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1887

INTERNATIONAL MEDICAL CONGRESS.

REPORT

BY

COLLECTIVE INVESTIGATION COMMITTEE, OF THE
NORWEGIAN MEDICAL ASSOCIATION

ON

THE ETIOLOGY

OF

RICKETS.
ACUTE RHEUMATISM.
CHOREA.
CANCER.
URINARY CALCULUS.

635

CHRISTIANIA.

PRINTED BY TH. STEEN.

1887.

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REPORT

Annex

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Film no. 5265, no. 6

REPORT
OF THE
INTERNATIONAL
MEDICAL CONGRESS
HELD AT
COPENHAGEN
IN 1887

BRITISH

REPORT OF THE

The question of collective investigation in Norway, similar to what already has been established in England and Germany, was first brought before the Norwegian Medical Association in Christiania at a meeting on the 12th September 1883 by Dr *E. Bull*. The question having been discussed at that and the following meeting on the 26th of the said month, it was determined to appoint a preparatory committee, to which on the 10th of October Drs *C. Larsen*, *E. Bull*, *E. Winge*, *H. Heiberg* and *Lochmann* were elected.

The proposals of this committee were reported to the meeting held on the 27th February 1884 and gave rise to a further discussion, the result being, that it was determined to appoint a permanent committee consisting of 10 members, to be elected for 5 years, in order to promote collective investigation amongst Norwegian medical men. At a meeting held the 26th March a committee consisting of 10 members was elected, the following gentlemen being chosen: Drs *Bidenkap*, *C. Boeck*, *E. Bull*, *O. B. Bull*, *A. Koren*, *Lochmann*, *Nicolaysen*, *Schönberg*, *Wulfsberg* and *E. Winge*.

At the International Medical Congress held in Copenhagen August 1884 it was resolved, as is known, to endeavour to establish international collective investigation, and

for this purpose an international preparatory committee was appointed, to which Dr *E. Bull* was elected as Norwegian representative.

The 2nd October 1884 the Norwegian committee of ten members for collective investigation was constituted and elected Dr *E. Bull* as chairman. It was then determined to proceed with the investigations proposed by the international committee concerning the etiology of Rickets, Acute Rheumatism, Chorea, Cancer, and Urinary Calculus. In a series of meetings the practical question of arranging the furtherance of the enquiries was discussed, and Dr *Bidenkap* and Prof. *Schönberg* were instructed to revise the replies received concerning Rickets, Drs *C. Boeck* and *E. Bull* to revise acute Rheumatism and Chorea, Prof. *E. Winge* Cancer, and Prof. *Nicolaysen* Urinary calculus.

The preliminary expenses attending the investigations were undertaken by the Norwegian Medical Association. On a representation from the committee, the Storting (Parliament) in 1886 voted a sum of 1000 kroner in order to complete the investigations and publish the obtained results.

An additional light may be thrown on the results obtained by mentioning, that according to the official list of 1886 there were a total of 629 authorised practitioners in Norway. This number must however be reduced by at least 100, where the question arises of contributing to collective investigation, as some have gone abroad, others are old and have retired from practice, others have but lately become qualified and have not as yet commenced work on their own account, while others have appointments, which prevent them from practising. In reality however this number is too small, so that it may be assumed, that

there are about 500 practitioners, who are in a position to contribute to the investigations, of which we now treat.

The number of those, who have in reality contributed to the following reported results, must therefore be judged from comparison with these figures.

Report

the investigations about some points concerning the etiology

Statistics

Dr. L. Böncker and Prof. E. Schönböck

1. Figures have been received from 35 practitioners which include the following number of cases:

1882 - 112
1883 - 145
1884 - 116
1885 - 131
1886 - 111
<hr/>
Total 515

Of these cases there occurred in water in the years:

1882 - 54
1883 - 63
1884 - 53
1885 - 51
1886 - 70
<hr/>
Total 291

Report

on

the investigations about some points concerning the etiology
of

Rickets

by

Dr *L. Bidentkap* and Prof. *E. Schönberg*.

1. Replies have been received from 75 practitioners,
which include the following number of cases:

In 1882	—	112
- 1883	—	145
- 1884	—	116
- 1885	—	131
- 1886	—	111
		Total 615.

Of these cases there occurred in towns in the years,

1882	—	54
1883	—	92
1884	—	62
1885	—	81
1886	—	70
		Total 359.

In the country

1882 — 58

1883 — 53

1884 — 54

1885 — 50

1886 — 41

Total 256.

In the three largest towns in the Kingdom the following numbers were observed:

Christiania.	Bergen.	Thronthjem.
1882 — 18	2	6
1883 — 65	0	4
1884 — 42	2	3
1885 — 36	6	5
1886 — 44	0	10
Total 195.	10.	28.

Further particulars of the number of cases mentioned as having occurred in 1885, and 1886:

Sex.

Males 145.

Females 97.

Total 242.

The stated ages of 236 patients.

0—6 months,	15
6 months and under 1 year,	45
1 year « « 1½ years,	73
1½ years « « 2 «	47
2 « « « 2½ «	31
2½ « « « 3 «	10
3 « « « 4 «	6
4 « « « 5 «	3
5 « « « 6 «	2

6	years and under	7	years,	2
8	«	«	«	9
13	«	«	«	«
				1
				1

2. Only in two cases was there clear proof of syphilis in the parents; in the one case both parents had suffered from syphilis but neither the time nor symptoms are mentioned; in the other case three years previously the father had suffered from a syphilitic rash and affection of the throat.

