can, at best, wait in deputation on their own departmental head! They are prohibited from waiting in deputation on the Hon'ble the Minister in charge of the Veterinary Portfolio and explain matters to him even in the immediate presence of the departmental chief!

With such elementary principles of liberty cut out, is it any wonder then, that a Service Association is more dreaded than loved! It is an association where even the united will of the members does not receive much consideration, but, it is an association where the members have to accommodate themselves to the implied and expressed wishes of the Veterinary Adviser! The farce of such an association can better be imagined than described. Hence Service Associations lead on a lingering state of existence, more dead than living.

The branches of the All-India Veterinary Association not owning the seal of recognition of the Government are often referred to with contempt or as a sort of dangerous institutions for which all help from the departmental head is to be withheld. In consequence these associations also languish. This is the result of having two associations. The one is too official ridden to be of any use and the other is disliked and discouraged because of its independence! How long is the central board of management of the All-India Veterinary Association going to tolerate such a state of affairs? If it is not mended soon, we fear, hard days are in store for the association.

To ask the members of the profession to discuss only professional subjects and then disperse—particularly when there is no other efficient body to effectively champion their cause in matters of pay and prospects—is putting too much premium on human nature. It may be possible in a country like England where Independent Veterinary profession exists; but, in India where almost every man is in Government service on a miserable pay with no scope for private practice, it takes him all the time to keep the wolf off the door. He has no money to buy books with or subscribe for journals. Hence the agitation to improve the prospects of the profession receives greater attention. The wonder is, not that there are not many professional papers presented and discussed, but so many are forthcoming under such adverse circumstances of the profession!

Three years ago there was a proposal to discuss this matter with the Government of India, by arranging a deputation with Col. Pease at its head. But it all ended in smoke. After that no serious attempt has been made to

principle. 'Equal work, Equal wages' with the Veterinary Assistant Surgeons of the same province. But in their demands they seem to have been actuated by the well known dictum "Half a loaf is better than no loaf at all" Poor men! what else can they do!

Is it because they entered service at a time when many men were not coming forward to take up this Veterinary line, or is it because of their loyal services during the Great War, that such a badge of inferiority is placed on these officers when compared with the Veterinary Assistant Surgeons of the same place? Is loyal and long service to the Government to be treated in the manner that is done in the Punjab? We can only hope that their cries will be heard by the Government in all their pathos and relief rendered at an early date.

TASKER VETERINARY HOSPITAL, BANGALORE.

Nestled in a picturesque and cosy but busy corner of the Civil and Military Station, Bangalore, is situated the TASKER VETERINARY HOSPITAL. Starting its useful career in a rented building in the year 1919, it is now the proud possessor of a pile of pretty buildings — thanks to the untiring efforts of Mr. T. J. Tasker, I. C. S. O. B. E., the former Collector of the Station who obtained a grant of Rs. 64,000/- from the Government of India for the purpose and after whom the Hospital is named. Besides the residential quarters of the Superintendent in charge and his Veterinary Assistant, the Compounder and others of the staff, there is individual accommodation for 24 dogs, 12 horses and 12 cattle. Horses and dogs form the bulk of daily attendance, which is between 40 and 50 and the annual receipts are Rs. 4,100/-. The institution is run by the Government of India and the maintenance charges are Rs. 8, 100/ per annum.

The hospital has an up-to-date surgical ward, distemper ward, observation ward, wards for contagious and non-contagious diseases, washing and drying yards. The dog kennels, smart and comfortable are the centre of attraction and admiration. The several buildings were designed and executed by

Buildings in Tasker Veterinary Hospital, Bangalore.



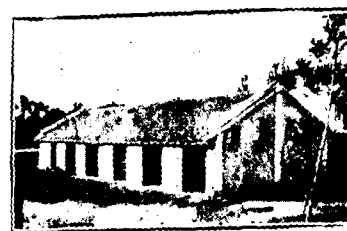
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Horse ward.



Dog Ward.

Mr. W. H. Murphy, A. M. I. C. E., & M. B. E., of Bangalore. The Superintendent in charge is Mr. M. R. Chengeri G. B. V. C., a post graduate of Lahore.

A hot Shoeing Forge has been sanctioned and will begin its work from 1st March 1928.

NOTES.

We invite the attention of our readers to a letter of Colonel G. K. Walker, written to the Veterinary Record and published in its issue of August 6, 1927, which we have extracted elsewhere. The following sentence is remarkable for its outspokenness.

* * * *

“What can be done with a Government that abolishes the head of the department (the sole co-ordinating influence) *ignores the proceedings of constituted Veterinary Conferences* (italics are ours) discourages the publication of research work, and rules that research institutions are to be run at a profit over and above the value of the animal life saved by their investigations and productions?” Serious charges these! Will the Government have the courage to question the truth or otherwise of these allegations?

* * * *

What disgust and despair at the action of the Government! And that by a Senior Indian Veterinary Officer after nearly three decades of service. If the same truths were expressed even mildly by the subordinates, it will be put down for ‘agitation’. Bravo! Col. Walker.

* * * *

We are glad that our article on “Veterinary Science and Rural Reconstruction” in the previous issue is finding support in the public press also. For the information of our members we are extracting below portion of an article entitled “Some

aspects of Rural Reconstruction" by Mr. E. Subramaniya Pillai, B. A. in "Justice" of March 12th 1928.

* * * * *

"There is one other aspect to which I shall briefly advert. If rural reconstruction is to give the full benefit which it is intended to give to the masses, Veterinary Science must find a place in any scheme of rural reconstruction. As it is in British India, and I believe also to some extent in Mysore, Veterinary Hospitals are few and far between. The Veterinary Inspectors so far available have to cater for the needs of localities with extremely large areas with the result that they find it physically impossible to be of any use to the cattle of the villagers. Cattle, in ancient days as in the present, was money, and a man's wealth was reckoned by the number of cattle he possessed. Judged by this standard, it behoves all Governments to expand their Veterinary Departments, to locate hospitals in every Taluk with a network of Inspectors and Assistants to go round the villages and afford relief to the suffering animals. The co-operative Department can start Cattle Insurance Societies so that the loss of valuable bulls may not result in serious hardship to the ryot. The expansion of Veterinary Science in all possible directions will inevitably conduce to the happiness of the toiling agricultural millions of the land who are the prop and the mainstay of all progressive Governments."

* * * * *

We are glad to learn that serum simultaneous inoculation against Rinderpest is being pushed forward with great enthusiasm and vigour in the Madras Presidency, and that, in combating outbreaks of the disease in the villages, this method of inoculation is being satisfactorily carried on with practically no untoward results.

* * * * *

With this number closes the fourth Volume of our Journal. The next issue of the Journal will be sent per V. P. P. to all of our subscribers unless otherwise informed in time. We request them to honour the V. P. P. and thus continue their patronage.

GENERAL ARTICLES.

CO-OPERATIVE CATTLE INSURANCE.

BY

M. K. JHAVERI, G. B. V. C.,

Veterinary Assistant Surgeon Ankleswar

and

*President, Co-operative Cattle Insurance Society of
Borbhatha Bet, Ankleswar Taluka, Brouch District.**

I. INTRODUCTION.

India is the land of agriculturists and cattle is the living wealth of farmers; and therefore it is the first and the most important duty of those interested in agriculture to look after the welfare of cattle. Our benign Government has therefore organised Civil Veterinary Department in every Presidency to look after these animals in sickness. Epidemics break out every year among animals in every part of the country and the subordinates of the Civil Veterinary Department immediately run to the scene of outbreaks and try their best to save the healthy animals from being attacked by preventive measures; but what about those that are already attacked and expired? Thousands and millions of animals die of contagious diseases every year in this country and as the result the cultivators are heavily ruined. Without draught cattle, a farmer cannot till his land or move his produce for sale in bazars. Periodical famines and pestilences also occur in addition to ordinary risk. The price of cattle has gone up and is not unlikely to increase any further. To repair such unforeseen losses of cattle it may be necessary for the small farmer to pledge his credit. To save him from such loss of cattle a more desirable solution is advocated. Co-operative Department has very lately organised Co-operative Cattle Insurance in this Presidency. By means of a well organised system of cattle insurance, a poor farmer of this country can provide himself with necessary amount to replace his dead animal by regular payment of small premium and insure its life.

*Read at the fifth All India Veterinary Conference, Bombay 1927.

There are also other advantages to be derived from this kind of Cattle Insurance. It teaches the value of mutual help and spreads education among cultivators. He is bound to pay more attention to the keeping up in a safe state the lives of his valuable insured animals. Experience says that insured animals are properly housed, taken care of, well-fed and better looked after than other animals. Every possible veterinary help is taken in regard to the prevention and cure of diseases. Efficient veterinary advice is always necessary in any scheme of Cattle Insurance. If a Cattle Breeding Society, is started in conjunction with Cattle Insurance Society, it will be an ideal arrangement for the farmers to purchase new animals to replace their dead insured ones.

II. CATTLE INSURANCE IN EUROPE.

In many parts of Europe, the formation of Cattle Insurance Societies has been found very successful. It has been said that insurance was first co-operative and afterwards it was made commercial and largely carried out by Joint Stock companies which began to insure against great variety of risks; but they are not keen towards live-stock insurance and their management being costly, they are not likely to appeal small cultivators. Co-operative Cattle Insurance exists in England, Germany, France, Italy and many other parts of Europe. In Germany this form of Cattle Insurance is believed to be the best because in this form members can observe and supervise the care given to insured animals and action taken when anything occurs; and it is to their own interest to do so. The drawback in this form of insurance is that the risk is covered by too small a number of animals and in a too restricted area. If number of deaths occur at a time a small society of such kind cannot meet with its losses. For such occasions Re-Insurance Societies are started there for so many such small societies. By Re-Insurance means a proportion of premiums received by small societies is paid in Re-Insurance Society which bears the same proportion of Indemnity. At other places some arrangement is made by the state to help such small societies on such occasions. At some places, scheme of cattle insurance is aided by the state, at other places Cattle Insurance is made compulsory by legislation.

In Europe premium rates are fixed in accordance with the risk involved and experience obtained. At some places compensation is not paid for loss of animals in contagious diseases; at other places certain diseases are excluded from risk, in some places very young and old animals are not accepted for insurance and indemnity is not paid on insured animals that have died as results of war, riot, theft or loss by starvation or by fire, lightening and flood. At many places insurance can only come into force 10 or 15 days after valuation. This is a kind of quarantine to guard against diseases in incubative stage and appears to be sound. At all places fraud on the part of the owner invalidates the policy; and indemnity cannot be paid if death is due to the neglect of the owner. In many places all animals of a member of such a society are insured so as to avoid fraud from the owner. To ensure that owner will attend his sick animal properly and not let it die so as to obtain insurance money, in all such societies, the whole value of the insured animal is not paid as indemnity but a portion varying from 60 to 70 % of the value insured is paid. Value of the animal to be insured is always settled by the valuation committee of experts, and generally this value is checked every year or every half year as decided by the society and altered if necessary before the next premium is paid.

In Europe, officials of the society give their services free of charge, but the Secretary is paid a small sum. There every member insures all his animals and one who receives indemnity compulsorily insures all his animals for three years continuously. Co-operative Societies are always limited ones and therefore not responsible beyond their resources and if funds do not permit, proportionate reduction is made in indemnities all round.

In England in some societies premiums are not levied and common fund is not maintained, but in case of death of an insured animal indemnity is paid by levying a proportionate subscription on all the existing members of the society.

III. CATTLE INSURANCE IN BOMBAY PRESIDENCY.

To encourage thrift, self-help and co-operation among farmers, artists and persons of limited means, Government of

India passed Act. No. X of 1904 and organised co-operative Department to constitute and control Co-operative Societies in India. This Act was revised in 1912 and under the provisions of the Act, the first Co-operative Cattle Insurance Society in this Presidency was started in 1916 in Borbhatha Bet in-Ankleswar Taluka, Broach District and the writer of this paper became its honorary President. Several other societies of this type were also started subsequently in Gujarat but none could work well and almost all except the first one had to be closed. Borbhatha Bet Cattle Insurance Society is still working well and has set a good example in this line of Co-operation. From the working of this society it is found that it is essential to start a society cautiously and to progress gradually. Failures discourage and instead of teaching the people to help themselves have contrary effects. Co-operative Cattle Insurance on sound lines is very desirable in this Presidency and therefore it is advisable to study the means of applying them successfully. Accurate and complete statistics of the mortality of cattle are not available and this complicates the situation. Epidemics in Gujarat are common and irregular in its occurrence and without including epidemics in the risks undertaken by the society it will never be popular here. Such a provision will be a real help to the farmers. Risk of famine must also be undertaken. In view of all these things it is obvious that the fixation of an equitable tariff is a problem involving some difficulty. Local conditions should also be paid attention to and the success depends on the foresight and the intelligence of the organisers in fixing the rates of premiums. 5% of the value of the animal to be insured is fixed as premium rate per year in Borbhatha Bet Cattle Insurance Society. It is not advisable to start a society in a place which is periodically visited by epidemics of serious nature as valuable animals will not be seen in such a place. Hæmorrhagic Septicæmia is very common in Ankleswar Taluka and though it is not advisable to include buffaloes for insurance in such places, we have still included them in insurance and have never experienced any serious trouble, because we always take necessary preventive measures in due time. Very young and very old animals are excluded from insurance. Borbhatha Bet Society takes insurance of animals between the age of 4 and 12.

IV. EXPERIENCES.

Experience says that no society should be started unless atleast 100 animals are to be insured and at least there are 12 members. Society with very large number of insured animals will also not be successful because it will be very difficult to keep an eye over so large a number of animals to avoid fraud. The scope of the society should be restricted to one village only if possible. It is also necessary to keep down the expenses of administration and for this purpose members must give their services free of charges. The Secretary should be paid a little to keep records of the society. Accounts of the Society must be kept methodically.

The success of the society greatly depends on the efficiency of its valuation and Managing Committees. In case of death of an insured animal one or two members of the Valuation Committee must see the carcass and give necessary certificate and the owner of the animal should produce it before the Valuation committee and if satisfied, this Committee will recommend the Managing Committee for the payment of indemnity. The Managing Committee has to consider the decision of the Valuation Committee and can verify it when there is any doubt on either side. Managing Committee has also to lay down some sanitary regulations that are necessary and see that all insured animals are properly looked after. If possible new purchases of animals in the jurisdiction of the society should be segregated for 10 days before they are allowed to be mixed with insured animals to avoid risk of epidemic diseases. Itinerant cattle dealers should be made to halt at a reasonable distance from the village and their animals should not be allowed to drink water from the village watering-trough, as animals in herds of these merchants are frequently affected with contagious diseases and are responsible for spreading them.

Indemnities should be paid as soon as possible, however, in case of epidemics a little delay is advisable for two reasons: one being that in serious outbreaks, a proportionate distribution of funds may be necessary and other that it is better to postpone the replacement of animals for some time when the village has been infected with epidemic disease.

V. SUGGESTIONS FOR FURTHER PROGRESS.

After the above considerations of the subject it will be seen that the Co-operative Cattle Insurance is absolutely necessary for the poor farmers of India and in order that it may make further progress, the following suggestions may be considered with advantage:—

(a) *Propaganda*:—The knowledge of the cultivators as regards this subject is so scanty that unless and until a strong and vigorous propaganda is undertaken both by the Government and the Non-official bodies to bring home to the cultivators the advantages of the system of Cattle Insurance, the farmers will remain in the dark and decayed state of old.

(b) *State Aid*:—In all countries the maintenance of good agricultural cattle is regarded as one of the duties of the state and cattle breeding and cattle insurance are chief factors in maintaining good stock of agricultural cattle. In view of the above fact the primary duty of the Government is to give all possible help and facilities for the progress of Co-operative Cattle Insurance in form of grants, guarantee of indemnities in times of famine and epidemics and maintenance of cattle mortality register.

(c) *System*:—There are certain drawbacks in present model by-laws such as non-payment of any damages for the animal dying after the insurable age, though the same animal may have been insured continuously for the whole insurable age. It is therefore suggested to appoint a committee to study the subject and frame a comprehensive scheme of Cattle Insurance.

VI. END.

Lastly I beg to state that I am highly indebted to my worthy superior Col. G. K. Walker, F. R. C. V. S., C. I. E., who was once the Superintendent, Civil Veterinary Department, in this presidency and who had helped me much in starting and conducting in the beginning, the Borbhatha Bet Co-operative Cattle Insurance Society—the only working society in this presidency at present—by way of intelligent suggestions and advice and much in this paper is what I have received from him and from his writings on the subject.

