

ORDINARY, PRINTED.

Public DEPARTMENT.	
G.O., DATED	1 st Sept 91
No.	746
540 Poll 81 ? ?	

First copy sent to Press. 3. 9. 91.

Returned for signature.

Despatched in print. 21-9-91

[Despatch Abstract.]

Microbiological Institute Recording re-
port of the Sanitary
Commission on the
experiments made
with two tubes of the
vaccinal pulp pro-
cured from the —
at Saigon & directing
that it be sent to
H.E. the Governor-General
of Cochin China —

GOVERNMENT OF MADRAS.

PUBLIC DEPARTMENT.

READ—the following paper :—

From the Acting Consular Agent for France, Madras, to the Chief Secretary to Government, dated Madras, 23rd April 1891.

I have the honor to enclose an order of His Excellency the Governor General of Cochin-China concerning the Microbiological Institute established in Saigon.

I am desired by the Director of the Institute to bring it to the notice of the Government of Madras.

ENCLOSURE.

ORDER of H. E. the Governor General of Cochin-China dated Saigon, 20th March 1891.

* * * *

1. A Microbiological Institute has been established at Saigon in the quarters of the military hospital, and will be prepared from the 1st April next to carry out the various objects for which it has been organized, *i.e.* :—

1. Animal vaccination.
2. Vaccination against hydrophobia.
3. The manufacture of Pasteur's vaccine for anthrax in cattle.
4. The analysis of water, of organic liquids, and of alimentary or manufactured substances liable to alteration by microbes or to fermentation such as food, preserves, beer, &c.

2. The conditions under which and the manner in which each of these objects will be carried out are regulated by the annexed circular.

3. The proceeds of the sale of vaccine to foreign doctors will in the ordinary course be paid into the public treasury and will be devoted to the maintenance and the renewal of the material of the Institute.

CIRCULAR regulating the organization of the Microbiological Institute.

Animal Vaccination.

The Institute will ensure by uninterrupted means the culture of cow-pox from hieffer to hieffer, so as to furnish all practising vaccinators in Indo-China with a sufficient quantity of lymph and of glycerine or fresh vaseline pulp.

Persons will be vaccinated publicly and gratuitously direct from the calf to the arm at Saigon every Wednesday at 4 p.m. in the special pavilion of the Institute situated at the angle formed by the "*Rue nationale*" and the "*Rue Grandière*."

Physicians, whether French or of foreign nationality, belonging to countries in the neighbourhood of Indo-China will be afforded facilities for providing themselves with fresh

supplies of animal vaccine from the Institute. Such demands will be complied with as speedily as possible, the sole condition being that orders are accompanied by the sum necessary to cover the expenses of transit and the cost of the tubes of vaccine; the latter being calculated on the uniform scale of one dollar for two tubes containing a quantity of lymph or of pulp sufficient to vaccinate at least 15 people. A small stock of lymph recently prepared will be always kept in reserve at the Institute in case of the outbreak of an epidemic in any part of the Colony.

Vaccination against Hydrophobia

The preventive treatment of hydrophobia will be applied to all persons who have been bitten and who are desirous of undergoing the treatment according to the method practised at the Pasteur Institute at Paris and with virus procured from that institute.

The object of the organization of this treatment of hydrophobia has more particularly an international character. Hydrophobia is not indeed a common malady in Indo-China except in Tonquin where its frequency has tended to increase for some years. But in Singapore, Batavia, Ceylon, China and Japan it has a fairly large number of victims. The duration of its incubation in man being on the average 40 days it will accordingly be possible for almost every one who is bitten to repair to Saigon in sufficient time to ensure the efficacy of the preventive treatment.

The French Government hopes to be of service not only to its own employés and people but also to all its Eastern neighbours in turning to account the resources of the Microbiological Institute at Saigon for the application of the only efficacious treatment against one of the most terrible maladies which attacks mankind.

This treatment will be gratuitously rendered to the functionaries and employés of the colony except when the gravity of the bite necessitates the patient remaining in hospital; in this case the hospital can incur no extra charge.