3. In 7 other instances there were appearances, which indicated, that some of the parents had suffered from syphilis, in which the probable date of the syphilitic affection is reported in 3 cases, of which :

The father had syphilis 18 years previously without any further account of symptoms	1
The mother syphilis 4 or 5 years previously	1
The mother, whose children suffered from ulceration of the nose, infected by a syphilitic vagrant.	1

In the other instances the date of the suspicious symptoms is not given, and these only in two cases, namely :

The father suffered from tertiary syphilis.	1
The mother from a psoriasis like exanthem	1

4. The period of suckling of children is given in 183 instances, who left off taking the breast as follows :

under 6 months	23
over 6 months and under 1 year	50
« 1 year « « 1 1/2 years	58
« 1 1/2 years « « 2 «	29
« 2 « « « 2 1/2 «	20
« 2 1/2 « « « 3 «	3

26 children had not been suckled.

5. Information concerning the sufficiency of the food since weaning was obtained in 112 instances, of which in 100 cases it is described as sufficient, in 12 as insufficient.

6. Concerning the condition of the food since weaning a report is made of 131 cases, in which 74 are reported as good, 37 as unsatisfactory. The unsatisfactory condition of the food is most often said to have been from its containing too much amylacea, occasionally too much fat, and that it did not consist of sufficient milk.

7. An account of the age of the parents is given in 167 instances, which is reported further on page 11.

8. Replies to the question concerning any definite cause, to which the illness might be attributed, have been received in 111 instances, which may be classed as follows:

Consumption in both parents	1
« « the father	4
« « « mother	5
« and in the family	10
Both parents sickly	4
Mother of a weak constitution	11
« ill when pregnant	3
« elderly	1
Father «	1
Grandfather leprous	1
Mother suffering from rickets	1
Father « « «	1
« a drunkard	1
« a lunatic	1
Father suffering from chronic rheumatism	1
Mother repeated abortions	1

Consanguinity of the parents	1
Mother bleeding from the womb after parturition	1
Mother hydroorrhœa uteri during pregnancy	1
Twins	2
Prematurely born	3
Want of suckling and to early weaning	10
Over nursing	1
Dentition	1
Unhealthy quarters	18
Too little exposure to fresh air	4
Unsatisfactory sanitary arrangements	}
on the whole	
Indigestion	2
Chronic diarrhœa	7
Appearance of rickets after	}
scarlet fever	
Appearance of rickets after	2
« « « « whooping cough	3
« « « « itch	1
« « « « acute gastritis	1

Mother of a weak constitution
 ill when pregnant
 elderly
 Father
 Grandfather
 Mother suffering from rickets
 Father
 a grandchild
 a phthisis
 Father suffering from chronic rheumatism
 Mother repeated abortions

The reports of the mentioned cases of rickets were received from the following medical men:

Augestad, (Tin & Gran). Berner, (Christiania). Binne-
balle, (Sundal). F. Blich, (Arendal). P. Blich, (Do.) Blomberg,
(Christiania). U. Bugge, (Ringsaker). E. Bull, (Christiania).
P. Conradi, (Selbu). Dannevig, (Tønsberg). C. Dietrichson,
(n. Fron). Drejer, (Aasnæs). Dørum, (Elverum). Eger,
(Østlofoten). Engh, (Indre Sogn). Gjestland, (Tysnæs).
Glatved, (Drangedal). Graarud, (Holmestrand). F. Grøn,
(Christiania). Hartwig, (Kragere). Heimbeck, (Langesund).
Henriksen, (Trygstad). Hoel, (Biri). O. Holm, (Christiania).
J. M. Holmboe, (Tromsø). J. W. Holmboe, (Holden). F.
Holst, (Tin). J. C. Holst, (Drammen). C. Holtermann,
(Fredriksstad). Hørbye, (Christiania). Johannessen, (Bæ-
rum). J. Johnsen, (Sarpsborg). Jønsberg, (Hønefos). E.
Kaurin, (Molde). Kielland, (Trondhjem). Kinck, (Ytre Har-
dager). Kjær, (Lom). Kittel, (Arendal). Kionig, (Chri-
stiania). Knutssøn, (Hof, Solør). Kolbjørnsen, (S.Land).
Krüger, (Midthordland). Hj. Lindboe, (Christiania). Lin-
deman, (Ringsaker). F. Lund, (Trondenæs). J. Lossius,
(Farsund). A. Martens, (Bergen). Meyer, (Midtre Sogn).
J. F. Nielsen, (Karmøen). P. E. Nilsen, (Trondhjem). Ant.
Olsen, (Jevnaker). Oxholm, (Mandal). E. Randers, (Aale-
sund). Rummelhoff, (Risør). Scheel, (Christiania). Schou,
(Indre Søndfjord). Schelderup, (Trondenæs). L. W. Selmer,
(Surendal). H. F. Smith, (Molde). Sommerfelt, (Spydeberg).
J. G. Stang, (Sandnæs). Støren, (Gran). Synnestvedt,
(Rollag). Sødning, (Aalesund). H. J. Vetlesen, (Hamar).
Wiesener, (Bergen). J. W. Wille, (Melhus).