SURRA AND ITS TREATMENT.

BY

R. K. RAM,

*Veterinary Assistant Surgeon, Bankipur, Patna.**

It is not my desire to present a lengthy article on surra covering all the aspects of the disease; my object is mainly to give an idea of the advances that have recently been made regarding its treatment. They have no doubt been already published in the journal of Comparative Pathology and Therapeutics for June and September 1926. But as they are highly technical, being mostly details of research work done on its Chemotherapy with various drugs tried and also as they are not ordinarily accessible to most of my colleagues working in the district, a short and simple note on this disease will, I hope, be of considerable interest to them, especially when it has been our routine practice to destroy all the horses affected with this disease under Glanders and Farcy Act, but they can now under the new method of treatment be given a chance for recovery. Before coming to the treatment, however, it seems to be necessary to say something about the disease itself.

Surra, as is well known, is a febrile disease characterised by alternate paroxysm and intermission and is caused by a specific blood parasite which belongs to an important group of organisms known as trypanosomes and is called *Trypanosoma Evansi* after Griffith Evans, who had discovered it in 1880 in the Punjab. This organism is, like many other pathogenic organisms, liable to exaltation and attenuation by passage through different species of animals and probably also through the same species of animal and through different stages of age and condition. Surra affects horses, dogs, cattle, camels, elephants, rabbits, guinea-pigs and mice, as a matter of fact, almost all the domesticated animals and even wild games. As we in this province are mainly concerned with horses and cattle including, of course, buffaloes, I will confine my note to these animals only. The disease is fatal in horses, as a matter of fact, to all animals belonging

* Paper read at the Annual meeting of the A. I. V. Association Patna in Oct. 27.

to the equine species, but it is not so to cattle except in some outbreaks. The susceptibility of any animal or species of animal to any disease depends largely on its power of natural resistance, i. e., whenever any foreign element—be it micro-organism or anything else, enters or affects the system, the body fluid or the tissue elements react in order to destroy it or render it inert. The power of this resistance to surra in equine species is so small that the affected animal puts forth all his energy to fight out the enemy as is seen by the rise of temperature; the trypanosomes are, of course, destroyed but not entirely, the remaining retreat and hide themselves in some part of the body which will be described later. As soon as the anti-bodies and the defensive materials have been excreted from or diminished in the blood stream, the organisms again return to it and the same phenomena follow until the animal is exhausted and trypanosomes are found in the blood even when the temperature has come down, the tissues being unable to re-act any more and the animal dies. This explains the state of paroxysm or intermission in horses which is so characteristic a symptom of this disease, though there are of course, other symptoms, such as urticarial eruptions on the body, petechiae on the *membrana nictitans*, *œdema* of the dependent parts following poverty of the blood due among other devitalising causes to the destruction of red blood corpuscles by the parasites resulting in anæmia and debility. The appetite remains almost normal or not entirely suspended except sometimes during the height of paroxysm.

The disease, however, assumes somewhat a different form in cattle. The rapidity with which these animals sometimes die in the field or at home is surprising and the disease even difficult to diagnose. There is high fever, staring eyes, frequent micturition, bellowing, stamping of the feet, the affected animal runs out of the herd, jumps, falls down and dies in convulsion, froth coming from the mouth making one suspect it for anthrax. Such rapid casualties occur only in the beginning of an outbreak in an area that was apparently not affected with this disease before and may be due to the animal system not being prepared to meet such contingencies, and the grave symptoms produced being the result of intensive invasion of the brain by the parasites. The whole thing soon changes

afterwards, almost all the affected animals recover after a varying degree of rise of temperature and the disease as an epidemic apparently disappears from the area, probably for ever. The reasons appear to be that cattle possess so great a natural power of resistance to the disease that the body fluid secretes enough anti-bodies to check rapid multiplication of the parasites in the blood, and it is so constant that they seldom increase in numbers to be found in the smear preparations for microscopical examination. It is probable that they may safely be living in small numbers in the cerebro-spinal fluid or other tissue to come out in the blood circulation only when the power of its resistance has been lowered by some causes—disease or debility. It is for this reason that cattle once affected though clinically cured, may remain throughout their life a carrier of the disease without showing any sign of ill-health. To my own knowledge surra in cattle appeared at different times in different parts of the province showing that it is present in most of the districts in these animals. They are a danger to healthy animals only during the hot or rainy season when blood sucking flies abound and the vitality of some of the carriers is lowered by disease or otherwise allowing the re-appearance of the trypanosomes in the peripheral circulation in numbers sufficient to be present on the proboscis of the vectors to infect the healthy ones. Thus the natural resisting power of the bovine species to the disease explains the rarity of actual surra outbreaks in spite of the presence of the carrier probably throughout the province; but the danger is there, and one has to be on guard for prompt diagnosis in order not only to save the lives of cattle affected with the disease especially of those showing brain symptoms, but also to protect the lives of equine species that are highly susceptible to the disease to a fatal termination which renders them more liable to infection in an infected area through the same vectors.

Transmission:—The knowledge of transmission of this disease from one animal to another in nature is most important from an epizootiological point of view, especially as it relates to its preventive measure, but as it is beyond the scope of this paper, I will confine myself to what actually happens in an actual outbreak. It has already been pointed out that surra does exist in a subdued or latent form in the carriers,

the bovine species; some agents or vectors are required to convey the infective materials from these carriers or the sick to the healthy animals either mechanically or cyclically. So far as it is definitely known at present, transmission takes place purely mechanically by means of tabanus or gad flies, commonly called "dans" in "Hindustani" though any other blood sucking flies that may convey the infective blood from a sick to a healthy animal on their probosces within half an hour can transmit the disease. For this reason, stomoxys or stable fly has also been suspected as a probable vector, but it has not yet been proved by experiment. Flies that cannot engorge themselves with sufficient blood from one animal either through their own nature or restlessness of the host and therefore attack another animal nearby where-upon to complete their feed are most likely vectors in the transmission of this disease. Cross and Patel working in the Punjab some years back showed that there was a cyclical development of the "*Trypanosoma Evansi* in the tick-*Ornithodaras Crossi*" and that cyclical transmission of this disease by means of this tick was quite possible in nature, but similar experiment repeated in the Tropical School of Medicine at Liverpool with infected tick did not confirm these results. The period of incubation in artificial infection varies from 4 to 15 days.

Treatment.—Having explained the pathogenicity and transmission of the disease, I now come to its treatment—the theme of this article. It is a well known fact that treatment of a disease by means of medicament is to help the system in its struggle to win over the cause of the disease and thereby effect a cure, though in some cases medicines have also a direct destructive action on the causative organisms. How this phenomenon of combined action of the animal tissue and the drug takes place in the system, it is not the object of this article to describe here, but it is important in rational treatment of a disease with medicine, to remember that the affected animal should be kept as far as possible in good condition with good food, healthy surroundings, proper exercise, etc., so that the system may readily respond to the action of the drug in destroying the parasites.

Surra is known to exist in all species of animals, particularly in horses since a very long time and its treatment

with various kinds of drugs was tried throughout the world, but without any success. In this country Lingard (1899) at Muktesar first undertook the experimental treatment of this disease in horses with various drugs and finally recommended arsenic in gradually increasing doses. Holmes (1908) at the same place undertook an extensive experiment on its treatment which he continued for several years and finally found some success in arsenious acid, its solution and *atoxyl*, the first two by mouth and the third by subcutaneous injection. On the lines of his recommendation I treated 10 horses at Jamshedpur during 1924, following rigidly all the laboratory technique necessary in this line of treatment which took me over a month to complete, but the result was not entirely satisfactory. Out of 10 horses one was destroyed by the owner due to a severe injury sustained by the animal during a night, four relapsed in from one to four weeks after the termination of the treatment and were consequently destroyed and five were known to have recovered completely. It was, moreover, a laborious method of treatment, hardly possible in the field with so much laboratory exactitude.

After this, when a number of other drugs were being tried as to their efficacy in the cure of surra, came in the field "Bayer 205" commonly known as "Naganol" a German preparation from some aniline dye, probably built around methylene blue, which offered a further scope for therapeutic investigation. I had the honour to work under Mr. Edwards, the able Director of the Imperial Institute of Veterinary Research at Muktesar on this disease during 1925, in continuation of the preliminary work I had the privilege to do there in 1924. After prolonged experiments on different lines with different drugs and different combination of drugs he came to the conclusion that "Bayer 205" offered the best chance of success in the cure of surra in horses. It remained in the system for a long time, being very slowly excreted and its therapeutic index was found to be much higher than the other drugs tried.

It transpired during the course of the experiment that the trypanosomes, while entirely absent from the peripheral circulation as a result of treatment denoting apparent cure, were found in large numbers in the cerebro-spinal fluid,

probably due to the fact that the drug either did not reach this fluid at all or was present only in insufficient concentration to destroy the parasite, as a result probably of some physiological process in the secretion of this fluid by the piameter. It was for this reason that the horses treated with arsenical compounds or even with "Bayer 205" injected only intravenously, though apparently cured to all appearances, developed paraplegia and consequently died showing symptoms of cerebro-spinal affection and subsequent return in some cases of trypanosomes, in the blood. This discovery led to the idea of simultaneous injection of the solution of "Bayer 205" in the blood and the cerebro-spinal fluid, so that the parasites may be destroyed in both the places and these fluids may become unsuitable for them to live in, resulting in a permanent recovery of the affected animal. Under this method of treatment, a number of artificially infected horses in sufficiently advanced stages of the disease were subjected to intravenous intrathecal injections of Naganol solution at Muktesar. Sufficiently long time has elapsed without a relapse confirming the effectiveness of this line of treatment.

The dose of Naganol suitable for the cure of surra in horses is 5 grams per 1,000 lbs. body weight in 10 per cent. aqueous solution intravenously and 20 c. c. per 1,000 lbs. body weight of a 1 per cent solution, preferably in normal saline solution, in the cerebro-spinal fluid. The trypanosomes will disappear from the general circulation and the temperature will come down to normal in 12 to 24 hours. Some of the animals with this dose may show some toxic symptoms manifested by locomotive disturbance, even laminitis, urticarial eruptions on the body, albuminuria or some symptoms of general intoxication, but these symptoms, if any, will gradually pass off in a few days. This dose, though slightly toxic in some animals, is necessary in order to prevent the parasites acquiring resistance to the action of the drug administered in smaller doses, or in other words, to prevent what is known as "drug fastness" on the part of the parasites when they can tolerate higher doses that may become fatal to the patients. The intrathecal injection (the injection into the cerebro-spinal fluid) should with safety be repeated fortnightly to two injections more and one more intravenous injection of the

same dose in a month with the last intrathecal injection, though in the latter the toxic symptoms may be more pronounced. It has not yet been definitely known by experiment whether the repetition of these injections is absolutely necessary, but to ensure perfect safety it has been considered advisable to repeat them.

This drug can also be used as a prophylactic agent against the disease in badly infected area where horses are exposed to surra infection. 1 gram dose per 1,000 lbs. body weight repeated fortnightly till the chances of infection have passed off will ensure complete safety. Larger doses at longer intervals may be employed but their exact prophylactic period is not definitely known.

It seems to be necessary to give some idea of the technique of intrathecal injection. The horse is cast on any side convenient to the operator with his head firmly secured by an attendant, an area of hair and mane from the poll behind is clipped close to the skin for about 6 inches and washed thoroughly with soap and water, dried and then painted with tincture of iodine. The seat of puncture should ordinarily be about 3 to 5 inches behind the poll at the occipito-atlantal space; an ordinary sterile, well pointed inoculation needle, about 6 inches in size, is firmly thrust downwards and slightly forward into the sub-arachnoidal space that lies between piameter and arachnoid membranes covering the spinal cord at about $1\frac{1}{2}$ to 2 inches from the surface of the skin, though in some animals it may require a little more penetration to reach the space, the indication of which will be furnished by the flow through the outer opening of the needle of a clear cerebro-spinal fluid. The requisite quantity of the solution may then be injected through the needle that may then be withdrawn and the part repainted with tincture of iodine, or with tincture benzoin co. A piece of rubber tube joining the needle and the nozzle of the syringe at the time of injection will prevent the jerk and injury to the meninges, should the animal struggle at the time of injection, but its disadvantage is that it cannot be sterilized properly in the field; all along I have been able to do without it.

In the treatment of surra in bovine species, it is not necessary to employ any expensive drug such as Naganol. It has already been pointed out that cattle (including buffaloes) possess a certain amount of natural resistance to the disease, except of course in highly susceptible animals in the beginning of some of the outbreaks in which manifestations of brain symptoms are rather prominent. When the disease has been diagnosed and confirmed microscopically in any case during such outbreaks or even in individual or isolated cases, the best treatment is to inject intravenously a 3 per cent. solution of tartar emetic at the rate of 5 c. c. per 100 lbs. body weight, though even smaller quantity can do equally good, say about 3 c. c. per 100 lbs. body weight; the smaller dose is rather desirable in very heavy infection, as larger doses may sometimes cause collapse of the animal with very high fever. Immediate treatment is necessary in animals showing indications of brain symptoms, as the course in such cases is so rapid that there can hardly be time to wait for the result of microscopical examination of the blood smears if a microscope is not at hand. It is therefore advisable in outbreak of surra in bovines to inject the solution of tartar emetic in all animals that show rise of temperature and thereby prevent mortality from this disease.

The solution may be prepared in sterile distilled water but normal saline solution is better which can be prepared with a drachm of pure sodium chloride in a pint of distilled water, filtered and sterilized by boiling. The tartar emetic solution may ordinarily be prepared by adding 15 grains of the drug in an ounce of sterile distilled water or N. S. S. when larger quantity is necessary, 5 drachms may be put in a pint of distilled water or N. S. S. the whole thing may then be slightly heated till the material is dissolved. It may be filtered if considered necessary.

A BRIEF NOTE ON THE ORIGIN AND DEVELOPMENT OF SERUM SIMULTANEOUS INOCULATION AGAINST RINDERPEST IN THE MYSORE STATE.*

BY

K. KRISHNIENGAR.

Asst. Superintendent, Mysore C. V. D.

The Mysore State comprises a tract of country lying between the 11°38' and 15°2' parallels of North Latitude and between the 74°42' and 78°36' East Longitude, covering an area of 29,305-square miles. It is completely landlocked by nature, having no seaboard or outlet to the sea. In general aspect, the country is exceedingly undulating, the western half of the State being very hilly, while the eastern half consists of extensive undulating plains alternating with wide valleys. The climate is mild throughout the year. In the winter months of December and January, the mean temperature ranges from 62° in the Western Districts to 67° in the Eastern Districts. Summer temperatures seldom go above 100° while the mean temperature ranges from 83° to 87°. This much about the geographical feature.

Coming now to the subject proper, rinderpest is prevailing in the State, in some part or the other, though mostly in the western districts, throughout the year, for several years past. The Civil Veterinary Department was organised in the Mysore State in the year 1907 and serum alone method of inoculation was being carried on as a preventive measure. In those days, protection conferred by this method was said to last for a period of six months. But this period of immunity has since been reduced to nine days, and we see that there are different qualities of serum for serum alone and serum simultaneous inoculations, and then again special serum for different breeds of cattle.

It is not necessary to point out that, unless all the animals are protected in an infected village, the disease would

* Read at the Fifth All-India Veterinary Conference, Bombay, December 1927.

continue to prevail there for long periods and animals that have once been protected by serum alone method will have to be continuously protected every ninth day till the infection completely subsides in the village. Every Executive Officer here, who has had to move with the people in villages, in the prevention of epidemic cattle disease is, I am sure, aware how difficult it is to induce the people to submit their animals even once for inoculation, and as such it would be futile to expect that they would come forward every ninth day for getting their cattle protected. Apart from this, the qualified veterinary staff, especially in Mysore, is quite insufficient to attend to re-inoculations every ninth day, in consequence, if any of the inoculated animals die after the short period of immunity, the ignorant masses will lose faith in the process of inoculation itself and further work will then be hampered considerably. Again, Mysore is a country where numerous Cattle Fairs (about 80 in number) are held annually in which 50 to 60 thousand head of cattle are brought together causing a practically continuous movement of cattle all over the State. It is also a country where fine cattle are bred and exported to several parts of Southern India and other places. If therefore, the immunity conferred by the inoculation is only for a short period of 9 days, the help rendered to the Agriculturist in protecting his live-stock, under the circumstances explained above, is practically very little.