Persons who have been bitten and desire to undergo the preventive treatment are expressly recommended to procure the most precise information regarding the symptoms exhibited by the animal which has inflicted the bite, so that the officers of the Institute may be able to ascertain the probable or certain existence of hydrophobia in the animal. Whenever it is possible for a doctor or veterinary surgeon to hold a post mortem examination over the animal it is desirable that a detailed report relating particularly to the state and the contents of the digestive organs should be forwarded to the Institute. Moreover, if the animal has been killed and it is possible to forward the entire head packed in ice to the laboratory, it is specially requested that the opportunity may not be neglected as only by the means thus afforded can the reality of the existence of madness in the suspected animal be affirmed by the aid of experimental inoculations.

Preparation of Anthrax Vaccine.

The laboratories of the Institute will furnish to all veterinarians in French or foreign Colonies in the East vaccine for the preservation of cattle against anthrax or splenic fever.

The tubes containing this vaccine will be delivered only after trial in order that all desirable guarantee may be offered. Each tube will contain a quantity of vaccine sufficient to inoculate fifty sheep or twenty-five cows and will be sold at the uniform price of one dollar per tube, the cost of transit by post being extra.

ORDER-- dated 12th May 1891, No. 377, Public.

Communicated to the Revenue Department, the Surgeon General and the Sanitary Commissioner.

(True Extract)

Chief Secretary

To the Revenue Department.
" Surgeon General.
" Sanitary Commissioner.

Govt. of {1891} Madras.

PUBLIC.

Issued

Encl.

Recd.

G.O., 12th May 1891, No. 377.

MAY.

Microbiological Institute.

Communicating the order of the Governor-
General of Cochin-China, concerning the es-
tablishment at Saigon.

No 3104
v

Office of Sanitary Commission
Fort St. George 15 August 1891

From

Surgeon D-F. Dymott M.B.

Inspector of Vaccination

and of Sanitary Commission

To

The Sanitary Commission
for Madras.

Sir,

With reference to G.O. dated 12th
May 1891 No 377, Public, I have the
honor to submit herewith a report
on the two tubes of Saigon "Vaccinal
pulp" which you forwarded to me
for trial.

2. The tubes were despatched from
Saigon on the 3rd July. They were re-
ceived in good order, being packed
in a piece of glass piping, enclosed
in a hollow wooden cylinder, and
well protected with cotton wool. Each
tube is about 1/8 of an inch in diameter.

diameter, being therefore con- siderably larger calibre than the tubes supplied by the medical stores, and, in my opinion, of much greater service. The contents consisted of the pulp taken from in- oculated calves mixed with one- third of its weight of pure glycerine, which had been previously steril- ized by heating to 120° Centigrade. Each glass tube is also sterilized by washing in sulphuric acid, then in alcohol and in water, and finally heating to 120° C. After be- ing about half filled with "vac- cinal pulp" it is hermetically sealed at both ends, and, as an extra precaution, a cap of sealing wax is applied.

Dr. Calmette claims for his "vac- cinal pulp" that it keeps effica- cious for several weeks and that there is a large measure of success with it, in

in primary vaccinations, is about 98%. In operating punctures may be used, but he considers it better to make three light scarifications on each arm with a lancet. Two tubes should suffice for the vac- cination of 15 persons.

On the 31st July - 28 days after the despatch of the pulp from Saigon - I opened one tube, and, with the assistance of my Inspector C. Sobroya Chetty, had a calf (A) and one child inoculated with its contents. On the calf, a healthy male aged $1\frac{1}{2}$ years, 46 punctures were made and 4 linear incisions. Of these 50 in- sertions 28 eventually proved suc- cessful. The evolution of the vesi- cles was somewhat delayed, as is usually the case in operations performed with preserved lymph. Of 3 insertions by puncture on the child's Arm 2 proved successful.

On the 5th August lymph from the inoculated calf (A) was transferred to another calf. The resulting vesicles were excellent. Of 3 children operated on with lymph from the inoculated ^{calf} (A) - three insertions on each arm - one developed 6 vesicles, one 5 vesicles and the third was unaffected. On enquiry it was proved that the unsuccessfully vaccinated child had had small-pox.