Besides these, a report from the out department of the
Christiania Lying- in Hospital has been received.

Reports from the following practitioners, who have not treated any case of rickets with bent bones during the years 1882—1886, have been received:

Birch, (Holmestrand). Chr. Bull, (Evje). Frost, (Vos).
 J. M. Heidenreich, (Opdal). J. W. Holm, (Næs, Hedemarken).
 Holter, (Eker). A. Selmer, Balsfjord.

Report
 on
 the investigations concerning some points in the etiology
 of
Acute and sub-acute Rheumatism
 by
 Drs *C. Boeck* and *E. Bull.*

The subsequently named 94 practitioners as well as the 2 medical departments of the National Hospital have in the years 1882—84 treated the following number of cases of acute and sub-acute rheumatism:

In 1882 — 388 cases ¹⁾
 « 1883 — 469 —
 « 1884 — 467 —

¹⁾ For comparison with these figures the number of cases of rheumatic fever throughout the whole of Norway is added, which according to the official medical reports were

in 1882 — 2.301 cases
 « 1883 — 2.724 —
 « 1884 — 3.005 —

The number of cases reported on in the named 96 forms of questions for the years 1885—86 amount to

in 1885 — 523 cases

« 1880 — 450 —

Total 973 cases.

These 973 cases therefore form the basis for the collective investigation, undertaken in this country, concerning the etiology of rheumatic fever.

The appearance of the disease as regards the seasons will be seen from the following table:

January 113 cases

February 97 —

March 112 —

April 107 —

May 112 —

June 76 —

July 72 —

August 55 —

September 43 —

October 41 —

November 69 —

December 76 —

Total 973 cases

As will be seen, with the exception of February, the number of cases for the first 5 months of the year have

been about equal. From June the number decline somewhat suddenly in the following months and gradually decrease until and including October. In November and December the numbers again increase. The maximum of cases occur in January, and the minimum in October. ¹⁾

The sex is stated in 963 cases:

Males — 447.

Females — 516.

The ages represented in these 963 cases will be seen from the following table.

	Years.												Total.
	0-1	1-5	5-10	10-15	15-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	
Males	1	7	37	52	66	117	70	42	33	14	7	1	447
Females	0	1	23	52	73	178	82	39	37	22	6	3	516
Total both sexes . . .	1	8	60	104	139	295	152	81	70	36	13	4	963

This table appears to indicate in an interesting manner, how males under 10 years of age are much more subject to this complaint than females of the same age. Of the

¹⁾ According to the official medical statistics the minimum number of cases of rheumatic fever generally occur partly in August and partly in September.

number of individuals attacked under 10 years of age the males number 65 per cent. In those cases, which occurred under 5 years of age, the comparison will be seen to be still more striking. Between the ages of 10 and 15 an equal number of both sexes have been attacked, whilst between the ages of 15 and 20 the number of females attacked has somewhat exceeded the males. Between the ages 20—40 a comparatively larger number of women have been attacked than men. The greatest difference in the number of cases, as will be seen, occurs between the age of 20—30. Between the ages 40—60 the cases again become more equal in both sexes, whilst in females over 60 years the numbers are again somewhat more.

The colour of the hair and iris is given in 870 instances. The comparison will be seen from the following table.

	Fair.	Dark.	Individuals- with dark hair & blue or grey iris.	Individuals with light hair and brown iris.
Males	226	78	92	1
Females	263	101	108	1
Total	489	179	200	2

The question:

Has the patient's father or mother ever had acute or sub-acute rheumatism? has been replied to concerning 682 cases.

The father has been afflicted in 57 instances

« mother « « « « 59 «

In 4 of these instances both parents have been afflicted. Thus in 112 cases out of 682 one or other or both parents have suffered from rheumatic fever. 16.4 per cent.

The question:

Have any of the patient's brothers or sisters suffered from the same illness?

has been replied to concerning the same 682 cases, the result being, that in 95 instances one or more brothers or sisters have suffered from acute or sub-acute rheumatism — about 14 per cent.

It deserves maybe to be especially mentioned, that in 24 instances as well the parents as well as one or more of the brothers or sisters had suffered from rheumatic fever.

The question:

«Has the patient's father or mother or any of his brothers or sisters ever had true gout? has been replied to concerning 720 cases:

The father had suffered from gout in 6 instances.

The mother « « « « « 2 —

It is also stated, that in 3 instances the patients themselves have suffered from gout. It must be stated, that in Norway gout is a comparatively rare disease.

The question:

Have any of them ever had any nervous disease, such as Chorea, Epilepsy, Migraine, Locomotor ataxy, Insanity &c?

is replied to concerning 655 cases, and of these in 512 cases in the negative. Nervous affections therefore prove to have appeared in the nearest relations in 143 cases out of 655 = 21.83 per cent.

The most prevalent nervous affections in the parents and brothers and sisters appear to be migraine and insanity. To a less frequent extent neurasthenia, cephalalgia, epilepsy, hysteria and chorea. Cases of asthma, locomotor ataxy, diabetes, morbus Basedowi and paralysis agitans occurred but occasionally in the nearest relatives.