The Superintendent of the Civil Veterinary Department, having realised the necessity of rendering better help to the cattle owners wanted to try serum simultaneous inoculation, in some of the infected villages, as far back as 1921. The difficulty of obtaining potent virus was the first problem to be solved. The only place wherefrom it could be obtained throughout the year, is Muktesar; it could also be had from the Imperial Dairy Farms at the time of inoculation of the Government cattle there. Opportunity was availed of when the Bangalore Imperial Dairy cattle were being protected by S. S. method, and, with the virus obtained from there, the Palace Dairy cattle at Mysore were protected by S.S. method in the the year 1921-22. But this did not go far in protecting the cattle of the ordinary ryot. The idea of getting virus from Muktesar had to be dropped, as it was not possible to get it potent, directly to any of the infected villages in time, on

account of the long distance and consequent delay in transit. The next course that suggested itself was to draw virus from an infected animal in the infected village itself, and use it immediately for inoculation, either after defibrination or mixed with Potas-citrate solution. But, even here, there were many difficulties we had to contend against. It was not always possible to get suitable animals for bleeding, and, even when they were obtained, the villagers greatly resented the drawing of blood from them. These difficulties prevented the progress of our work in this direction. Only 400 animals were protected by this method during the years 1921 and 1922 and then the work was suspended for want of funds to have a properly equipped station for producing virus. During the latter part of 1925, Government granted some funds for starting a virus producing station, and susceptible calves were got from several parts of the country. With the initial virus obtained from Muktesar, the working of S. S. inoculation was then renewed on a practically permanent and satisfactory basis. Veterinary Inspectors were given the necessary training for a short period by taking them out to one or two of the infected villages and showing them the nature of work to be done by them. They were then allowed to undertake inoculation work independently in infected villages and before the end of June 1926, 39, 912 animals had been protected. Subsequent reports received from these places, revealed that 326 of these animals had died after inoculation, showing the mortality rate at even less than one per cent. Considering that we undertook the inoculation only in infected villages where some of the inoculated animals might have had the disease in the incubative stage, and realising that the serum used was intended only for serum alone method of inoculation, this small percentage of casuality among the inoculated should be considered negligible. As a result the inoculation was very much appreciated by the people and they were eagerly anxious to have their animals portected by this method. But, unfortunately, this rapid progress in this direction could not continue long as the Government ordered a levy of a fee of one rupee per head of cattle inoculated by this process. This order was issued probably because the cost of sera and virus became very high. The Government might have also thought that the people would not hesitate to

pay the small contribution levied on them as they had already realised the advantages of this method of inoculation. However, this order brought in very great opposition from the people and the progress of work was considerably retarded; in consequence, only 24,555 animals were protected by this method during 1926-27. 79 of these are reported to have died, working the mortality rate at about 1 in 300, and also showing that the experience gained during the previous year had thus reduced even the negligible mortality of that to a very considerable extent.

In addition to rinderpest, there are several other preventable diseases always prevailing in the Mysore State and causing heavy losses to cattle owners. Procuring sera and vaccine in time from Muktesar was often times not possible and the cost of these as well as the cost of carriage from Muktesar became also prohibitive, as the work went on increasing. Government then considered the necessity of opening a Serum Institute of their own within the State and, with this object in view, deputed in April last two officers of the State to Muktesar to learn the method of preparation of sera and vaccine. After their return in September, a Serum Institute has been started on a small scale, and manufacture of antirinderpest serum has been taken up in co-ordination with virus production work. Within these three months, 1,80,000 doses of serum have been manufactured. I feel proud to place before you the sample of the Serum prepared in the Mysore Institute and a sample of Virus. Though we have used this serum in several infected villages, we have so far received final results of inoculation from only two of the villages; and these go to show that the serum prepared in our Institute is quite as efficacious as the serum we were getting all along from Muktesar. We have reduced the dose of serum to such an extent as just to produce a slight thermal reaction in a pretty large number of cases in order to be sure that the animals have been actively immunised. This process has reduced the consumption of serum to a great extent; where we were using 40 c.c. before, we are now using about 25 to 30 c.c. The cost of production is expected to be much less than the cost of getting the same quantity from Muktesar even when the Institute is well equipped with all appliances.

Considering that the payment of fees retarded the rapid progress of work in this direction and that the disease was spreading rapidly to several parts, our Government have been pleased to suspend the order of payment of fees, for some time, and I hope this will induce cattle owners in all the infected villages to have cattle inoculated in large numbers. It is very unfortunate that the Department is very much understaffed compared with the work we have on hand.

Regarding the period of immunity conferred by S. S. inoculation, we have got to wait and see, as the results could only be known when the villages, where S. S. inoculation has now been carried on, get a natural reinfection later on. But I might say, that I selected 3 animals which were protected in November 1921 in the Palace Dairy Farm and gave them 5 c. c. of virus in December 1925 i. e. 4 years after the inoculation, and in no case was any reaction noticed. This shows that the immunity conferred will last for at least four years. I hope to try pure virus next year on some more animals inoculated in 1921 and will probably be able to tell you the results when next we meet.

In conclusion, I wish to state that the results achieved so far in the Mysore State are encouraging and favourable and that this method may safely be entrusted to any qualified Veterinary Surgeon with slight training. About 30 to 35 members of the profession who worked in the Mysore State temporarily on rinderpest inoculation work, are now serving in several parts of British Provinces and they must all have known how the agriculturists appreciate this mode of inoculation. As I have not read much of S. S. inoculation work undertaken on a large scale in any other part of India, my object was to select this subject and I will feel amply rewarded if this method comes into general use in all provinces in future.

I thank you Gentlemen for giving me a patient hearing.

METHODS ADOPTED IN KHEDDAH OPERATIONS
IN CERTAIN DISTRICTS OF BURMA,

BY

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Subscribed by his son Mr. S. Gupta.*

These are different from the Government Kheddahs. Three permanent stockades are built, one about four miles distant from the base camp, the second stockade is about four miles south to the first and the third one is about eight miles north. They are all permanent stockades, each 400 feet square, substantially built and the cost to build each stockade, I am told is about Rs. 1,000/-. The selection of the sites for these stockades depended chiefly on the salt licks the district is favoured with. As a matter of fact the stockade I inspected has got a salt lick inside it. The other stockades have also got such licks. These licks, no doubt, tempt the wild elephants to come and eat the salt which they are so fond of.

How elephants are driven to the stockade:—Before driving the wild elephants to the stockade, their grazing grounds are watched and an artificial path is made by the Koonkies which leave a good impression of their food prints. The wild elephants follow the track, alas! under a false persuasion that it is their own and thereby lead themselves direct to the stockade. When the whole herd is inside the stockade, the gate which is not a dropping one, as was in the Government Kheddahs, but an ordinary strong wooden path made of posts which can easily be closed by the men, who are always in a *machan* built for them, very close to the stockade. These men watch the stockade whole day and night (of course the elephants never come inside the stockade in the day time). The method is a simple one and saves the big expenditure the Government Kheddahs had to undertake to surround the herd and drive them into the

stockade. The Government method was to catch a big number of elephants at a time.

Work inside the stockade:—As soon as an elephant gets inside the stockade, the Koonkies are told off for work in the enclosure. The riders noose the wild elephants by thick jute ropes (they specially make ropes for this purpose), after sitting on their trained Koonkies. When the noosing is finished, the ropes are tied between the wild elephants and the Koonkies. The captives are then led out of the stockade by these Koonkies as soon as they are secured and are picketed in the forest. Two men are generally appointed to each large elephant and one to each small one. These men make themselves friendly constantly moving about them, singing to and feeding them.

Training:—This is taken in hand at once. The Indian riders ride these wild elephants and train them in a comparatively short time without much detriment to their conditions. The Karen methods are not generally adopted, mainly on the ground that their method is simply cruel. Karen trainers, at the ordeal of these crude modes of training, slice off the best vigour and energy of the beast and ultimately leave the poor animal almost a wreck. The elephants are trained by the Indian mahouts (riders). It reminded me of the old kheddah days and training of the new captures by the Dacca men. They are the particular class of men suitable as trainers of these elephants. These Dacca men train the elephants to such an extent that although they (the elephants) were captured about a month and half ago, they allowed me to go near them and feed them with their usual daily ration of paddy and salt. My plan of feeding is adopted by giving them small quantity of paddy at a time with a little salt in it wrapped up either in paddy straw or kaing grass. All the wild elephants are fed in this way. On account of this slow feeding the elephants get familiar to their attendants and thus the training becomes easy. The riders get a training fee of Rs. 100- for each elephant trained. The elephants are all fed on plantain trees and cut fodder in the stalls.

Expenditure:—Roughly speaking it comes to about Rs. 1,000 a month. This includes training fees, fodder, riders' and attendants' wages etc.

Conclusions :— From the above it may be observed that there are three essential points which favour this mode of Kheddah operations :—

(1) *The position of the district* :—The district (e. g. Bassein district, Katha and Bhamo districts) must abound with the salt licks and a very good forest for the wild elephants to graze throughout the *yomas*. In the districts mentioned above, the Burmans, and especially the Karens had been capturing elephants for years. I am told that their method of capture and the treatment of the unfortunate captives during the period of training was shockingly cruel, so much so that the Sub-divisional officer of Ngathaingyaung (an European I. C. S. officer) let some of the captured elephants loose on account of their distressing sores and famished condition.

(2) *Trained Kheddah Koonkies* :—This is the most important item to train the new captures in condition and train them without much harassment.

(3) *Bath bricks to rub the elephants' body during their bath* :—The subject, although has no bearing on the actual Kheddah operations, I may be excused to write a few lines about it. I dealt with it elaborately soon after I joined the firm in one of my reports after inspecting the Min yè elephants in 1915. These bricks are very good to rub on the elephants' body during their daily bath. In fact, one of the paraphernalias of the Dacca Mahouts when they come to Burma is to secure a brick or two for their elephants when they leave Dacca for their elephant work in Burma. These bricks are far superior to "Du Nwe" a creeper used by the Burmese riders sometimes at the time of washing their elephants. This creeper has a similar effect to soap and gives the skin a good healthy appearance. Bath bricks are used by the Indian riders every day to scurb their elephant's body during the time of their bath. The application of this not only gives the skin a healthy appearance, but prevents all other skin diseases and keeps the general circulation both in order and preventative from any diseases. They are overburnt bricks and can be had in any brickfield in India at a nominal cost.

THE PHUKA OPERATION PRACTISED UPON COWS AND ITS EVIL EFFECTS.

BY

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The Act for the Prevention of Cruelty to Animals—Act No. XI of 1890—enacts, amongst others, the following :—

If any person performs upon any cow the operation called phuka, he shall be punished with fine which may extend to one hundred rupees, or with imprisonment which may extend to three months, or with both.

The Act has been in force since 21st March, 1890, in almost all parts of British India. But nothing has been on record as to what this operation is like, how it is practised, what the evil effects on the health of the animal are and why it is that the operation is condemned by law. I was myself asked many a time by officers of the Police Department and candidates appearing for examination in law as to what this operation was like and I could not until a few years ago answer to the question. I therefore took the question in hand at once and started on a regular programme of visits round gawalia's cow-sheds and, to my surprise, I found wherever I visited the operation quite commonly practised by gawalias and cultivators on cows. Uptil now, I have seen myself this operation being practised on nearly 60 animals. I closely watched the effects of the operation and observed as to why it is performed and how it is performed on cows; and I am now glad that I have been able to keep before the profession my views on the operation. If you ask the gawalia about it, he will surely reply that it is quite common and that it is not cruelty to practise the operation and that there are no resultant bad effects on the health of the cow. It is with this view, therefore, I am writing this article for the information of the general public, and those concerned with live-stock, and I am sure they will agree, once they see the operation and its evil effects, that the practice is most heinous, most abnoxious, most injurious and cruel and that it brings

about sterility in cows. It should be at once stopped and persons carrying on such operations should be brought before the court as per law provided and fined heavily.

The operation is performed on cows in the following manner:—

In northern India, and parts of India where people speak Urdu, the gawalis there catch hold of the lips of the vulva in such a way as to enable the operator to blow right into the vagina up to the mouth of the uterus good lot of air. The lips of the vulva are then held tightly together to prevent the air getting out. The word Phuka means blowing and hence the name of the operation. I think this operation must have been well known in those parts hundreds and hundreds of years ago.

In some parts, the tuft of the tail is introduced right into the vagina upto the mouth of the uterus.

In some other parts, a pledget of straw, big enough and well smeared with some irritant oil, is introduced right into the vagina up to the mouth of the uterus to be lodged there for some time.

In a few other places, a pledget of cotton wool soaked in irritant oil is directly introduced into the mouth of the uterus.

The oil used in most of the cases is mustard oil which is irritant when it is prepared fresh and not boiled. This operation is performed on cows that are very troublesome to drop the milk. By introducing air, the tuft of the tail and pledgets with irritant oil into the vagina, the result is the counter-production of sympathy which compels the cow to drop the milk. On such cows the operation is not performed only once but every day until she gets into easy way of dropping milk. The evil effects of the operation are therefore most distinct namely it produces continual irritation of the genital organs and as a result of the irritation septic poison is the result. The most common form is septic Leucorrhoea with an offensive mucopurulent discharge which can be easily smelt as soon as you enter a cow-shed where such operation is daily performed on cows. As you go on inspecting the cows,

those that are subject to the operation will be noticed to stand with their backs arched and the tail lifted; their genitals would be swollen with an offensive discharge and the tuft of the tail matted and the hairs half eaten away; sometimes the tip of the tail would be ulcerated, gangrenous and rotten. If you were to examine the internal of the genitals, namely vagina and the mouth of the uterus, you will find the lining membrane of the vagina and the mouth of the uterus badly ulcerated and inflamed. And lastly if you were to go into the history of such cows a year or so afterwards you will surely find that they remain sterile and very difficult to breed by any means. Is it not therefore a serious thing to note from a point of animal economy? Looking to the number of animals undergoing such an operation every year, I am sure, it must be one of the important causes of such animals ultimately falling into the hands of the butchers every year. If you consider very carefully the last named evil, namely sterility in cows, I think it is a very serious problem to deal with and I only hope that persons concerned with live stock, with law, with the veterinary profession and agriculture in general, will certainly see their way to stop this evil practice as early as possible.

Now looking to the purpose for which a gawalia practises this evil operation upon a cow, namely, that it is very troublesome to drop milk, I should think it is not the fault of the cow, but it is the fault of the breeder. The three principles of the breeding are selection, environment and heredity, and I think, if we were to follow these factors in practice there is no necessity to practise this evil upon poor dumb creatures for the sake of milk only.

DUM DUM SORE OR CALCUTTA SORE*

BY

RAI SAHIB DEBAKAR DEY, P. V. S. &C.,

Assistant Principal, Bengal Veterinary College.

This intractable affection has received its name owing to its prevalence in Calcutta and Dum Dum, a very famous place of historic importance. The place was a famous military station, now defunct. It situates in the outskirts of Calcutta, about a mile east of the Bengal Veterinary College, Belgachia, now under the Corporation of Calcutta.

It is a disease peculiar to bovines and rarely to buffaloes. It appears as warty growths on the neck (yoke place), sides of the hump, fetlock, back and elsewhere. Like Bursatty it has a seasonal prevalence, i. e. it is worst in the rains.

It is an infective, inoculative disease (apparently a skin disease) not affecting the condition of the victim, and therefore, it may now be looked upon as a local disease.

Etiology:—So far, I am not aware of the "causa causans" of the disease. It may be an infective epitheliomata, originating from the irritation set up by an unknown microbe.

It appears to me a "mycelium" somewhat allied to "actinomyces", or an yeast allied to cryptococcus of Rivolta.

Modes and channels of infection:—The inoculation experiments in my hand, proved positive in every case. I took some of the growths and immersed them in physiological salt-solution (sterile) and injected hypodermically 1 c. c. in each case on the sides of the humps, necks and dewlaps. Ten out of twelve cases showed some cardinal signs of inflammation within 10 to 20 days after the injection. The remaining two cases responded to the inoculations after 6 weeks. The specific growths, viz. thickening and roughening of the inoculated areas were complete during the aforesaid periods.

The incubative period in earlier cases varied from 7 to 10 days and the later cases between 18 to 21 days approximately.

* Read at the Fifth All-India Veterinary Conference, Bombay, December 1927.

The channels of infection in natural cases:—The gates are similar to those of Epizootic Lymphangitis of the horse and "Streptotrichosis" and Bovine Farcy of cattle, viz. parts liable to friction.