With the second tube of "vaccinal pulp", which was now 34 days old, 3 children were inoculated. In one case three insertions were made on each arm by scarification with a lancet; in the other two cases only two insertions on each arm were made. The operation failed on one child, but on the other two children every insertion was successful.

On the 7th August - 3 more children

Children were vaccinated from the inoculated calf (A) - three punctures being made in each arm. Of a total of 18 insertions only one was unsuccessful.

3. On the whole the method of preserving "vaccinal pulp" at the Saigon Institute seems to be efficient and very simple.

I have the honor to be
Sir

Yours most obedt servant
Donald ~~Smith~~ ^{Surgeon}
Inspector of Vaccination
and of Sanitary Council

No 3200
5.

Office of Sanitary Comr:
Camp Madras Dist. 19th Aug/91

From

Surgeon Major J. A. Laing
Sanitary Commissioner
Madras

To

The Chief Secretary to Govt
Public Department

Sir

With reference to G.O. No. 377
dated 12th May 1891 Public [which
was received by me on the 7th June
1891] I have the honor to state that
I wrote to the Director of the Institute
at Serigon requesting he would be
so good as to send me some of
the vaccine lymph prepared at
the Institute. I received the vaccine
last month while at Trichinopoly
and sent it to Surgeon Dymott
the Inspector of vaccination with
a request that he would make
experiments with it in Madras
and report the results. Enclosed
is Surgeon Dymott's report which
I forward for the information

*The vaccine lymph
sent to me by the
Director of the
Institute at Serigon
was prepared at the
Institute at Serigon
and was sent to me
by the Director of the
Institute at Serigon

of Government

2. The vaccine which was sent consisted of the pulp taken from inoculated calves mixed with $\frac{1}{3}^{\text{rd}}$ of its weight of pure glycerine and this preparation was found to give the best results in Saigon. Dr. Calmette in his letter to me states that although the *pommade vaselinee* keeps well yet its use has not been found as convenient by the vaccinators as that of the "pulp glycerinee".

3. The percentage of success obtained in Saigon with the "pulp glycerinee" in primary cases is stated to be "about 96%". With fresh animal lymph the percentage of success in Madras town in primary cases was 99.8 for 1890-91.

4. The price of two tubes which are said to contain sufficient vaccine to vaccinate 15 subjects is — excluding transit charges — one dollar.

I

I have the honor to be
Sir

Your most obedt Servt

Jas. Anderson, Esq.
Surgeon Major
Sanitary Commission
Madras

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Dr. Calmette claims for his "vaccinal pulp" that it keeps efficacious for several weeks and that the percentage of success with it, in primary vaccinations, is about 96 per cent. In operating, punctures may be used, but he considers it better to make three light scarifications on each arm with a lancet. Two tubes should suffice for the vaccination of 15 persons.

On the 31st July—28 days after the despatch of the pulp from Saigon—I opened one tube, and, with the assistance of Deputy Inspector C. Soobroya Chetty, had a calf (A) and one child inoculated with its contents. On the calf—a healthy male aged 1½ years—46 punctures were made and 4 linear incisions. Of these 50 insertions, 28 eventually proved successful. The evolution of the vesicles was somewhat delayed, as is usually the case in operations performed with preserved lymph. Of 3 insertions by puncture on the child's arm, 2 proved successful.

On the 5th August, lymph from the inoculated calf (A) was transferred to another calf. The resulting vesicles were excellent. Of 3 children operated on with lymph from the inoculated calf (A)—three insertions on each arm—one developed 6 vesicles, one 5 vesicles, and the third was unaffected. On inquiry it was proved that the unsuccessfully-vaccinated child had had small-pox.

With the second tube of "vaccinal pulp," which was 34 days old, 3 children were inoculated. In one case 3 insertions were made on each arm by scarification with a lancet; in the other two cases only two insertions on each arm were made. The operation failed on one child, but on the other two children every insertion was successful.

On the 7th August, 3 more children were vaccinated from the inoculated calf (A), three punctures being made in each arm. Of a total of 18 insertions, only one was unsuccessful.

3. On the whole, the method of preserving "vaccinal pulp" at the Saigon Institute seems to be efficient and very simple.

ORDER—dated 1st September 1891, No. 746, Public.