Migraine occurred in the father in 6 instances, in the mother in 19, in the brothers and sisters in 14. In both parents and brothers and sisters in 3 instances.¹⁾ In the relatives, without further particulars as to which of them, in 2 instances. Thus the cases of migraine in the nearest relatives amount to 41 = 6.25 per cent.

In 7 cases the patients themselves are reported as suffering from migraine, and in 4 instances this illness has appeared both in the patient and his or her nearest relatives.

¹⁾ The 3 cases are also included amongst the previous 39 cases, and this also applies to the following complaints, where both parents and brothers and sisters have been attacked by the illness. They are therefore not included in the totals.

Cephalalgia in the nearest relatives, but without further enlightenment as to who they were in 1 instance.

Therefore in the nearest relatives in 13 cases = 1.98 per cent.

Epilepsy occurred in the father in 3 instances
 « « « « mother « 3 «
 « « « « brothers & sisters « 7 «
 « « « « both parents and
 brothers and sisters in « 2 «

Therefore epilepsy in the nearest relatives in 13 cases = 1.98 per cent.

It is reported besides, that the patient suffered from epilepsy in 2 cases, and both patient and relatives in 1 case. Hysteria occurred in the mother in 7 instances.

« « « « brothers & sisters in 1 instance.
 » « « « patient « 1 «

Chorea occurred in the brothers and sisters in 6 instances.
 « « « « patient « 5 «
 « « « « both patient and
 relatives . . . « 1 instance.

Convulsions have been reported in the brothers and sisters in 3 instances.
 « « « « « « patient 1 instance.

Asthma has been reported in the father in 1 instance.
 « « « « « « mother « 1 «

Locomotor ataxy has been reported once in a brother, diabetes once in a father, morbus Basedowi once in a mother, paralysis agitans once in a father.

The question :

Has the patient during the month preceeding the outbreak of rheumatism suffered from any disease, especially angina?

has been replied to concerning 950 cases. In 236 of these angina had in the course of the previous month preceeded the outbreak of rheumatic fever, thus in 24.84 per cent.

One country practitioner, who of all those in the country, who have taken part in the collective investigation, has treated the greatest number, 45 cases, of rheumatic fever in the years 1885 and 86, points out, with respect to the relations between rheumatic fever and angina, that he, at the same time as the unusual outbreak of rheumatic fever, also had real epidemics of angina follicularis in his district. He points out besides, that angina not only appeared most frequently in the confined limits of his district, where the greatest number of cases of rheumatic fever also occurred, but that these two diseases likewise corresponded with each other as regards time, as the greatest number of cases in both instances occurred during the first months of 1885 and in the last months of 1886. In 28 of his 45 cases of rheumatic fever angina had preceeded the disease during the course of the month previous to its appearance.

When the special form of the preceeding angina has been stated, the most frequent has been that of angina follicularis s. lacunaris, but phlegmonous angina and abscess in the tonsil has also been mentioned.

Next to angina, the most frequent illness preceeding the rheumatic fever has been bronchitis, which is reported in 14 cases, after which comes erythema nodosum in 9

cases, scarlatina in 7, gonorrhoea in 4, diarrhoea in 3, urticaria, erysipelas, pituita, pneumonia, morbilli and abscess of the breast each in 2 cases, and varicellæ, parotitis, herpes zoster, impetigo, panaritium, gum boil, cystitis, distorsio pedis, and hydartrus genu, each in 1 case. One practitioner in instances, preceded by angina, observed the rheumatic fever complicated partly with erythema nodosum, partly with peliosis rheumatica and urticaria.

The next question is:

Can you in each case state approximately the height above the sea, lake, or valley?

The height above the sea has been stated concerning 800 cases, and the result will be seen from the following table.

Up to 25 Metres above the sea.	Metres				
	25-50	50-100	100-150	150-200	200-300
372	49	74	62	58	70

Metres						Total.
300-400	400-500	500-600	600-700	700-800	1000	
37	21	28	19	9	1	800

From these figures it is impossible to arrive at any definite result concerning the influence, which a greater or less height above the sea exerts over the etiological features of this disease, as we are not in possession of any accurate information concerning the population at the various heights above the sea. So much however can be said, that

the disease in this country appears at every elevation, where people dwell. One practitioner states thus, that in one of the previous years he had treated 2 cases, which had occurred at a height of from 1100—1200 metres above the sea. As will be seen, the number of cases decrease somewhat suddenly at a height exceeding 300 metres above the sea, but at such a height the population certainly decreases considerably. Neither does the circumstance, that so many cases comparatively occur up to a height of 6—700 metres above the sea, indicate, that a considerable elevation above the sea in any degree decreases the liability to the disease. The great number of cases, which have occurred amongst those living at a less height than 25 metres above the sea, must be accounted for by the considerable coast population, and especially the situation of all our large towns, which lie but a few metres above the surface of the ocean.

As it was thought, that the height above the valleys, lakes and rivers might also possibly be of consequence as to the etiology, the question as regards the heights was put in the said form; and as regards this the following statistics have been obtained.