The intermediate bearer in Bengal and perhaps elsewhere is a 'crow.' It may be possible for all biting insects and flies to give this malady from the diseased to the healthy animals.

I have doubts in my mind that perhaps an yeast analogous to "cryptococcus Rivolta or Farciminosus" is responsible for this disease. I leave this point to the future workers upon this disease to enlighten me.

What I really want to be educated is this, that, whether a fungus or an yeast is the real cause of this disease.

Semiology:—After an inflamed or congested skin, due to an accidental or intentional violence, there appears upon an unbroken "contusion" or "contused wound" some wart-like growths very recurrent, baffling all known treatments even thermocautery or actual cautery without any appreciable constitutional derangement.

The growths (naked eye macroscopic appearance) almost give the picture of Epithelioma.

Microscope (low power) reveals fibrous changes. High power, shows threads and branches (?) cocci-like bodies and pus corpuscles in late cases.

Therapeutics:—Until quite recently, I tried the whole pharmacopœia without radical cure. But before I left this for Europe I had an opportunity of treating a few early cases of this ungovernable disease upon some cows and bullocks, the properties of a distinguished lady doctor friend of mine, Miss E. M. Greenwood, 5, Dum Dum Road, Cossipore, Calcutta with a patent ointment viz. 'Hadensa'.

My method of treatment:—Gentle washing the diseased parts with non-medicated soap and warm water by means of

a soft napkin or a piece of sponge; after drying the treated areas perfectly, preferably sun-dried, Hydrogen Peroxide has been dropped on to them (10 drops or so) until it begins to bubble and allowing rest to the parts for a while for the Hydrogen Peroxide to act; 'Hadensa' has been very gently applied and the applications of the "Unguentum" repeated in the course of the day (as frequently as about 3 to 4 times daily) until recovery.

Conclusion:—The use of this remedy, I must admit, is nothing but empirical for the present. I had had no convenience nor time to analyse chemically its component parts but seeing the marvellous result of this simple treatment I would request the present and future hopes of the Veterinary science to deal with similar cases and adopt my line of treatment and communicate the result of the treatment through the pages of this valuable Journal.

N.B.—So far 'Hadensa' is being used as a hemostatic in "Hemorrhoids" or "Piles" in human patients. It appears to be some medicament upon Hazeline basis.

PITFALLS IN VETERINARY SURGERY.*

BY

S. S. AHMAD,

Professor, Bengal Veterinary College.

This is a record of 3 cases that came to me while I was still young in the profession and show the difficulties that an unexperienced Veterinary Surgeon encounters.

1. *Oesophagotomy in a buffalo-cow:*—This animal was brought to me with pronounced symptoms of choking when I was enjoying college summer vacation at home in Patna district in Bihar.

The history of the case elicited from the owner was, that the animal was given ripe palm fruit-Borassus flabelliformis,

* Read at the Fifth All-India Veterinary Conference, Bombay, December 1927.

N.O. Palmaceae to lick for its sugar contents. This happens to be a common practice in Bihar.

The animal swallowed one of the seeds and was in great distress with certain amount of tympany.

I happened to have no instruments of any kind, neither any drugs and the nearest Veterinary dispensary was about 20 miles away.

On examination of the mouth, the offending seed was found to be out of reach. Some linseed oil was obtained, a walking cane stick utilised as a probang and with the help of these two articles, and two strong men to raise and extend the head futile attempts were made to push the obstruction down.

Eventually, as the pressure on the wind pipe was causing difficulty in breathing, oesophagotomy was decided upon.

Some cotton wool, machine silk thread, 2 handkerchief-size cloths and a pen-knife were boiled in salt water and some camphor was put in boiling linseed oil to serve as dressing later on.

The animal was thrown on the right side and secured and an incision made into the skin just on the bulging caused by the seed, lodged about 6 inches from the throat. The muscles underneath were carefully dissected and separated, the constant fear being arteries, myself having no artery forceps or any forceps as a matter of fact.

Next the oesophagus was cut open and the seed removed. The oesophagus was now closed in the orthodox fashion and finally the skin was stitched leaving a small opening in the skin below for drainage.

The camphorated oil was applied on the wound and a square bandage put on and I thought nothing more of the case.

My confidence was rudely shaken when an hour later the owner turned up and told me the stitches have all given way and straw was coming out through the opening.

The fact was the animal was trying to remasticate when it felt well. I saw the animal, manipulated and found to my disgust that the œsophagus was torn through, there being no room for further stitches. Consequently the animal was passed on to a butcher.

Text books are, as far as I am aware, are silent about this sequel of œsophagotomy in ruminants and I believe if I had but deferred suturing and waited till all straw was out of the opening and then sutured and fed the animal on liquids all would have been well.

II. *Ocular filariasis complicated with Periodic Ophthalmia*:—A Bay Waler gelding, 15·2", about 7 years old, belonging to a District Officer was brought to the hospital from a moffussil town for the removal of the worm.

This operation was performed successfully and worm removed. With a bandage for his eye and boric and zinc in solution, the case was progressing very favourably and the opacity was almost gone. On the fourth day without any apparent cause, the whole eye was inflamed, the eyelids were puffy and the cornea was opaque once again.

Hot boric compresses morning and evening for days together, and protargol solution for the eye itself had no effect and eventually the sight of the eye was lost.

This case had a very sad ending for me, and as we do quite a number of cases a year I inquired from the owner as to any former trouble about this horse's eyes and was told he was subject to Periodic Ophthalmia and this attack came at a very unfortunate time.

III. *Peculiar behaviour of a Spermatic Cord during Castration*:—A dealer's Grey C.B. entire, 4 years old, was brought for castration. He was prepared, cast, chloroformed and operated by the castration clamps and hot iron method. When the testicle was grasped (the left one first) after cutting through the skin and membranes, the spermatic cord started giving way and would have been torn away; so the clamp was put on at once immediately above the testicle and fired off.

The other testicle behaved in exactly the same way. The case made an uneventful recovery afterwards.

A LACTATING MALE GOAT. *

BY

D. K. SEN,

Lecturer, Bengal Veterinary College, Belgachia, Calcutta.

The subject is a well-nourished Hill goat from Nepal, about 4 years old, the property of the Calcutta Zoological Gardens, to which it was presented by an employee of the Calcutta Police Force.

It presents both mammary glands placed in front of the scrotum, the left one being rather well-developed and consisting of a fair amount of gland tissue with a good-sized teat. This is the gland which yields milk. The right is smaller in all respects and yields no milk.

Not much of the early history of the animal could be obtained beyond the fact that the person who presented it to the Zoo, purchased it at a place called Hanumannagar which is on the borderland of Nepal. He was careful to see that the goat was in a state of lactation, and had the animal milked in his presence.

At the present time the goat is milked regularly and gives about half a pound of milk daily. I tasted a little of the milk and found it to be quite good. The Zoo authorities utilize this milk in feeding their three tiny marmosets, who take it with relish and are thriving on it.

The animal has quite normal genitals, is a vigorous specimen, butting at strangers whenever he can, and, I was informed, is capable of mating.

The probable explanation of this abnormality is:—

Noticing the rather large-sized teat, which must have been present from a very early age, some one playfully started pulling at it, and as the pulling continued, it acted as a stimulus, with the result that the gland tissue developed and milk secretion was established.

It is interesting to note what other authorities say in this connection:—

* Read at the Fifth All-India Veterinary Conference, Bombay, December 1927.



No. 1. The general appearance of the goat with the extremity of the teat protruding.



No. 2 The present state of the left mammary gland with the scrotum behind it.



No. 3. The goat being milked.

Chlorine Mixture and Its Use In Typhoid 337

Chauveau, in his Comparative Anatomy (translated by Fleming, p. 979) remarks:—"In Ruminants towards the extremity of the prepuce are small teats; these, in the He-goat, are sometimes glandular, and secrete a fluid analogous to milk."

Smith, in his Manual of Veterinary Physiology, Fifth Ed. p. 790, states on the authority of Mumford and Marshall, "The rudimentary teats of the goat and sheep, and even of a bull, have been known to produce milk."

But no explanation has been offered.

The Zoo authorities have kindly presented me with a sample of milk and three photographs of this goat, showing in No. 1, the general appearance of the goat with the extremity of the teat protruding, in No. 2, the present state of the left mammary gland with the scrotum behind it, and in No. 3, the goat being milked. I have also been able to secure a part enlargement of No. 2.

CHLORINE MIXTURE AND ITS USE IN TYPHOID AFFECTIONS IN DOMESTIC ANIMALS.

BY

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The easiest, the cheapest and the simplest method to prepare Chlorine Mixture is as follows:—

R	Pot. Chlorate	...	Half a drachm,
	Acid Hydrochloric	...	one drachm.
	Aqua	...	12 ounces.
	M. ft. Mist.		To be prepared fresh.

Sig. half an ounce for dogs and a teaspoonful for fowls every four hours.

The most common Typhoid affections in veterinary practice are Typhoid in dogs and poultry. Many valuable dogs and poultry die every year of this malady, and, in veterinary literature, there has been nothing so far, substantial in the way of cure mentioned. In my practice, I have had many such cases and tried all sorts of cures but to no good. Lately I tried this Chlorine Mixture and found it very effective. I think, if I mistake not, I have been able to cure almost all cases that were brought to me for treatment. It is not my intention here to describe what Typhoid is like and how to detect it in dogs and poultry as every Veterinarian must have had many such cases in his practice to deal with. I want to know the results of such a treatment if any one has done so. If not, I would certainly like the general profession to give this treatment a thorough trial and to let me know their experience about it in such cases.

It must be mentioned however here that Typhoid in poultry is generally mistaken for cholera and spirocheitosis, as I used to, some years ago. As such, it would not be out of place to mention a few facts in this article about the malady.

Fowl Typhoid is known as Fowl pest. Chickens and Turkeys, pheasants and geese generally suffer from the malady. Natural infection is probably transmitted mostly by droppings and nasal secretions of the affected birds. The disease commences with depression and diminished appetite, which condition soon changes to conspicuous dullness and sleepiness. In the meantime the comb and wattles become dark-red and finally are blackish red in colour. On pressure of the bill a tenacious mucus oozes from the opening. Profuse diarrhoea is observed and the droppings are dirty greenish fluid and towards the end of the disease, the writer has observed in several cases irregularity in walk and symptoms of paralysis. The disease runs a course, with the exception of very rapidly terminating cases, of 2 to 4 days. With chlorine treatment as prescribed, recovery takes place within a day or two.

In dog Typhus, the symptoms almost invariably commence with sudden vomiting which usually attacks the animal while eating or drinking and which does reappear very frequently. The vomited material consists of remains

of the infested food or water stained yellow by the bile. From this stage on, the animals refuse to eat. On the other hand they drink water very frequently and feverishly. There is first constipation but later diarrhoea sets in. The animals become greatly emaciated as a result of the frequent vomiting and persistent inappetence and the disease develops in its characteristic form in from 3 to 5 days. The abdomen is very sensitive over the region of the stomach and it is either bloated or drawn up. In average cases the disease runs its course in from 4 to 6 days.

I have described the malady as it occurs in dogs and poultry giving only such symptoms as are pathognomonic.

The diet I prescribe in such cases is icy cold milk only, withholding water all along the course of the disease. If this cannot be done, let the patient have chlorinated water by its side so that it may avail itself at its ease.

The main point of chlorine mixture in this malady is the through and through disinfection of the alimentary canal and thus preventing auto-intoxication with the poison of the disease.

The proper method to prepare chlorine mixture is as follows:— Put in a twelve ounce coloured bottle 30 grs. of Pot. chloras 60 minims of strong Hydrochloric acid, cork the bottle and shake well until it is full of greenish yellow gas. Then pour water *little by little* into the bottle, each time shaking well and when half the water is added, add 36 grains of Quinine sulph. and 2 ounces of syrup of orange. Dose is one ounce. Ed.

CLINICAL ARTICLES

AN INTERESTING CASE OF PSOROPTIC MANGE

AFFECTING THE HORN OF A BUFFALO*

BY

G. S. BALEKUNDRI, G. B. V. C.

Veterinary Assistant Surgeon, Hubli.

I submit this short note for the simple reason that, so far as I know, the existing literature on Mange does not seem to contain this observation.

Subject :—A Deccani she buffalo, 5 years old.

History :—The owner, a farmer from Byahatti, a village in my charge, found the left horn of this beast turning brittle gradually and even detaching itself from the core. Though the animal was in this condition for about 6 months, the farmer could not describe any early symptoms which, probably, might have escaped his notice. But he was clever enough to take it for a disease and in fact, he named it as "Geddalu Godu" i. e. horn affected with white ants and so brought the animal to the dispensary on 23rd November, 1927.

Symptoms :—On percussion, it sounded hollow in the affected region. The horn was brittle and detached from the core from the middle to a point 3" from the root. The horn was so brittle and burrowed, that the part of it could be easily broken by hand in bits.

Macroscopic Examination :—On removing the affected horny tissue I found to my surprise, clusters of minute living parasites in the galleries formed by them in the horny tissue. The size of a parasite was smaller than a pin's head. From the condition of the horn it appeared that the parasites lived on the insensitive portion of the horn leaving the core unaffected and therefore no irritation was manifested throughout the course of the disease.

Microscopic Examination :—The same specimens were sent to "Sir Dinshaw Maneckjee Petit Patho-Bacteriological

* Read at the Fifth All India Veterinary Conference, Bombay. December 1927.

Laboratory, Veterinary College" Bombay, for their correct nomenclature. They were declared as "*Psoroptes Communis Bovis*."

Treatment :—It was very simple. Removal of the affected portion and tar dressing imparted a good cure.

AMAUROSIS AND EPISTAXIS IN A DOG SUFFERING FROM ANCHYLOSTOMIASIS

BY

P. PANDA.

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On the 4th September, 1926, I was called in to attend on a terrier, belonging to Lieut. Colonel J. A. S. P., I. M. S., Patna with a history that it had suddenly become blind in both eyes since the 2nd with no other attendant symptoms. This dog, aged about 4 years was brought from Bambassa in the Nepal Terai to Patna during last hot weather and apparently never had a similar attack.

On examination, the pupils were found very much dilated, and a slight photophobia was present. Mucous membrane was congested. Temperature 101.2° F., respiration regular, pulse normal and the appetite good, though it was dull and depressed. On the approach of fingers near the eyes the eyelids did not respond. When taken up and down stairs, he collided with the steps as he could not see them. I was unable to decide the cause of the trouble. However, examination of the blood microscopically showed anisocytosis—pointing to anæmia. A blood count was made, the R. B. C. being approximately 3,880,000 per c. m. m. and Eosinophilia in excess by 6 to 6.5%—conditions which are usually found in intestinal worms. A provisional diagnosis of nematode infection was accordingly given and the attendant was asked to bring a sample of the fæces for examination. In the meantime an opening dose of castor oil was given. I further prescribed Pot. Iodide grs. V, Spt. Amon. Aromatic m XV and Tinct. Nux Vomica m III Aqua dr. IV.

to be administered thrice daily from the next day i.e. 5th September.

6th. I found profuse bleeding from both the nostrils (about 5 to 6 ounces of blood of a bright red colour). Cold applications were applied to the head and the dog allowed only milk diet. Microscopic examination of the faeces showed a large number of ova of ancylostomes (hook-worms). A dose of 3.5 c. c. of carbon tetrachloride in gelatine capsules was administered followed an hour later by castor oil. The Pot. Iodide mixture was discontinued.

8th. Bleeding from nostrils was less profuse, and it stopped after the application of ice to the forehead. The dog was very weak and there was no improvement in his sight. Carbon tetrachloride and castor oil had the desired effect and examination of the stools showed many dead ancylostomes. The Pot. Iodide mixture was repeated thrice daily and the dog allowed liquid nourishing diet and raw eggs.

10th. The dog was better and able to walk and responded to calls. The pupils had contracted slightly and it appeared that the sight was gradually returning although there was slight photophobia. The bleeding had stopped but when sneezing, small clots came out from the nostrils.

When I again saw the dog on 13th, he was very much better in his general condition and eye sight. The Pot. Iodide mixture was continued till the 22nd September after which date he was put on a course of tonics and at the end of the month the sight had completely returned and he was in his usual health and spirits.

Neumann mentions in his book on parasites that sometimes epistaxis occurs in dogs affected with hookworms but I have not found any mention of amaurosis in the literature. I shall be obliged if some member of the profession can throw more light on the subject.