Recorded.

2. The report will be communicated to the Governor-General of Cochin-China.

(True Extract.)

J. F. PRICE,
Chief Secretary.

To the Sanitary Commissioner for Madras. 6

„ Revenue Department. 7

„ Local and Municipal Department (with copy of G.O., dated 12th May 1891, No. 377) 8

„ Surgeon-General with the Government of Madras. 9

Recd 18/9/91.

LETTER—to His Excellency the Governor-General of Cochin-China, Saigon, dated Ootacamund, 1st September 1891, No. 540, Political.

746 I have the honour to forward, herewith, a copy of the Proceedings of my Government of this date, No. 877, embodying a report by the local Sanitary Commissioner on the experiments made with two tubes of vaccinal pulp procured by him from the Microbiological Institute at Saigon.

WENLOCK.

Gobt. of {1891} Madras.
PUBLIC.

Issued

Recd.

Encl.

G.O., 1st Sept. 1891, No. 746.

SEPTEMBER.

Microbiological Institute.

Recording report of the Sanitary Commissioner on the experiments made with two tubes of vaccinal pulp procured from the — at Saigon and directing that it be communicated to His Excellency the Governor-General of Cochin-China.

1st SEPTEMBER 1891, No. 746, PUBLIC.

GOVERNMENT OF MADRAS.

PUBLIC DEPARTMENT.

READ—again the following paper:—

G.O., dated 12th May 1891, No. 377, Public.

ABSTRACT.— Communicating to the Revenue Department, &c., the order of the Governor-General of Cochin-China concerning the Microbiological Institute established at Saigon.

READ—also the following paper:—

From Surgeon-Major J. A. LAING, Sanitary Commissioner for Madras, to the Chief Secretary to Government, dated Camp Madura District, 19th August 1891, No. 3200-S.

With reference to G.O., dated 12th May 1891, No. 377, Public, I have the honour to state that I wrote to the Director of the Institute at Saigon requesting he would be so good as to send me some of the vaccine lymph prepared at the Institute. I received the vaccine last month while at Trichinopoly and sent it to Surgeon Dymott, the Inspector of Vaccination, with a request that he would make experiments with it in Madras and report the results. Enclosed is Surgeon Dymott's report which I forward for the information of Government.

2. The vaccine which was sent consisted of the pulp taken from inoculated calves mixed with one-third of its weight of pure glycerine, and this preparation was found to give the best results in Saigon. Dr. Calmette in his letter to me states that, although the *pommade vaselinée* keeps well, yet its use has not been found as convenient by the vaccinators as that of the *pulpe glycerinée*.

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4. The price of two tubes, which are said to contain sufficient vaccine to vaccinate 15 subjects, is, excluding transit charges, one dollar.

ENCLOSURE.

From Surgeon D. F. DYMOTT, M.B., Inspector of Vaccination and Deputy Sanitary Commissioner, to the Sanitary Commissioner for Madras, dated Fort St. George, 15th August 1891, No. 3104-V.

With reference to G.O., dated 12th May 1891, No. 377, Public, I have the honour to submit, herewith, a report on the two tubes of Saigon "vaccinal pulp" which you forwarded to me for trial.

2. The tubes were despatched from Saigon on the 3rd July. They were received in good order, being packed in a piece of glass piping, enclosed in a hollow wooden cylinder, and well protected with cotton wool. Each tube is about one-eighth of an inch in diameter, being, therefore, of considerably larger calibre than the tubes supplied by the Madras Medical Stores, and, in my opinion, of much greater service. The contents consisted of the pulp taken from inoculated calves mixed with one-third of its weight of pure glycerine, which had been previously sterilized by heating to 120° centigrade. Each glass tube is also sterilized by washing in sulphuric acid, then in alcohol and in water, and, finally, heating to 120° centigrade. After being about half-filled with "vaccinal pulp," it is hermetically sealed at both ends, and, as an extra precaution, a cap of sealing-wax is applied.

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To the Sanitary Commissioner for Madras.

„ Revenue Department.

„ Local and Municipal Department (with copy of G.O., dated 12th May 1891, No 377).

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WENLOCK.