	On the banks of lakes and rivers, and bottom of the valleys.	From a few metres to 25 metres above the sea.	Metres		
			25-50	50-100	100-150
Lakes	22	14	19	21	17
Rivers	22	35	3	5	3
Valleys	22	8	4	9	7
Total	66	57	26	35	27

	Metres				Total.
	150-200	200-300	300-400	400-500	
Lakes	5	6	3	2	109
Rivers	-	1	-	-	69
Valleys	3	8	1	2	64
Total	8	15	4	4	242

As will be seen from this table, the cases diminish somewhat suddenly at a height of 150 metres above a lake, but it must be pointed out, that the greater number of cases, in which the height above the lake has been mentioned, have occurred in the districts surrounding 2 of our largest lakes, Mjøsen and Randsfjord, which both lie at a height of about 150 metres above the sea. Again at a height of 150 metres above the surface of these lakes, an elevation above the sea is attained, at which the population diminishes to a very considerable extent.

The next question is:

Can you in any case point out any special circumstances concerning the localities, where the disease has appeared? (Dampness of the soil, state of the dwelling, apartments in the cellar, the stories, and whether on the sunny or shady side).

The question concerning the greater or less dampness of the soil has been replied to concerning 226 cases.

The soil is described as dry in 76 cases.
 « « « « damp. « 150 «

The question concerning the state of the residence has been replied to concerning 295 cases, which have been described as:

Good in 94 instances.
 Bad « 105 «
 Dry « 34 «
 Damp. « 62 «

Eleven of these residences have been besides specially pointed out as having no cellars, but resting entirely on the ground. Dampness thus appears to play a considerable part both concerning the nature of the soil and the residence.

The materials, of which the house is built, is given in 23 instances; of these 18 occurred in wooden, and 5 in brick houses.

In those cases, where the situation of the apartments towards the sunny or shady side is given, there were on the sunny side 112 cases.

« « shady « 64 «

thus quite contrary to what one would have expected.

The stories are stated concerning 152 instances

in the cellar 2 cases
 « « ground floor 83 «
 « « first « 43 «
 « « second « 21 «
 « « third « 3 «

In 34 instances «unhealthy work places» is given as the most probable etiological feature, and dampness again, it appears, plays not a small part. 5 individuals became affected on board ships, others have had

work to do with fish, floating of timber, lumbering work in peat mosses, in wet woods. Others again have laboured in damp cellars in dairies, in the basement story, in saw mills &c &c. Finally it may also be pointed out that in 1885—86 in no less than 15 houses 2 or more cases of rheumatic fever have broken out, as a rule within a short time of each other.

In 1 house 5 cases occurred

« 2 houses 3 « « in each

« 12 « 2 « « «

As regards 2 of the houses, in which during 1885—86 rheumatic fever occurred, it is shown, that the disease had also appeared there during the two previous years.

It is also interesting to observe, how the disease occasionally can specially affect one individual group of closely situated houses. Thus one practitioner from one of the country districts relates, that a young man suffering from rheumatic fever was removed to his father's residence in the country on the 6th Feb. 1885, and that his sister, who attended him, was attacked by the same disease on the 22nd of the same month. In the neighbouring house 2 individuals were attacked by rheumatic fever on the 12th of March, and the 20th of the same month respectively. Furthermore in the neighbouring house to this latter one one individual was attacked by rheumatic fever on the 13th June 1885. On the 15th of March 1886 another case occurred in the centre house of the three, and in a house exactly opposite an individual was attacked on the 10th of August 1886.

The same gentleman reports two other cases in which in two adjoining houses within the space of 1½ months a case occurred in each of them.

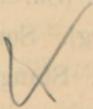
The following practitioners have taken part in the collective investigation concerning the etiology of rheumatic fever:

Augestad, (Grøn). H. Berner, (Christiania). H. Birch, (Holmestrand). F. Blich, (Arendal). P. Blich, (Arendal). Blomberg, (Christiania). J. Boyson, (Skien). U. Bugge, (Ringsaker). Chr. Bull, (Evje). E. Bull, (Christiania). M. Bøckman, (Throndhjem). T. Conradi, (Selbu). Dannevig, (Tønsberg). C. A. G. E. Dietrichson, (Nordre Fron). Drejer-Aasnæs, (Solør). Dørum, (Elverum). Chr. Eger, (Kabelvaag). C. A. Engh, (Indre Sogn). J. Frost, (Vossevangen). Gladtved, (Drangedal). G. M. K. Graarud, (Holmestrand). A. F. Grøn, (Christiania). Klaus Hansen, (Bergen). Hartvig, (Kragerø). J. M. Heidenreich, (Opdal). Heimbeck, (Langesund). Th. Henriksen, (Trygstad). Hoel, (Birid). J. Hoffmann, (Sandnæs). J. W. K. Holm, (Næs, Hedemarken). O. Holm, (Christiania). J. Holmboe, (Tromsø). J. W. Holmboe, (Gvarv). M. Holmboe, (Rotvold). F. Holst, (Tinn). J. C. Holst, (Drammen). C. A. Holter, (Hougsund). C. N. Holtermann, (Fredrikstad). C. L. R. Hørbye, (Christiania). A. Johannesen, (Bærum). O. Johnsen, (Sarpsborg). Jønsberg, (Hønefos). E. Kaurin, (Molde). Kinck, (Strandebarm). F. Kittel, (Arendal). C. Kjøning, (Christiania). C. S. Kjelland, (Throndhjem). C. A. Kjær, (Lom). K. J. A. Knutssøn, (Solør). Kolbjørnsen, (Søndre Land). Krüger, (Søndre Midthordland). J. Langberg, (Aas). H. Lindboe, (Christiania). H. Lindemann, (Ringsaker). J. R. Lossius, (Farsund). J. C. Lund, (Hedemarken). Ivar Lund, (Trondnæs). A. Martens, (Bergen). H. Meyer, (Sogn). E. Mohr, (Tromsø). Chr. Munch, (Christiania). B. M. Müller, (Røros). E. Nielsen, (Stegen). J. F. Nielsen, (Vignæs). K. E.