Amaurosis and Epistaxis have been observed in dogs having Hookworm Disease in this presidency. The best treatment for Epistaxis is an injection of Adrenalin. Regarding hæmorrhage under the retina, cases have been seen here though rare and the eye sight gets lost—at least in the cases observed here such dogs did not get the sight back. This is a disease of the dog that has not been given enough attention in this country and is a very important one to the practitioner. [Ed.]

GONORRHOEA IN DOG

BY

V. P. GOKHALE, G. B. V. C.,

Medical Department, Perak. F. M. S.

Such was the title of an article contributed by Mr. S. K. Acharya, G.B.V.C., and which was published in the Indian Veterinary Journal for October, 1927.

I wish to point out that gonorrhoea is a disease of human beings only. It is caused by a micrococcus called gonococcus. Up to this date this organism has not been found to be pathogenic to the lower animals such as dogs, rabbits, horses &c. Inoculations of gonorrhoeal pus into the vagina or conjunctival sac have failed to produce the disease in these animals. In fact, hitherto it has been found impossible to reproduce the disease by any means in the lower animals. Although a few medical and veterinary men had reported small number of cases of gonorrhoea in dogs that came under their notice, these were not confirmed bacteriologically and undoubtedly their clinical diagnosis was erroneous.

It would have been a most commendable thing if Mr. Acharya had confirmed his diagnosis by submitting a few smears of pus to a bacteriologist for examination. He had ample time to do so as the case was under his treatment for a long period. It may be a case of purulent urethritis but even if Mr. Acharya is of opinion that this is a specific disease of dogs, a further study is necessary to establish it.

With regard to the treatment of venereal tumour in the above case, it is very difficult to know whether the infective granuloma came under control by surgical measures or by internal medication, as both measures were tried simultaneously. But as his Mercury-Iodide treatment internally did not prevent the recurrence of fresh growths, it is evident that the repeated surgical intervention effected a cure. Still Mr. Acharya states on page 134 that his prescription was administered during the whole course of treatment and proved to be effective.

I have not so far heard of any specific internal treatment for infective granuloma of the dog, but I feel confident from

personal experience that the malady can be successfully got rid of by thoroughly removing the growths from their base *before it is too late*, i.e. before the appearance of secondary growths in difficult situations by metastasis. Operations will not be successful if even minutest traces of the growth are left behind either carelessly or unknowingly. To avoid this the case should be watched for a week or so.

TREATMENT AND DIET IN CATARRHAL JAUNDICE IN DOGS.*

BY

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

Veterinary Surgeon, Calcutta.

Catarrhal jaundice is frequent among dogs in India. It attacks young pups and old dogs as well.

Symptoms:—These are so characteristic that once seen, are never forgotten; the visible mucous membranes, skin and eyes all turn icteric. I am not going into the details as they are well known. One marked symptom is no rise in the temperature, often it is subnormal, it is generally associated with gastritis.

Etiology:—In addition to the usual causes generally described in books, such as parasites, fatigue, overexertion, chill etc. I believe most of such cases seen in India are due to overfeeding and want of exercise; the practice of keeping a dog tied up in a flat and feeding him on table food and excessive meat, brings about a toxic condition affecting the liver and other important digestive organs. Those that are caused by intussusception or tumours are very rarely found, I have never seen them. The common cause among puppies is worms.

Treatment:—For a long time I have tried various kinds of treatment but have been unsuccessful. Wallis Hoare's treatment of jaundice was followed in over 40 cases with but one cure and I had to give it up. I may repeat here the prescriptions, Wallis Hoare recommended and which I followed.

* Read at the fifth All India Veterinary Conference Bombay, December 1927.

Treatment and Diet In Catarrhal Jaundice in Dogs 345

R	Liq. Hyd. perchloride	2 oz.
	Tin. cinchona co.	2 oz.
	Syrupus Rhami	4 oz.
	Aqua chloroform	8 oz.

M. Ft. mist. Sig: Two teaspoonfuls to a tablespoonful thrice daily as required. Also

R	Iridin	gr. i
	Euonymine	gr. ii
	Ipecac	gr. 1/4
	Pil. Colocynth. hyoscyamus Co.	gr. ii

M. Ft. pil: one to be given daily.

The disease is so common and the death rate so great, that I was hopeless from the beginning whenever I got a case of this disease. Since last two years, I got an opportunity of close study in the treatment, diet, and cause of this disease. I treated over 30 cases during last year. I kept a record of 10 important cases. I first got a litter of Great Dane Pups, who all on a sudden, one by one, commenced developing this disease. On post mortem of a few pups I found they were infested with round worms in their bowels, and after the death of 4 pups I treated the rest with 1 gr. of Santonin and 1 gr. of Hyd. Subchloride with gr. II of Sodii bicarb, twice a week for three weeks. They all passed out worms and the rest were saved. It has been my practice since then to dose with calomel, santonin and sodii bicarb whenever I find a litter of pups showing symptoms of jaundice. It is found worms are mostly responsible to cause this trouble in pups.

I will now give below the result of treatment I followed in the following cases: the age and breed of the dogs are stated.

Case No. 1. Spaniel dog: age 4 years. Developed jaundice all on a sudden, the general condition of the dog was good.

Symptoms. Visible mucous membranes and skin yellow absolute refusal of food, constipation, vomiting frothy mucus, could not retain even water, temperature subnormal, dull in appearance, slow pulse, urine very scanty, in consistency like linseed oil, colour deep yellow.

Treatment. $\frac{1}{6}$ gr. of calomel with sodii bicarb gr. v every half an hour, till 6 powders were given. This was followed by.

R		
	Mag. sulph.	gr. xx
	Sodii. Sulph.	gr. xx
	Ammon. chloride.	gr. ii
	Aqua	ad dr. iii

M. Ft. mist. Sig every 4 hours :

By the fourth dose, bowels moved in deep red coloured stool with mucus, smell offensive, the same treatment was pushed on for two days but after the first day the doses were reduced to two.

Hexamine gr. x was given in drinking water. A mustard plaster was applied en the region of the liver.

On the 2nd day bowels moved two times and urine improved.

3rd day. R

	Mag. sulph.	gr. x
	Sodii. sulph.	gr. x
	Ammon. chloride.	gr. ii
	Spt. Ammon. Aromat	m. vii
	Aqua.	dr iii
	given twice daily.	

Hexamine gr. x in water and mustard plaster was re-applied, urine both in quantity and colour improved more.

Adrenaline chloride solution (1-1000) $\frac{1}{2}$ c. c. was injected subcutaneously on the second day, as the dog was found very weak. The dog made a recovery.

The diet.

1st day, one teaspoonful of Liquid. Glucose with two teaspoonful of cold water was given every 4 hours. No other food was given.

2nd day. one white of the egg in the morning, one in the evening, and liquid glucose as before.

3rd day. Liquid glucose, white of the egg and barley water.

4th day. Milk with barley water, white of the egg.

5th day. Milk. bread, then gradually brought back to his usual food. A tonic with

R		
	Elixir Glycerophosphate	
	(Digestive)	oz. ii
	Tinct. Gentian	dr. $\frac{1}{2}$
	Aqua	ad oz. iv
	M. Ft. mist.	

One teaspoonful twice daily was given.

Case No. 2. Great Dane slut: age 6 years. Developed acute type of jaundice with the symptoms described above. The same treatment and diet was followed and ended in recovery.

Calomel was given in $\frac{1}{6}$ grs. at an interval of half an hour up to two grains.

Case No. 3. Bull Terrier Dog: age 2 years. Same symptoms. Treatment and diet as above, ended in recovery.

Case No. 4. Australian Terrier Slut: age 1 year. Acute jaundice: same treatment and diet ended in recovery.

Calomel was given in $\frac{1}{8}$ gr. dose for every half an hour till 1 gr. was given.

Case No. 5. Australian Terrier bitch: age 1 year.

The same diet and treatment was followed but the dog died. I may mention that due to extreme weakness Brands essence of chicken was given on the second day, which she retained. I had no opportunity to hold a post mortem examination as the owner was not agreeable.

Case No. 6. Fox Terrier Slut: age 1 year.

Same treatment and diet ended in recovery.

Case No. 7. Airedale Terrier Slut: age 2 years.

Same treatment and diet ended in recovery.

Case No. 8. Pomeranian Poodle, age 6 months.

Calomel was given in $\frac{1}{10}$ gr. dose till 1 gr. ended in recovery.

Case No. 9. Chow, age 2 years.

Treatment and diet same, recovered.

Case No. 10. Bull Dog, age 4 years.

Treatment and diet same, ended in recovery.

Points of observation:—The modern treatment of acute toximia demands alkalisation of the blood, which should be done by freely giving bicarbonate of soda and alkaline saline purgatives; calomel in small doses is a mild cholagogue and a powerful intestinal antiseptic. The Hexamine is given to fix the toxin in the circulation and to eliminate them by increasing diuresis. Liquid glucose is a cardiac stimulant.

Muller in his excellent book on "Diseases of the Dog" says, strong purgatives such as calomel, castor oil and infusion of Rhubarb are of no particular value and they do more harm than good. But in my experience calomel in fractional doses up to 2 grs. has given excellent result, it has stopped vomiting also. I never try oleogenous purgatives and infusions in these cases and I have seen they increase nausea and thereby cause more vomiting.

Regarding feeding, I am of opinion that in a state of irritation of the whole digestive tract, if the general condition of the patient allows, diet should be restricted to liquid glucose, egg albumen, and barley water only. In my experience I have found Brand's Essence of chicken or beef or lean meat does more harm than good.

In cases of persistent vomiting which do not subside with calomel, I found very satisfactory result with the following:

R	
Bismuth carb.	gr. ii
Sodii bicarb	gr. ii
Chloretone	gr. ii
Cerium oxalis	gr. ii
M. Ft. pulvis 1.	

Repeated every two hours till vomiting subsides. 2 or 3 of these powders are enough to give effect; then the saline mixture may be tried.

It is always necessary to keep the dog in a dry warm place and rest is essential.

Use of Eupad and Eusol in Surgery

SUMMER DIARRHOEA.*

BY

T. V. KUPPUSWAMY, G. M. V. C.,

Veterinary Assistant Surgeon, Akola.

This disease year after year, prevails among the cattle population in a large percentage, in the Akola Taluk. Since the time, Major R. F. Stirling, F.R.C.V.S., D.V.S.M., I.V.S., advised the value of Potassium permanganate treatment in summer diarrhoea cases. I tried it in good many cases and got success in almost all cases except a few which succumbed to the disease due to having other kinds of complications; thus the severity and mortality have been brought under control. Hence I request my professional brothers to use constantly this mode of treatment which is really a boon to the cattle population to save their lives from a very common disease and one which is amenable to treatment.

THE USE OF EUPAD AND EUSOL IN SURGICAL WOUNDS.*

BY

P. S. SUNDARAM, G. B. V. C.,

Veterinary Assistant Surgeon, Veterinary Hospital, Nagpur.

Subject:—A Bay C. B. mare, belonging to Captain Frankau.

Disease:—Fibroma about the size of a big walnut over the Supra-spinous process of the dorsal vertebrae.

Treatment:—This animal was treated for some time back with all sorts of refrigerant and cooling lotions wet pad, for a fortnight in the early stage and the thickening subsided temporarily.

The animal came again for the same complaint after a couple of months. Tried to aspirate the fluid but nothing

* Read at the Third Annual Conference of the Central Provinces and Berar Veterinary Association, in November 1926.

came out. An area of 4 inches square was shaved and the part was blistered with Ungt: Hydrargerie Iodide Rubrum 1 in 8. On the 3rd morning the part was cleaned with hot water and soap, caron oil was applied for a fortnight and the animal was discharged as apparently cured.

After a few months, the swelling started increasing in size and the owner consulted Major. R.F. Stirling who returned to India recently and he recommended the removal of the tumour by operation.

The case was admitted on the 8th September 1926, the animal was completely starved and was kept in a loose box. Ten ounces of Ol. Lini was administered at 12 noon, just to have a mild action on the bowels. An area of 4 inches square was shaved and painted with Tr. Iodine.

On the 9th September 1926, half an hour before operation the following medicine was given to facilitate in bringing the animal under chloroform.

R
Chloral Hydras dr. iv
Mucilage Q. S

M. Ft. Haustus. To be given at 8 A. M.

Just at about 8-30 A. M. the animal was secured well with hobbles and with 6 drams of chloroform the animal was brought under anaesthesia completely within 15 minutes.

All instruments were sterilized and all other antiseptic precautions were taken. One horizontal incision about 2 inches in length was made just towards the right of the median line over the swelling. The diseased portion which was found between the spinous process and the muscles, was removed very carefully after dissecting the muscles and after cleaning the part with carbolic lotion 1 in 40, the skin was brought together by three silk sutures.

The animal was allowed to get up at 9 A. M. and a pad of Eusol lotion was applied with a square bandage whose corners were secured by tape. Every two hours Eusol pad was renewed till the sutures were removed.

The animal had no temperature and it was not allowed to lie down from the beginning till it was discharged.

Removal of Fibro-Lipoma in a Bull . 351

From 9th to 13th September 1926 slight puffiness was noticed and on the 13th middle suture was removed.

On the 14th September 1926, remaining 2 sutures were also removed. 30 minims of fluid was aspirated and an equal quantity of Lugol's solution was injected at the place which promoted the absorbant action quicker. The wound healed up by first intention with no scab or scar and the animal was discharged as completely cured on the 19th September 1926.

The animal was detained from 14th to 19th September 1926, to watch the progress of puffiness which was gradually disappearing. During this time Eusol pad was renewed every three hours only.

Preparation of Eupad and Eusol.

Eupad is prepared by mixing equal parts of Calx Chlorinata (bleaching powder) and Acidum boricum.

Eusol is prepared by dissolving 25 grains of freshly prepared Eupad in a litre (35 ounces) of water and decanting the clear fluid after 24 hours.

Eupad and Eusol are to be prepared freshly to have the desired effect. If they are prepared and kept for a long time free chlorine escapes and the desired effect is lost. Further it is necessary that 30 per cent of free chlorine must be present to have the beneficial effect.

My object in writing this article is to convince you that in our practice also, wounds resulting from major operations can be healed by first intention and the advantages of the use of Eupad and Eusol in all sorts of wounds should not be lost sight of, considering the cheapness and easy method of preparation.

REMOVAL OF FIBRO-LIPOMA IN A BULL.

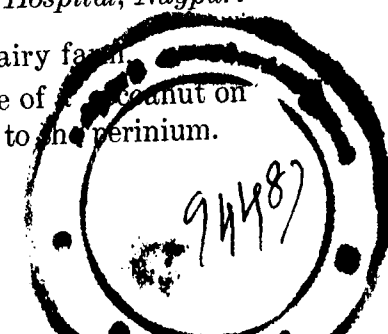
BY

P. S. SUNDARAM, G. B. V. C.,

Veterinary Assistant Surgeon, Veterinary Hospital, Nagpur.

Subject :—Gaolow bull of Telenkheri dairy farm.

Disease :—Fibro-lipoma about the size of a walnut on the prepuce and the swelling extending up to the perinium.



History:—The animal was suffering from this complaint for about a month and it was sent to the hospital with the history that it was passing urine in small quantity repeatedly for some time and had not urinated for 24 hours prior to its being sent to hospital.

Treatment:—The animal was thrown down and the legs secured. The part was cleaned with Lotio Potassii Permanganas 1 in 1000 and some of the fluid was injected into the sheath with double canalled Y shaped tube attached to the irrigator tube. After few minutes white dead tissue was noticed at the prepuce and by a gentle pull dead tissue about two feet long and three inches in thickness was removed. The urine came out like a jet of water coming from a tap (specimen kept in C.V.D. Lab.) The sheath was then irrigated with the same lotion and the animal was allowed to get up.

Cold water irrigation was continued for some time and wet cloth soaked in Liq. Plumbi Subacetatis was applied to the swelling on the prepuce. Swelling on the sheath disappeared but on the prepuce the swelling remained the same.

As a last resource permission was obtained from the Deputy Director Animal Husbandry, for operation.

On the 7th August 1926, one ounce of Chloral Hydras was given well diluted in mucilage and the animal was thrown and legs secured. My assistant was holding the tumour on one hand and the tumour was removed by hot iron from the root. There was no bleeding. The growth was sent to Lab, and found to be Fibro-lipoma. The animal was allowed to get up and a loose bandage was applied to the prepuce.

From 8th to 9th August 1926, Eucalypts dressing was applied and the loose bandage was continued.

From 20th to 30th August 1926 Zinc oxide dressing was continued and the animal was discharged completely cured on the 31st August 1926. The animal is passing urine as usual and it looks now as if it is normal.

The object of writing this article is to show that in my opinion this method of removal, wherever it is possible, is by far superior to the removal by incision which would have produced profuse bleeding.

IODINE INJECTION FOR SKIN DISEASES.*

BY

P. S. SUNDARAM, G. B. V. C.

Vety. Asst. Surgeon, Veterinary Hospital, Nagpor.

There are varieties of skin diseases such as mange, ringworm, eczema and so on. I restrict myself only to loss of hair and the effect of Iodine for promoting the growth of hair over the affected area.

Treatment:—Although Petro-iodine and Unguentum Iodine have given good results, in my opinion from economical point of view and of early cure Iodine injections are preferable. About 50 cases are tried during this year including cases where the body showed a clean shaved appearance of the skin and the results are much convincing. Tr. Iodine 1 in 40 diluted with Aqua Distillata was given intravenously and even cases supposed to be incurable were cured with 4 injections.

Dose:—For horses, 4 drachms of Tr. Iodine diluted in 40 c. c. of distilled water is being given intravenously once a week.

For cattle, one ounce of Tr. Iodine in 60 c. c. of distilled water injected as above.

For calf, 2 drachms of Tr. Iodine in 20 c. c. of distilled water injected in the same manner.

For dogs, 10 minims of Tr. Iodine in 5 c. c. of distilled water given intravenously once a week.

So far the injections are being given at an interval of one week, but it is under trial whether the injections given twice a week will prove more beneficial in the early cure. It is premature to tell anything definitely about the shorter intervals of injections.

In one case 4 drachms of Tr. Iodine in 20 c. c. of distilled water was given intravenously in a pony, to ascertain the dilution and in the said animal cold perspiration at the sides of the neck and the chest, protrusion of the tongue and staggering gait as if the animal is about to fall, were noticed within two minutes after the injection.

At the suggestion of Mr. P. S. Nair intravenous injection of 1 pint of normal saline solution was given and the animal became quite alright within 15 minutes.

* Read at the Annual Conference of the Central Provinces and Berar Veterinary Association in November 1926.

Although Tr. Iodine is an alcoholic preparation no danger, so far, has been noticed by giving it diluted as mentioned in dosages mentioned above.

Usually for these injections Jugular vein in Equines and Bovines and Popliteal vein in Canines are selected as they are easily accessible and prominent.

Generally 2 injections are sufficient for ordinary cases the maximum injections being four.

Gentlemen, before going into the merits and demerits of this line of treatment for loss of hair and other allied skin diseases, I earnestly request you to give a fair trial and to express your opinions.

I am indebted to Mr. S. S. Iyer who also suggested to me to try this line of treatment and to write an article about it.

In cases of mange and loss of hair, we have and excellent results with subcutaneous injections of Iodine in doses ranging from 5 to 20 minims of Tr. Iodine in 5 c. c. distilled water in dogs, twice a week. This is our line of treatment. External dressings were also used, but we attribute the success of treatment to Iodine injections. (Ed. I. V. J.)

NORMAL SALINE INJECTIONS IN EYE AFFECTIONS

BY

S. SESHADRI AYYANGAR,

Veterinary Assistant Surgeon, Harpanahalli, Madras.

Adverting to my article on this subject in 1921, in the Madras Veterinary Journal requesting the members of the profession to communicate the results and the difficulties they met with, I regret that nobody was kind enough to respond to my request though it is more than six long years since its publication.

There is no necessity for me to describe the result as those who tried it would have known it. I crave the indulgence of the editor to allow me to inform certain difficulties I met with in the methods of injection.

Some of my professional brethren whom I met were giving injections invariably on the upper or lower eyelids (majority on the lower lid) and rarely on the conjunctival fold over the

sclerotic portion of the eyeball. It is very convenient and easy to give injections on the lower eyelids in equines and bovines.

We have to consider the after effects of the injections in these cases when we give many injections. I injected on the conjunctiva attached to the lids in two or three cases simply to know the effect of and to my extreme regret constricting of lids had happened though the opacity had disappeared. The constriction might have been due to the injury to the muscles of the lids.

I find from my experience that the best and the easiest method of giving injections is when the animal is standing into the conjunctival fold over the sclerotic above cornea after anaesthetization with ten per cent cocaine solution. The head of the animal is caught raised by two assistants. Open the eye with your left hand and slowly insert the needle and syringe with the solution. This is the only easy and harmless method when you practise on one or two animals.

In more than a dozen cases I had to give about 15 to 20 injections as the opacity was of a chronic nature. There was no ill effect on the eyeball or lids except a little thickening of the conjunctiva at the seat of injection on the sclerotic. The thickening disappeared after a month or two.

EXTRACTS.

Coccidiosis in Cattle. Walter Wisnicky*, in reporting an experience with this disease at a meeting of the Wisconsin Veterinary Association, says:

Coccidiosis, or red dysentery of cattle is a disease preferably of young animals, generally occurring as an enzootic affection and is caused by the protozoan organism, *Eimeria zurni*.

It appears from a review of the literature that the disease occurs more frequently in this country than is generally supposed.

In November 1926, a yearling heifer at the University of Wisconsin was observed to be passing bloody feces for several days. A microscopic examination of the fecal material revealed the presence of numerous

* *Coccidiosis in Cattle*, by Walter Wisnicky, Wisconsin Agricultural Experiment Station. *Veterinary Medicine*, Vol. 22, No. 5, May, 1927.

coccidia and a diagnosis of coccidiosis or red dysentery was made. The infected animal was immediately isolated and treated.

The incubation period is thought to be about three weeks but occasionally symptoms may appear after six or eight days.

Blood mixed with the feces is the most obvious symptom. Straining, at times violent, usually occurs. In most cases a bloody diarrhoea ensues, but in some instances the feces are not liquid even though a large amount of clotted blood is present. The temperature is normal unless secondary infection occurs by way of the denuded mucous membranes. The appetite usually remains fair in the first stages of the disease. In grave cases, especially in young animals, there is a rapid deterioration in conditions, straining becomes more intense, the animal gradually becomes weaker and anemic and death ensues.

As a prophylactic measure, cattle should not be allowed access of contaminated water, pastures, or feed. Upon discovery of the disease, the infected animals should be isolated and all the droppings burned or thoroughly soaked with a 3% sulphuric acid solution. Coccidia are very resistant to heat, cold and disinfectants, and ordinary sanitary measures are not sufficient to destroy the excreted coccidal oocysts.

The treatment is largely symptomatic and prophylactic. The line of treatment usually employed consists of intestinal antiseptics, astringents, enemas and tonics. A treatment that has been reported to give good results is equal parts of tannic and salicylic acids, one-half to one ounce doses daily per os. Also one-half to one ounce doses of formalin, creolin or other intestinal antiseptic may be given orally each day.

Rectal injections of a solution containing one per cent alum and one per cent tannic acid are said to have given excellent results.

In cases of severe tenesmus, laudanum in one-half to two-ounce doses may be employed.—*Veterinary Medicine, Decr. 1927.*

THE "CASH VALUE" OF CATTLE DIPPING *

In order to secure some direct evidence from Stock-owners regarding the benefits derived from the Tick Eradication work carried on in the Southern States of North America, a Circular was sent out to a large number of representative Cattle Owners by the Department of Agriculture, asking for replies to various specific questions concerning the results of the work.

The questions are given below, with the summarised answers.

These afford most impressive evidence, not only of enormous losses prevented, but also of immense gains obtained by the dipping of animals to free them of Ticks.

* From 'The Official Circular, No. 196, February 8th, 1912,' issued by the Department of Agriculture (Bureau of Animal Industry) of the United States of America, at Washington D. C.

How Ticks Reduce the milk Yield

Question.—What were the approximate annual losses of cattle from Tick-borne diseases before the Tick Eradication work was started?

Answer.—15.3 per cent.

Q.—What has been the annual loss of cattle from Tick Fever since Tick Eradication started?

A.—1.3 per cent.

Note.—The answer to this question should be compared with that to the first question, when it will be seen that the Tick Eradication work has resulted in the losses being reduced from 15.3% to 1.3% i. e. practically to vanishing point.

Q.—What was the average value of 3-year old steers in your Country before the Tick Eradication work was started?

A.—\$ 16. 15 or (£3. 7s. 3d.)

Q.—What is the average value of 3-year old steers now?

A.—\$ 25.28 or (£5. 5s. 4d.)

Note.—In comparing the replies to the two preceding questions, allowance has to be made for the recent general advance in the price of cattle. When this is done, the result shows that there still remains an appreciation in value of 40% which can be properly said to be due to the absence of Ticks.

Q.—Is there any difference between the average weight of cattle now and the average weight before Tick Eradication was started? How much?

A.—Yes. Average increase 22%. Average weight increase 116 lbs.

Note. Taking the value of the animals at 3½ cents (1¾d.) per lb. (the average for 3-year old steers,) the average gain, due to dipping, works out at \$ 4 (16s. 8d.) per head.

HOW TICKS REDUCE THE MILK YIELD.

(The following paragraphs give the results of Experiments conducted by the United States Department of Agriculture.)

If a dairyman with 20 cows, producing 8 quarts of milk each per day, should let them become lightly infested with ticks, the milk production would be decreased to the extent of 1½ quarts a day for each cow.

At 10d. a gallon, or 2½d. a quart, this would amount to 3¾d. a cow, or 6s. 3d. for the entire herd of 20 cows each day.

If the tick infestation were heavy, the reduction in the milk yield would be 3¼ quarts (worth 8½d.) a day for each cow.

This would amount to 14s. 2d. a day for the entire herd of 20 cows.

The following actual experience of a dairyman in the heart of the tick-infested territory also strikingly illustrates how much it costs dairy-men to have ticks on their cattle.

Late in the season, when his cows were covered with ticks, the cattle were dipped and the ticks killed. One week after dipping, the 42

cows in his herd gave 10 gallons of milk more than before dipping. This was an increase of 16.6 per cent., and as the milk was bringing 1s. 5½d. a gallon, the extra 10 gallons were worth 14s. 7d.

Hence, as a result of being freed from ticks by dipping, the same 42 cows, on the same feed, produced extra milk sufficient to increase the dairyman's profits by 14 s. 7 d. per day or £266 3s. od. per annum.

FOLLICULAR MANGE CURED IN THREE WEEKS.*

BY

J. C. JACKSON, M. R. C. V. S., LONDON.

Subject. Smooth-haired Fox-terrier dog (15 months' old).

Symptoms. Loss of hair at various parts of the body: the lower half of each leg, the under-part of the neck, thighs and face being bare and showing pustules, which were very numerous just above the feet. A smell as of "dead mouse" came from the lesions.

Diagnosis. Follicular mange. Confirmed by microscopical examination in the presence of three independent witnesses, who included a veterinary surgeon and a bacteriologist.

The contents of one small pustule were squeezed on to a clean slide and, on these being placed under a microscope, live "Demodex" parasites were immediately recognised.

Treatment. "Odylen" externally; "Aricyl" internally. These preparations are supplied by Bayer Products Limited.

"Odylen" was thoroughly rubbed for several minutes into the dog's skin over the whole body surface, care being taken not to overlook the interdigital spaces, under the tail, and other "hidden" parts of the body.

The next day "Odylen" was applied to the lesions only. This treatment was repeated once a week.

"Aricyl" (an arsenical preparation) is obtainable in ampoule form suitable for subcutaneous administration, and the dog was injected with the contents of a 1 c. c. ampoule every alternate day until five doses had been given, when fourteen days were allowed to elapse before the "Aricyl" treatment was repeated.

In three weeks' time all signs of mange had vanished: the pustules had gone, and hair was growing over the lesions. To complete the cure I decided to give one further application of "Odylen," and another course of "Aricyl." The dog was then bathed for the first time since the commencement of treatment.

More than two months have elapsed since the course of treatment was completed, and I have made a weekly examination of the dog's skin, but as yet I have failed to find any signs of recurrence of "skin disease."

* The Veterinary Record, December, 24 1927.

Undulant Fever

In the words of the owner "The dog is better than ever he has been in his life, and is now as strong as a horse."

This is the first case of follicular mange I have ever seen cured, and I trust it may be the means of saving the lives of other dogs similarly affected, and relieving the veterinary surgeon's usual death sentence: "Follicular mange! Have the dog destroyed and save money and drugs."

Medical History. The dog was treated by another practitioner for "distemper" and "a skin disease" before I was consulted. I found the dog at my first examination eight months ago suffering from paresis (the hind legs being practically useless), later he developed catarrh, gastro-enteritis, and three months afterwards had attacks of "hysteria" on two occasions. For ten months the dog received all the best-known methods of treatment for mange, but the lesions gradually got worse and all hope of recovery was abandoned.

After an interval of six weeks I decided to make one final effort, and I tried the "Odylen" treatment in conjunction with "Aricyl" with the above satisfactory results which have surprised both my client and myself.

UNDULANT FEVER

ALSO KNOWN AS

MEDITERRANEAN OR MALTA FEVER

A Memorandum submitted by the Members of the "CAMERA MEDICA" of MALTA and of the MALTA BRANCH of the BRITISH MEDICAL ASSOCIATION pleading for the discontinuance of the geographical designations of this disease and the general adoption of the name UNDULANT FEVER.

A suitable and generally acceptable designation of this fever has long been the subject of discussion. The disease is one of those that have been labelled with a multitude of names: thirteen appellations have been given to it on account of its supposed resemblance to typhoid or malaria; the character of its fever and the symptoms it presents gave rise to fourteen other designations and nine more were derived from the conditions which from time to time were considered to favour its prevalence. From the localities in which it was recognized and studied it came to be called Mediterranean Fever, Malta Fever, Italian Fever, Neapolitan Fever, Rock or Gibraltar Fever, Cyprus Fever, Crimean Fever, etc.

2. The name "UNDULANT FEVER" originally proposed by Captain M.L. Hughes, Army Medical Staff, in 1897 was recommended by the International Congress of Medicine held in London in 1913 and is the one generally used by English writers. The terms "Malta" or "Mediterranean Fever" however are still frequently met with, and the purpose of this communication is to point out the objections to the use of these appellations and to

make an earnest appeal to all medical and scientific writers to discard them in favour of the more proper and less controversial one—UNDULANT FEVER.

3. The term "UNDULANT FEVER", though not perfect, is the most suitable designation of this disease in the present circumstances. As Hughes had pointed out, it describes one of the most constant and characteristic features of the disease, namely, the undulations of the temperature curve. The temperature constitutes the primary, in many cases the only, clinical manifestation of the illness, and although the curve may not always be of the "undulant" type yet the phenomenon is sufficiently frequent and typical to justify the adoption of the word "undulant" as a term which would clearly convey to any person the principal clinical feature of the disease. Parallel cases are the designation "typhoid fever", in general use for the disease in which the "typhoid" state is a frequent and salient but not constant symptom—and even more so the term "relapsing fever", derived solely from the variations of the temperature.

4. The term "UNDULANT" has so far been used only for this disease; it cannot therefore give rise to ambiguity and does not offer the same drawbacks as the terms "remittent" and "intermittent". Hughes had also rightly claimed that it "has a familiar sound, slips easily and lightly from the tongue and is easily translatable into any language from the Latin form of *febris undulans*". Its use has been accepted by many authorities whose attention has been called to the matter and is continually gaining favour with scientific writers. It appears in fact to have stood the test of time, and once that, excepting the objectionable geographical names, no other term has been more frequently used as a designation of this disease, the coining of a new name does not appear to be opportune at present.

5. It is agreed that geographical names given to specific diseases are undesirable from a scientific point of view. They are mainly relics of the times when the miasmatic theory of disease held sway and each kind of fever was considered to be caused by "infective emanations" inherent to the particular country or locality where it prevailed. They have no relation whatever to the symptomatology of a disease, or to any of its primary or secondary features, and are neither characteristic nor significant of its nature. As Sir William Aitken said when advocating the use of a general nomenclature of diseases: "Except as matters of history and as beacons to warn us from a greater danger to science, let these and such like names be consigned to oblivion". And as a matter of fact, the disease which forms the subject of this communication appears to be one of the very few for which a geographical name is still in use.

6. A consideration of the history of Fevers for the last 150 years brings home very clearly the part which the use of geographical names played in helping to retard progress in the unravelling of the nosology and etiology of diseases. This is specially evident in connection with the "Mediterranean" group of fevers. Under such names were frequently grouped together indiscriminately such diverse diseases as typhus and

typhoid, yellow fever, another fever accompanied by jaundice of doubtful nature, sandfly fever, relapsing fever and probably malaria cases and other feverish diseases which are still unclassified.