Nilssen, (Frosten). A. Olsen, (Ringsaker). Oxholm, (Mandal).
 E. Randers, (Aalesund). H. Rogge, (Fredrikshald). Th. Roll,
 (Christiania). Rummelhoff, (Risør). Chr. Rømcke, (Halling-
 dal). A. Scheel, (Christiania). C. A. Schjelderup, (Tronde-
 næs). Chr. Schmidt, (Sandvigen). Chr. Schou, (Førde).
 O. Schøyen, (Ytre Namdal). L. Selmer, (Surendal). H. F.
 Smith, (Molde). Sommerfeldt, (Spydeberg). Sontum, (Lyng-
 dal). Sødving, (Aalesund). J. H. G. Stang, (Sandnæs).
 R. Steenstrup, (Fredrikswærn). D. Synnestvedt, (Rollag).
 R. Torkildsen, (Bergen). H. J. Thue, (Christiania). H. J.
 Vetlesen, (Hamar). Wiesener, (Bergen). Wildhagen, (Dram-
 men). W. Wille, (Melhus). P. Winge, (Christiania).

Besides these the replies received from two practitioners were not signed.

Finally reports have been received from the two medical departments of the National Hospital.



Report
on
the investigations concerning some points in the etiology
of
Chorea
by
D^{rs} *C. Boeck* and *E. Bull.*

The list of questions forwarded to the medical practitioners throughout the country, concerning some points in the origin and cause of chorea, has brought in 86 replies from practitioners besides reports from the medical departements of the National Hospital, and the Lying-in Hospitals Polyclinical Institution for diseases of children. Of the said 86 replies, 20 are of no real value as answers to the question, as they only illustrate, that chorea has not been observed by the gentlemen concerned, during the years 1882—86, and thus indicate, that chorea must be an excessively rare disease in their districts. The other 66 forms, as also those received from the National Hospital and the Polyclinical Institution for diseases of children, contain replies to all or some of the questions, and from a comparison of these replies the following results have been derived.

According to the answers received chorea has been observed
 in 1882, 1883, 1884, 1885, 1886
 in 25 cases, 27 cases, 30 cases, 76 cases, 62 cases.

From these figures however, it must not be presumed
 that in the years 1885—86 chorea appeared to any greater
 extent than the previous years.

The reason of the observations being so much more
 numerous in the last two years, will partly be found in the
 fact, that various colleagues, who have sent in replies, only
 began work on their own account during the last 2—3 years;
 and partly, because the request to take part in collective
 investigation, which was sent out about 2½ years ago, has
 caused a more careful record to be kept of all the cases,
 which appear, than previously.

The 138 cases during the years 1885—86 form the
 basis of the present report.

In 136 of these the month is stated, in which the doctor
 first observed them; it will thus be seen that these took place in:

January in	11	instances
February	16	«
March	17	«
April	13	«
May	17	«
June	9	«
July	8	«
August	10	«
September	6	«
October	5	«
November	13	«
December	11	«

136 instances.

The age and sex are given in all these cases.

It appeared in:

Age in years.	1	2	3	4	5	6	7	8	9	10
Males				2		3	3	6	5	7
Females		1			1	3	5	7	9	10
Total		1		2	1	6	8	13	14	17

Age in years.	11	12	13	14	15	15-20	20-25	25-30	Total.
Males	3	5	9	2	3	3	2	-	53
Females	6	14	10	6	3	8	1	1	85
Total	9	19	19	8	6	11	3	1	138

From the received replies it appears, that it appeared in:

	Fair.	Dark.	Individuals with dark hair and blue or grey iris.	Individuals with fair hair and brown iris.
Males	30	11	3	1
Females	48	16	10	1
Total	78	27	13	2

Did the patient ever suffer from acute or sub-acute rheumatism? If so, how long before or after chorea?

Replies to this question have been received concerning 124 instances. From these it will be seen, that 95 patients have not suffered from rheumatism previously¹⁾, whilst in 29 cases (23 $\frac{1}{2}$ per cent) acute or sub-acute rheumatism has been observed for a longer or shorter time before the appearance of chorea.

On closer inquiry into the individual cases it appears, that: in 6 cases chorea appeared immediately after rheumatism

« 2	«	«	«	8 days	«	«
« 1	«	«	«	14	«	«
« 1	«	«	«	1 month	«	«
« 4	«	«	«	1 $\frac{1}{2}$ months	«	«
« 6	«	«	«	2	«	«
« 2	«	«	«	3	«	«
« 1	«	«	«	3 $\frac{1}{2}$	«	«
« 1	«	«	«	4	«	«
« 1	«	«	«	6	«	«
« 1	«	«	«	1 year	«	«
« 1	«	«	«	4 $\frac{1}{2}$ years	«	«
« 2 instances the time between is not stated.						