7. The name "Malta Fever" was eventually assigned to the long continued fever of the undulant type comparatively recently. Formerly by "Malta Fever" or "Maltese Fever" was understood the "simple ardent fever" of short duration now known as phlebotomus fever. Marston who was the first to give a detailed description of Undulant Fever in Malta (Army Medical Report, 1863) called the disease "Mediterranean or Gastric Remittent Fever" and clearly differentiated it from "simple ardent fever" which he continued to call "Maltese Fever." Boileau (1866) described "Malta Fever" as "a Pyrexia with sudden onset terminated in seven days by lysis". Later on the term came to be applied also to fevers of longer duration. (Maclean, Wood, Notter, 1876).

It is evident therefore that the designation "Malta Fever" cannot be retained for the fever of the undulant type on the plea of length or priority of use.

8. The fact that UNDULANT FEVER is not confined to the Island of Malta or to the Mediterranean needs hardly to be emphasized. It has been identified in other European regions and in widely separated localities in China and America, South Africa and India, etc. etc. Nor, it may be mentioned, is it peculiar to the Maltese goats.

9. Recent observations that the *B. abortus* of Bang may give rise to a continued fever of the undulant type similar clinically to that caused by the *M. melitensis* of Bruce would furnish a further argument against the retention of the term "Malta Fever." Whatever connection there may be between the designations "Malta Fever" and "*M. melitensis*," it does not hold good when the fever is due to the *B. abortus*. The adoption of the term "UNDULANT FEVER" for the clinical condition, followed in each case by an indication of the causative agent, e. g. Undulant Fever (Bruce), Undulant Fever (Bang), should prove useful, as in the case of the paratyphoids.

10. The prejudice to the moral and material interests of the Island of Malta in consequence of the association of its name with a disease which is far from being peculiar or limited to the locality is considerable. The Maltese Nation keenly resent the resulting stigma and feel that the reputation of their country has suffered mainly on account of the important research work on the disease that has been carried out in the Island. The Government of Malta in fact has on several occasions considered it necessary to make representations on the subject.

11. The Members of the "Camera Medica" of Malta and of the Malta Branch of the British Medical Association have ventured to submit the above observations in the hope that their fellow Members of the Medical and Allied professions will take their request into sympathetic consideration and that they will accept their suggestion for the general adoption

of the designation UNDULANT FEVER, and for definitely discarding the inappropriate geographical names.

NOTE—The designation of the specific microorganism of Undulant Fever has not been discussed in this communication as it is understood that the whole question of bacteriological nomenclature is to be considered at an International Botanical Congress to be held in the near future.

A. V. BERNARD, M.D., D.P.H. *President,*

P. P. DEBONO, M.D., F.R.C.S., D.P.H.,

Hon. Secretary.

Malta Branch, British Medical Association,

Valleta, Malta,

November, 1927.

G. DEBONO, M.D. *President,*

G. HYZLER, M.D., B.Sc.

Hon. Secretary,

Camera Medica, Malta.

MEMORIAL BY THE PUNJAB SUBORDINATE
VETERINARY SERVICE ASSOCIATION.

TO

HIS EXCELLENCY.

Sir William Malcolm Bailey, B.A.,

K.C.S.I., C.I.E., I.C.S.,

Governor of the Punjab and its Dependencies,

LAHORE.

THROUGH

The Chief Superintendent,

Civil Veterinary Department, Punjab,

LAHORE.

Dated 6-2-28

Your Humble Memorialist Most Respectfully
Sheweth :—

1. That the members of the Punjab subordinate veterinary service, submitted a memorial in 1924, for the revision of their pay and prospects which most unfortunately for some reason or other, best known to the authorities, did not receive favourable consideration at Your Excellency's hands. Since then a new situation has arisen; the grades of Veterinary Inspectors have been abolished under the 5 years programme of the Punjab Veterinary Department, and this has put a stop to the promotion of the existing Veterinary Assistants in the Department.

2. That for your humble memorialist chances of promotion were already very remote. It took from 8 to 10 years for a 3rd

Memorial by Punjab Veterinary Service Association 363.

grade Veterinary Assistant to rise to 2nd grade, and from 11 to 13 years for a 2nd grade man to go up to 1st grade; and similarly after waiting for a very long time a selected man could aspire to reach the grade of Veterinary Inspector. According to the proposed new scheme however even such a slow promotion has been denied to your humble memorialist, and this has naturally caused much disappointment and discontent. Formerly, a 1st grade Veterinary Assistant could rise to the grade of Rs. 120-5-170 as Veterinary Inspector and later to the Provincial Veterinary Service. Now, what to say of the Provincial service, your humble memorialist cannot even rise to the post of a Veterinary Inspector. This step obviously imposes hardship on the 2nd and 3rd grade Veterinary Assistants in so far as their promotion to the next higher grades are concerned.

3. That another factor which has adversely operated in the case of your humble memorialist is the division of the Punjab Subordinate Veterinary service into two classes viz. (1) Veterinary Assistants, and (2) Veterinary Assistant Surgeons, no provision having been made for the promotion of the old Veterinary Assistants (who are the pioneers of the Department and have rendered loyal services to the benign Government in the province, as well as in the Great War) to the grade of Veterinary Assistant Surgeons. It means that all the avenues of promotion have been closed to the old Veterinary Assistants. In other words under the proposed 5 years' programme an old Veterinary Assistant cannot become a Veterinary Assistant Surgeon, and neither can he aspire to reach the grade of Veterinary Inspector, and so your humble memorialist cannot even dream of reaching the Provincial Service grade.

4. That it is most disappointing to your humble memorialist that his prospects should be rendered so gloomy, in spite of the fact that the Veterinary Assistants' cadre includes very capable and efficient men, and that all the existing incumbents in the Provincial Veterinary Service whether employed in the various circles of the province, or in the Punjab Veterinary College as Professors to teach the newly-started four years class of the Veterinary Assistant Surgeons, have been recruited from among them.

5. That in view of the foregoing facts your humble memorialist begs leave to approach Your Excellency with the following requests :—

1. The service of Veterinary Assistants be regularised on a time scale basis in the grade of Rs. 70-4-180 (as in case of B. Class Agricultural Assistants). The request is not unreasonable considering the fact that the Veterinary Assistant Surgeons have been placed in a scale equal to that of Agricultural Assistants, A class. This will make the Subordinate Veterinary service parallel to the Subordinate Agricultural Service.

2. That 20% of Veterinary Assistants may be promoted to the Veterinary Assistant Surgeons' grade, subject to 10 years approved service, as is provided in the case of B. class Agricultural Assistants.

3. That avenues of promotion to the Provincial Veterinary Service may be kept open for the present Veterinary Assistants as in the past, in consideration of their seniority in service and past experience.

I beg to remain,

* * *

*Speech Read by the Leader of the Deputation Before
The Chief Superintendent C.V.D. Punjab,
Lahore, on 6th February 1928.*

SIR,

We offer you our most grateful thanks for permitting this deputation of the Punjab Subordinate Veterinary Service Association to wait on you. We are, Sir, used to treating patients who do not complain, nor expatiate on their pain and suffering but silently endure whatever falls to their lot. The same is the case with us. By long contact with patients who do not speak but suffer, we also have learnt to patiently endure whatever befalls us. But there comes a stage, when even dumb cattle is forced to groan and give vent to its suffering. That stage has been reached in our case; and we hope and trust that you, as the worthy head of the department whose primary object it is to relieve the suffering of those who do not speak, will not refuse to lend a sympathetic ear to our humble representation. We are confident that we shall not be made to suffer, because we have not been articulate but have patiently and silently borne the grave injustice done to Veterinary Assistants.

Before referring to our specific grievances, we beg leave to point out that we, the Veterinary Assistants, are the back-bone of the Veterinary Department; and we are legitimately proud to feel that the agricultural prosperity and advancement of the province, ninety per cent of whose population subsists on agriculture, in a large measure, depends on cattle, for the health and upkeep of which we are responsible. We are equally proud of the fact that we rendered loyal and devoted service to the benign Government during the War. At the time of peace, we have contributed our quota towards the prosperity and progress of the province; and practically all the Veterinary hospitals in the Punjab are under the charge of Veterinary Assistants. We may also be permitted to point out that the professional skill of Veterinary Assistants has been generally recognised and is not surpassed by the graduates or diploma-holders of any Veterinary College or school in any part of India. We may also be permitted to mention that we have no holidays whatever; and even Sundays are treated as full working days. In spite of all this, we are made to bear the heaviest burden and at the same time receive hard blows and meagre nourishment like the dumb-driven cattle, which we treat in our professional capacity.

Ours, Sir, is one of the few unfortunate services which are denied a time-scale of pay. We are grouped together in three grades, and promotion from one to the other not unoften depends on the sweet will and pleasure of our officers. Starting at the paltry salary of Rs. 60/- the Veterinary Assistant has no chance of promotion, unless there is a vacancy in the second grade of Rs. 75/- and then he has again to wait for another indefinite period until there is a vacancy in the grade of Rs. 90/- to which he can be appointed. There is no gradual or assured promotion, and the Veterinary Assistant has constantly to live in a state of hope and fear with no definite prospects of promotion before him. Some end as they begin, while others reach the first grade when they are on the verge of their retirement from service. All through this period, they have to live in a state of suspense. To make things worse, no private practice is allowed to us; and we have nothing but our meagre pay to support us and our families.

So far, Sir, the only thing that consoled us was the dim, distant prospect of being promoted to the rank of Veterinary Inspectors, and, thereafter, perchance, to the Provincial service. Now we have been deprived of even that consolation: The posts of Veterinary Inspectors have been abolished, and we have no hope whatever of being anything better than Veterinary Assistants. No matter how long or however diligently and honestly we may serve the Department, 'Once a Veterinary Assistant always a Veterinary Assistant' is the dictum which has been laid down for us. The new posts of Veterinary Assistant Surgeons, which have been recently created, will now effectively debar us from entry into the Provincial service and block our way to promotion. The Veterinary Assistant Surgeons start on a salary of Rs. 100/- and by regular annual increments of Rs. 10/- can rise to Rs. 300/- while we, the Veterinary Assistants, even if and when we reach the first grade after an indefinite period of service, cannot hope to get more than Rs. 90/- a month. This, we most respectfully submit, is neither fair nor justified by the facts of the case. The only reason given for according this invidious treatment to us is that Veterinary Assistant Surgeons have attended a four years' English course, while we have attended a Vernacular course, a course of training which had elicited warm praise from every competent critic including Lord Hardinge, which alone was in existence when we were educated at the College or when we entered Government service. As against this, we beg leave to point out that most of us are well-versed in practical and theoretical knowledge and have a large and varied experience of actual work at our back, and have successfully held charge of important hospitals. Even now almost all hospitals are under the charge of Veterinary Assistants; and Veterinary Assistant Surgeons, before being put in charge of hospitals, are placed under a Veterinary Assistant for a year's training. There is no difference whatever between the work of Veterinary Assistant Surgeons and Veterinary Assistants. Both hold independent charge of hospitals.

We may also be permitted to point out that this differential treatment of old and new recruits to the service is not recognised in any other

department of the Government. In the Medical Department, no such differentiation was introduced when the course of teaching in the Medical School was altered from vernacular to English and the period of study from 3 to 4 years or when the 4 years' L. M. S. course was altered to 5 years' M.B.B.S. course. Nor was such invidious distinction recognised in the Agriculture Department when the old 2 years' course at the Cawnpur Agricultural School was changed into a three years' course or when the three years' diploma course at the Punjab Agricultural College was replaced by 4 years degree' course. No such distinction was introduced when, some years ago, the 2 years' course in the Punjab Veterinary College itself gave place to the 3 years' course. We, therefore, most respectfully urge that the distinction between Veterinary Assistants and Veterinary Assistant Surgeons be removed, because both have to do exactly the same work. "Equal work, equal wages"—is all what we claim.

This is, Sir, what justice to our service requires. Failing that, we pray that the service of Veterinary Assistants be regularised on a time-scale basis in the grade of Rs. 70-4-180 (as has been done in case of B. Class Agricultural Assistants who undergo only a two years' course). The request is not unreasonable, considering the fact that the Veterinary Assistant Surgeons have been placed in a scale equal to that of Agricultural Assistants—A Class. This will make the subordinate Veterinary Service parallel to the Subordinate Agricultural service. We further pray that 20 per cent of Veterinary Assistants may be promoted to the Veterinary Assistant Surgeons' grade, subject to 10 years' approved service, as is provided in the case of B. Class Agricultural Assistants. This, Sir, is a very modest demand; and we hope and trust that you will be pleased to recommend its acceptance to Government, in case you do not see your way to recommend that the slur which has been cast on us by treating us as inferior to Veterinary Assistant Surgeons be removed in view of the fact that we do exactly the same work as they do, and most of us have long records of approved service at our back. It is hardly necessary for us to dilate on the merits of a time-scale of pay, when the Government has introduced it in almost every other department and even in our own department in the case of everyone except Veterinary Assistants.

Before closing, we beg leave to re-iterate one of our old standing grievances. We are debarred from private practice, which deprives us of a legitimate, though very small, source of income, a circumstance which is of immense importance to poorly-paid men like us. We hope you will be pleased to re-consider this matter and assimilate our position to that of the members of the Medical Department.

Sir, we again most respectfully tender our thanks to you for permitting us personally to lay our case before you. We hope we have been able to convince you of the justice of our case; and we are confident that our humble appeal will not go in vain. We have a firm faith in the justice of the benign Government; and, knowing as we do your untiring solicitude for your subordinates, we have no doubt that the humble prayer of the

poor Veterinary Assistants, which you have permitted us to lay before you, will find a ready response in your kind heart.

We express our deep gratitude to you for the patient hearing which you have given us.

THE ROYAL COMMISSION ON AGRICULTURE IN INDIA

To the Editor of The Veterinary Record.

Sir,—With reference to Professor Gaiger's letter in your issue of July 30th, will you permit me to deprecate the ventilation of divergent views in the public press from individuals who have been invited to give evidence before the Royal Commission on Agriculture in India? For reasons of their own the Royal Commission have asked for the opinions of persons who have had no experience of conditions in India, but in weighing the evidence it may be presumed that every point will be taken into consideration. In any case there is nothing to be gained from correspondence which might lead outsiders to think that the profession is not unanimous in considering that the problem in India is essentially administrative in importance. If the Government of India had the services of a capable Veterinary Adviser possessing adequate experience of Indian conditions the Royal Commission would be in a much better position to deal with Veterinary questions. Local Indian experience is insufficient. Veterinary research work in India has a very distinguished record, but development has been interfered with by a policy of destruction.

What can be done with a Government that abolishes the head of the department (the sole co-ordinating influence) ignores the proceedings of constituted veterinary conferences, discourages the publication of research work, and rules that research institutions are to be run at a profit over and above the value of the animal life saved by their investigations and productions? The number of officers who have retired prematurely from the Indian Veterinary Service, since it was constituted as a civil service, is remarkable enough to merit the attention of the Commission. It would almost certainly be found that the resignations have been mainly due to dissatisfaction with the methods of administration.—Yours faithfully, G. K. WALKER (Colonel), Indian Veterinary Service (retired). 30th July, 1927.—(*Veterinary Record* August, 6—1927).

ASSOCIATION NEWS.**THE BOMBAY VETERINARY GRADUATES' ASSOCIATION.**

The Annual general meeting of the Association was held at 5-30. P. M. at the hall of the Bai Sakar Bai Hospital for animals in the premises of the Bombay Veterinary College, Parel, Bombay, under the Presidentship of Khan Sahib N. D. Dhakmarvala, G. B. V. C.

89 members were present.

It was resolved unanimously that the report read by the secretary (Mr. P. V. Nagarshett) be adopted.

It was resolved unanimously that the retiring office-bearers be thanked for valuable services rendered during their regime.

It was resolved that the following members who got highest number of votes, for the offices they competed for, be elected as office-bearers for the next year :—

- | | |
|---------------------------------|-------------------------|
| 1. Khan Sahib N. D. Dhakmarvala | <i>President.</i> |
| 2. Mr. R. G. Sathe | <i>Secretary.</i> |
| 3. „ M. K. Garudachar | <i>Joint Secretary.</i> |
| 4. „ Y. N. Marathe | <i>Treasurer.</i> |

Members of the Managing Committee :—

1. Prof. V. R. Phadke.
2. Mr. D. S. Laud.
3. „ P. G. Date.
4. „ P. V. Nagarshett.
5. „ M. G. Kulkarni.

The meeting terminated with a vote of thanks to the chair.

THE MADRAS VETERINARY COLLEGE MEDICAL ASSOCIATION

Report of the above association for the year ending 1927-28 March.—

The association began its work as early as 18th July, 1927, this year with the following office-bearers :—

- | | |
|--------------------------|---|
| <i>President</i> | ... Major P. T. Saunders, M.R.C.V.S.,
O.B.E., I.V.S. |
| <i>Vice-President</i> | ... G. T. D'Silva Esq., G.B.V.C. |
| <i>Secretary</i> | ... Mr. M. K. Sreenivasan. |
| <i>Treasurer</i> | ... „ M. Balasubramany. |
| <i>Committee members</i> | —Messrs. K. A. Ganapathy
A. K. Kumaran; R. Veeramany;
Kapinappa; Krishnappa and
Lakshmana Rao. |

The inaugural meeting of the above association was held on 4th August, 1927 with the President of the association in the chair when T. Bhaskaramenon Esq., M.B., M.R.C.P. (London) delivered a lecture on "The importance of scientific research".

Subsequently a number of papers were read and discussed in the various meetings held. The papers read are :—
1. Glanders and Farcy, 2. Anthrax, 3. Canine distemper, 4. Rinderpest, 5. Foot and Mouth, 6. Johne's disease, 7. Hæmorrhagic Septicæmia, 8. Rabies, 9. Tetanus, 10. Diseases of the foot, 11. Wounds and their treatment in animals, 12. Soundness, 13. Breeding and dairying in India, 14. Obstetrical presentations, 15. Immunity, 16. Surra, 17. Milk fever, 18. Inflammation and 19. Ophiology.

Thus it is a proud privilege to say that only this year so many papers were read since the beginning of the association in 1920.

The association awards two prizes for the first two best essays. The papers are valued by four examiners selected by the president and the first essay gets a silver medal and the second a bronze one. All the other papers passed by the examiners get a certificate from the association thereby they become fellows of the association.

Last year's prizes were won by Messrs. G. Seetharam moorthi, G.M.V.C. and R. Krishnamoorthi, G.M.V.C. respectively.

The association wishes to thank the President and the members of the college staff for taking keen interest in the association and helping the members in various ways. I again wishes to thank Mr. T. Bhaskaramenon, M.B., M.R.C.P. (London) for delivering the inaugural address.

This year's papers are being valued and the prizes will be awarded in due course.

COLLEGE NEWS.

BENGAL VETERINARY COLLEGE.

The following are the results of the diploma examination held in 1927-28 :—

Class A—63 appeared, 46 passed—73. 38%
Class B—41 " 35 " —85. 74%
Class C—40 " 30 " —75%

Names of the final year students that passed in order of merit :—

Messrs : 1. S. V. Raju, 2. G. Prosad, 3. S. A. R. Akhtar, 4. S. M. Hossain, 5. K. Hossain, 6. J. O. Johannes, 7. B. Rongong, 8. B. N. Roy, B. B. Singh, 9. A. Karim, 10. J. D. Kandulna, 11. N. Shunassi, 12. S. A. Azhar, 13. S. A. Hasan, 14. S. S. Bakshi, 15. A. T. Attisha, 16. B. Narayan, I. Hilmi, 17. M. S. Rath, 18. K. N. Subramania, 19. J. Hossain, 20. G. Zecharia, 21. B. K. Roy, 22. J. P. Singh, 23. J. Bardolai, 24. L. R. Pramanick, S. Stephens, 25. M. A. Shariff, 26. S. N. Singh, 27. K. C. Sen Gupta.

MADRAS VETERINARY COLLEGE.

The following are the results of the diploma examination held in 1927-28 :—

Class A—35 appeared, 27 passed—77. 14%
Class B—26 " 21 " —80. 77%
Class C—22 " 19 " —86. 36%

Names of the final year students that passed in order of merit :—

Messrs : 1. M. K. Srinivasan, 2. P. S. Narayanan, 3. A. Suryanarayana, 4. A. K. Kumaran, 5. A. Krishnamurthi, 6. T. Patnaik, 7. S. Parthasarathy, 8. E. R. Nagarajan, 9. G. N. Srikantiah, 10. M. Kuruvilla, 11. M. Alfred, 12. K. A. Ganapathy, 13. P. K. Kurian, 14. M. Balasubramani, 15. C. Sreeramulu, 16. D. N. Vasudevamudaliar, 17. G. Ahamad Hussian, 18. P. Abraham, 19. G. Osman Khan.

REVIEWS OF THE ANNUAL REPORTS.

BOMBAY VETERINARY COLLEGE, BOMBAY CITY AND HARBOUR VETERINARY DEPARTMENT AND C. V. D. IN THE BOMBAY PRESIDENCY (INCLUDING SIND) FOR THE YEAR 1926-27.

"While Government fully recognise the need for the expansion of the activities of the C. V. D., they are unable to provide adequate funds to satisfy the several requirements to which reference has been made in these reports." In these words, the Government of Bombay have summarily, without a regret, disposed of the Administration reports of the C. V. D. in Bombay and Sind. This might give an impression that the Government is already spending a good amount of money on the Veterinary Department; but we find that the total cost of the Department for 1926-27 is only 6½ lakhs of rupees—and this for a province with nearly 200,000 sq. miles. Bombay is a presidency which is noted for some really fine livestock and, therefore, in our opinion, the Government is running a most short-sighted and economically unwise policy in treating the Veterinary Department in such a miserly way.

A well equipped laboratory is a most essential thing for a Veterinary College and yet we are told that "the construction of the laboratory was again postponed on account of financial stringency and eventually was removed from the waiting list for the same reason." This is not a happy state of affairs and we do hope that, now that the Provincial contributions to the Imperial Government have been abolished, the Bombay Government would find money for nourishing the starved Veterinary Department.

C.V.D. BENGAL AND BENGAL VETERINARY COLLEGE FOR THE YEAR 1926-27.

With a Minister who had "to discharge the duty of reviewing the administration of a year" "even before he had a reasonable time to shape his own policy," there has been nothing striking in the Annual Report of the C.V.D. Bengal for 1926-27.

As usual, Rinderpest levies the heaviest toll from the animals—over 93% of the total mortality is from this disease. And this, in spite of the accepted fact that it is a purely preventable disease, "The advantages of inoculation against the disease are being gradually realised by the ryots" and, yet, for want of adequate and prompt supply of serum and for lack of sufficiency of men, the wealth of the poor ryots is being drained away! This does not certainly redeem to the credit of the Bengal Government and we earnestly hope that greater attention to this aspect of the activities of the Veterinary Department would be bestowed by the Government in the near future. We are of opinion that the dual system of Government—a sort of diarchy—which is existing in the administration of this Department is the cause of this inadequate relief to the ryots, and the sooner the Government relieves the "poor" local bodies of their responsibilities for Veterinary aid, the better for all concerned.

PUNJAB VETERINARY COLLEGE, C. V. D. PUNJAB, AND THE GOVERNMENT CATTLE FARM, HISSAR, FOR THE YEAR 1926-27.

The report is a record of good progress all round and we join the Government in "congratulating the officers of the Veterinary Department on a good year's work". Col. Walker, whose name will long be associated with the progress of Veterinary Science and whose name will long be cherished in the Veterinary world in India, retired during the year after a long and meritorious service.

Punjab is practically the only province where "the most important task before the Veterinary Department and one that may prove of immense potential advantage to the farmer is the improvement of the breed of draught and milch cattle"; and it is extremely gratifying to learn that progress in this direction is steady and sure and that the work is much appreciated by the public. This is as things ought to be and we earnestly commend the example of Punjab to other provinces.

The number of Veterinary Hospitals has been increasing steadily and it is a matter for justifiable pride "that 65% of the total castrations of inferior stock in India were carried out in the Punjab alone."

We are told that in order to meet the increasing demand for Veterinary graduates "proposals to start a two years vernacular course at an early date are under the consideration of Government." This, we are constrained to remark, is a very retrograde policy to adopt. Punjab is the only place in the East which can boast of a first class Veterinary College and it should be the object of every one to keep up the standard of Veterinary education at a high level. Such being the case, to let loose an army of ill trained Veterinary men with only a smacking knowledge of Veterinary science—practically dignified Veterinary quacks—in the midst of an appreciative and enthusiastic people—and all simply to suit a temporary sudden demand—is only to court disaster in the long run. One of the chief obstacles for the progress of Veterinary science in India is the prevalence of quackery and "the practice of quacks" who compensate for their lack of professional knowledge with other extrinsic qualities, and our energies are

a great measure directed in combating this quackery. And, therefore, a policy under the consideration of the Government is one which we could condemn very strongly and we hope that the Government would do it, in a hurry, sanction the proposal.

C.V.D., BURMA (INCLUDING THE INSEIN VETERINARY SCHOOL) FOR THE YEAR ENDED 31ST MARCH 1927

When we reviewed last year the annual report of the C.V.D. for Burma for 1925-26, we remarked that it was tragic reading. The report for 1926-27, we regret to say, is no better. According to this report, "the statistics show another disastrous year in respect of Rinderpest". The pathology of the people, the insufficiency of the staff and the inordinate delay in the receipt of serum—all preventable causes—contributed mainly to the high mortality from Rinderpest.

We have found that the dual control of the Veterinary Department by the Government and local bodies in some provinces worked adversely on the general administration. In Burma, it is a triple control—the Veterinary Department, the district officers and district councils. No wonder, therefore, the results are disastrous. A unitary control—best by the Government—is the only solution for this tragic state of affairs.

C.V.D., CENTRAL PROVINCES AND BERAR FOR THE YEAR 1926-27.

The report is an interesting record of a year's work.

The year has been a comparatively healthy one for livestock and the deaths from contagious diseases show a considerable decrease. It is to be regretted that the S. S. method of inoculation for Rinderpest "should be hampered by want of funds."

The Government recognise that "a longstanding need of the department is better training in every branch of the service"; but they deplore that the lower ranks do not avail themselves "of the opportunity of further study", and that the province itself would not supply recruits to the department in spite of the stipends offered. It is a great pity that neither the Government nor the Veterinary Adviser have cared to offer an opinion about the causes for this state of affairs. Probably, both of them know the causes and do not "for reasons of state" desire to give expression to it. Whatever that may be, it is our opinion that the low pay and poor prospects of the Department is the only reason for the people not taking up to the study of Veterinary Science; and, if only Government would realise and remedy it, there certainly would not be any dearth of hands.

C.V.D., MADRAS FOR THE YEAR 1926-27.

We have from the report that the Government are not favourably impressed with the change of policy of the Department with regard to its itinerating staff. We predicted in January 1927, while reviewing the Annual Report for 1925-26 that the change of policy as proposed by the

Veterinary Adviser would not prove a success. (Vide Indian Veterinary Journal, Vol. III. No. 3. P. 255). Our advice was not heeded then, and it has taken nearly a year for the Government to realise the unsound policy they then enunciated. And now, they want to go back to their original policy with regard to the touring staff. We are, indeed, very sorry for this. The objections to this policy still continue and as it is not yet too late for the Government to reconsider this step, we would commend once again the suggestions strongly advocated in the review quoted above.

The Government review on the report deals also with the shortage of entrants to the Madras Veterinary College and its consequent paucity of staff in the Department. The Veterinary Adviser thinks that this is due to the reduction of the stipends in the College and, on that opinion, we are told that the Government are considering the question of increasing the number of stipends. With regard to this point, we are constrained to remark that there is none so blind as those who would not see. If the grant of 15 stipends in each class would not attract enough number of students for the College, then there must be really something wrong with it. In the sister colleges of the medical profession, Forest, Agricultural, and Engineering, the number of applications for admission to the college has been quite adequate, in spite of the fact that the number of stipends in those institutions is very few. What, then, is the reason for students not coming forward in numbers to the Madras Veterinary College? The reasons are not far to seek. They are simple. The pay and prospects of the Department act as a deterrent cause. They are discouraging and gloomy enough to drive away any probable aspirants. At present, the Government is practically the only agency which employs the passed graduates of the College and there is absolutely no scope for a private practitioner. And, if that one agency viz. the Government, were to offer only a pay of Rs. 60-4-120, it is no wonder that candidates are not coming in numbers. We are strongly of opinion that the introduction of stipends should primarily be for the encouragement of the poor and depressed classes, and not 'to trap in' people to take up courses which ordinarily they would not. We are convinced that the improvement of the pay and prospects of the Department is the only sure remedy to attract the right sort of men. The Government could even reduce the existing number of stipends, but if only, they will offer a better standard of emoluments to the Veterinarians in the Department, we are certain that there will be no paucity of the required type of men for the College

COMMUNICATION.

To

THE EDITOR,

The Indian Veterinary Journal, Madras.

DEAR SIR,

1. Will any of your readers kindly throw light on the most practical treatment of "Retention of Urine" in the working oxen? Many animals succumb to this disease.

Cattle owners prefer internal treatment. They do not like surgical operations.

2. Will your readers kindly state their practical experience of anaesthesia in cattle and oblige.

Yours faithfully.

(Sd.) M.C. JOSHI, G. B. V. C.,
Veterinary Surgeon,
Shree Gujarat Cattle Hospital,
Umreth, Kaira Dt.

UMRETH,
26th March 1928. }

ERRATA.

For "Sarcoptic Mange in the horn of a Buffalo" by Mr. S. P. Belanke, "Read 'Psoroptic Mange affecting the horn of a Buffalo' by G. S. Balekundri, on page 12, in the All-India Veterinary Conference Supplementary Copy."

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EDITED BY
P. SRINIVASA RAO, G. M. V. C.
Veterinary Surgeon, Madras.

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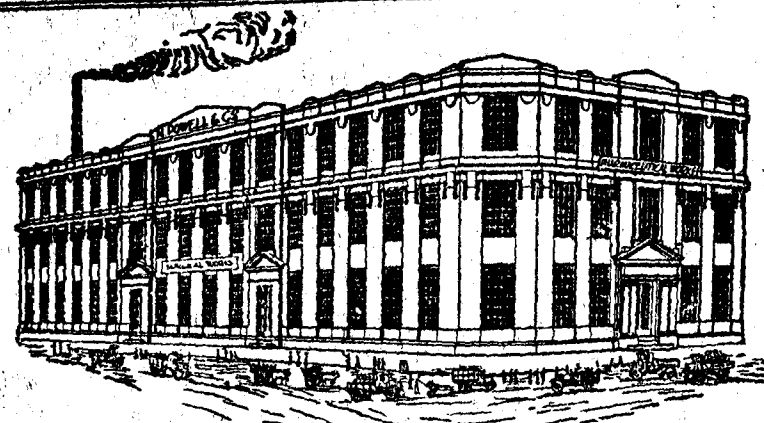
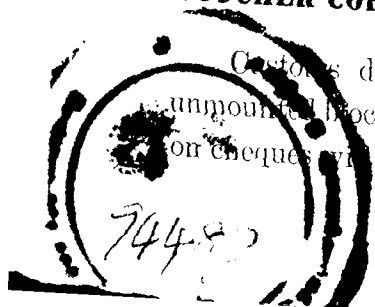
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" 1424	Drenching Bottle tin	3	0	0
" 1426	Bit for Horses and Cattle	25	0	0
" 1434	Castrating Clamps Burdizo	35	0	0
" 1437	Castrating Torsion Forceps (Prof. Robertson's)	16	0	0
" 1442	Castrating Knife Folding	3	8	0
" 1435	Ecraseur Farmer Miles	40	0	0
"	Docking Machine	35	0	0
" 1481	A. to D. Firing Irons fixed handles	3	12	0
"	E. F. G. Firing iron Line or pointed	4	8	0
"	Enema Syringe and Stomach Pump complete	100	0	0
" 1502	Wound Syringe 2 ozs. size	3	10	0
"	" 4 ozs. size	4	10	0
" 1512	Searcher folding metal handle	3	8	0
" 1513	Drawing knife on wooden handle	2	0	0
" 1558	Chloroform Muzzle (Raymond's)	30	0	0
" 1563	Obstetric Set "The Eclipse" in Japaned tin case	100	0	0
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"	from	1	0	0
" 1593	Milking tube with two rings	10	0	0
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" 1604	Trocar and Cannula for Horse			
" 1608	Thermometer clinical 6 inches in meta guard	4	0	0
"	1/2 min mag	3	8	0
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