Total 29 cases.

Concerning the first group, in which chorea appeared immediately after rheumatism, it can further be shown that one of the 6 cases was rheumatism after scarlet fever.

¹⁾ In some of these 95 cases it is stated, that the patients have had, for instance, pain in a certain joint without fever, or that they have had slight rheumatic pains.

In two other of these cases it was a relapse of chorea, which occurred in 1885—86. The rheumatism, which had immediately preceded the first appearance of chorea, in one patient had occurred 1 year, in the other 2 years before the relapse.

In the other group, where rheumatism occurred 8 days previous to chorea, one of the two cases under observation was a relapse 7 years after the first attack of chorea.

Finally, concerning the 6th group, where chorea appeared 2 months after rheumatism, amongst the 6 cases, one was a relapse 5 years after the first attack of chorea. In one other of these 6 cases the patient had suffered from rheumatism on 3 occasions, respectively 3 years, 2 years, and 2 months previously. Chorea only appeared after the last of these three attacks.

The next question is :

Was there any affection of the heart or pericardium before the attack of chorea: if so, what; and how long before?

This has been answered concerning 121 instances. In 104 cases it is reported, that affection of the heart did not precede chorea, whilst in 17 cases (14 per cent) various affections or symptoms of heart affection were present before the appearance of chorea. These 17 cases may be arranged according to the following table.

Pericarditis	3 cases
Mitral valvular affection	5 «
Valvular affection (without further information)	1 «

Systolic murmur over the left ventricle	3 cases
Diastolic —	1 case
Enlargement of the heart without murmur	2 cases
Palpitations	2 "

Total 17 cases.

Of the cases of pericarditis one had occurred two years before chorea, the other two immediately preceded the appearance of chorea.

Concerning the affection of the mitral valves it is shown, that in one instance the valvular affection appeared 5—6 weeks before chorea; in one instance 2 months, in another 2, and in a third 3 years previously.

Particulars are wanting in the 5th case. This also applies to the other cases with the exception of one patient with enlargement of the heart without murmur, in whom the affection of the heart was observed some months before the appearance of chorea.

Concerning the two cases of palpitation, it is reported, that one had occurred during acute rheumatism, in the other it is shown, that the action of the heart was easily affected.

The question:

Has the patient been sufficiently nourished of late?

has been replied to as regards 126 cases. In 64 cases the food has not been poor, but in 62 cases (49 per cent) it was found deficient.

In 29 cases (5 males, 24 females) the patients are described as anæmic, in 33 cases (11 males and 22 females) as badly nourished.

The question:

Was there any serious anxiety or worry just before the attack of chorea? Of what kind?

has been replied to concerning 113 instances. In 83 cases no mental disturbance was found or other debilitating influences; while on the other hand in 30 cases, (26½ per cent), it appeared, that instances had occurred, which can be referred to such.

Of all psychical influences fright is that, which is most commonly attributed as the cause of chorea. In 10 of the 30 cases fright from various causes is directly given as the cause affecting the mind, which has immediately preceeded chorea, and in several other instances this is undoubtedly connected with the more complicated mental impressions, which have affected the patients.

Thus for instance in the case of 2 children, where the peace of home was disturbed by dissensions between the parents, which in one case led to personal assaults. Also in the case of an unfortunate natural child, who was illtreated by its foster parents; furthermore in the case of

a child, who got chorea two days after it had fallen into the sea.

Amongst other things affecting the mind, which are reported, may be mentioned religious influence in one case. Disputes about heritage, with following sleeplessness in another, pregnancy in an unmarried female, in a third. Hasty and quarrelsome disposition, bad humour, teasing or annoyance, is reported in three cases.

Debilitating influences of another kind are also mentioned as immediately preceding chorea, such as bodily over-exertion in the case of 4 patients; as a 5th case that of a child, who suffered from having to go an excessively long way to school, may be taken into consideration. General slight suffering, partly on account of poor circumstances, is mentioned in 2 cases. One patient got chorea after receiving a kick in the abdomen.

Finally in a couple of instances the influence of the temperature is stated; in one the patient was insufficiently clad and suffered from cold in the winter time; in the other the patient had been exposed on board a steamer to great heat from both the sun and engines at the same time.

The final question is:

Was the chorea preceded by any other illness or indisposition? Of what kind?

Replies to this question have been received concerning 106 patients. In 90 of these cases no other illness had

been observed before chorea. In 16 cases (15 per cent) the following illnesses are stated to have been previously present:

Scarlet fever	3 cases ¹⁾
Erythema nodosum	1 « ²⁾
Catarrhus intestinalis chron:	2 «
Icterus catarrhalis	1 « ³⁾
Oxyuris	3 «
Inflammation of the brain	1 « ⁴⁾
Contusio capitis	2 « ⁵⁾
Eclamptic attacks	1 «
Rickets	2 «

The contributions towards the above mentioned results were received by the committee from the following practitioners:

Andvord, (Søndre Aurdal). H. Berner, (Christiania). P. Blich, (Arendal). Blomberg, (Christiania). E. Bull, (Christiania). U. Bugge, (Ringsaker). P. Conradi, (Selbu). A. Daae, (Kragere). Dannevig, (Tønsberg). C. Dietrichson (Nordre Fron). Engh, (Sogndal). Gjestland, (Tysnæs) Gladtved, (Drangedal). G. Graarud, (Holmestrand). A. F. Grøn, (Christiania). Klaus Hansen, (Bergen). Hartwig, (Kragere). Th. Henriksen, (Trygstad). I. M. Heidenreich, (Opdal). Hoel, (Birid). Holm, (Christiania). M. Holmboe,

¹⁾ In 2 cases 6 months previously, in 1 case shortly before chorea. ²⁾ 1 month previously. ³⁾ Came on at the same time as, or immediately before chorea. ⁴⁾ 1 year previously. ⁵⁾ In one case contusion of the head with wounds and symptoms of commotio cerebri 10 years previously, in one case a few days before the appearance of chorea.

(Rotvold). Frithj. Holst, (Tinn). I. C. Holst, (Drammen). Holter, (Hougsund). Chr. Holtermann, (Fredrikstad). A. Johannesen, (Bærum). O. Johnsen, (Sarpsborg). Jønsberg, (Hønefos). Edv. Kaurin, (Molde). Chr. Kielland, (Trondhjem). Kittel, (Arendal). Kjøning (Christiania). Knutssøn, (Solør). F. C. Leegaard, (Laurvik). Hj. Lindboe, (Christiania). Lindemann, (Ringsaker). J. R. Lossius, (Farsund). Iver Lund, (Trondenes). H. Meyer, (Sogn). M. Møller, (Røros). Chr. Munch, (Christiania). E. Nielsen, (Stegen). J. F. Nielsen, (Vignæs). Anton Olsen, (Jevnaker). Oxholm, (Mandal). Einar Randers, (Aalesund). H. Rogge, (Fredrikshald). Th. Roll, (Christiania). Rømcke, (Hallingdal). Rummelhoff, (Risør). A. Scheel, (Christiania). C. A. Schmidt. (Sandvigen). O. B. Schøien, (Nærø). H. F. Smith, (Molde). H. Sommerfelt, (Spydeberg)). J. G. H. Stang, (Sandnæs). Steenstrup, (Fredriksværn). Sødning, (Aalesund). Synnestvedt, (Rollag). H. J. Thue, (Christiania). H. J. Vetlesen (Hamar). Wiesener, (Bergen). Wildhagen, (Drammen). W. Wille, (Melhus). O. Winge, (Christiania).

Besides these, reports have been received from the medical departements of the National Hospital as well as from the Lying-in Hospital's Policlinical Institution for diseases of children.

The following practitioners have moreover returned the forms of questions stating, that chorea has not appeared in their districts in the years 1882—1886¹⁾:

Augestad, (Hadeland). F. Borchgrevinck, (Ibestad). Chr. Bull. (Evje). Drejer (Aasnæs). Dørum, (Elverum).

¹⁾ Two of these practitioners have added, that during a still longer period they have not observed any case of chorea.

Eger, (Kabelvaag). Frost, (Vossevangen). W. Holm, (Næs, Hedemarken). J. Holmboe, (Gvarv). Joh. Holmboe, (Tromsø). C. Hørbye, (Christiania). C. A. Kjær, (Lom). Krüger, (Søndre Midthordland). Alfred Martens, (Bergen). K. E. Nilsen, (Frosten). Schjelderup, (Trondenæs). Torkildsen, (Bergen). Also from 3 practitioners, who have not signed their names.

Report
on
the investigation concerning some points in the etiology
of
Cancer.

(Malignant disease including Sarcoma &c)

by

Prof. *E. Winge.*

1. Concerning the geographical distribution of this disease in Norway during the last 5 years, the replies, received from the medical practitioners in the land, to the series of questions issued throughout the kingdom furnish but incomplete and unsatisfactory details. Only 94 replies have been received from the various practitioners throughout the country concerning 531 cases, which occurred during the years 1885, and 1886, whilst it is stated, that in the years 1882, 1883, 1884: 284, 300 and 310 cases were treated respectively. When these figures are compared with the Official Medical Report, which states the numbers up to the year 1884, it will be seen, that a far greater number of cases are mentioned (about 5 times as many) as occurring in the years 1882 to 1884, and the numbers given for 1885 and 1886 are even less than in the previous 3 years. It must not be supposed

however, that any diminution of the disease has taken place throughout the kingdom, notwithstanding that 2 of the practitioners really believe, that such is the case within their districts, as the difference is but slight, and it can also be seen, that somewhat many of the practitioners in these 5 years have resided at different places, so that it is difficult to compare these 3 years 1882—1884 with the last 2 years.

In the official statistics the cases treated are:

in 1882:	1481,	of which	892	died.
« 1883:	1456,	«	«	959
« 1884:	1489,	«	«	1006

Now our medical statistics only contain a statement concerning about 50 per cent of the total deaths (Viz, 51 per cent in 1882, 50 per cent in 1883, 52 per cent 1884). If we therefore venture to make this percentage a basis for a calculation of the true number of deaths from cancer in Norway, the reported number of deaths must be doubled in order to make it right — in other words, the mortality from cancer in 1882 should be about 1800, in 1883 about 1900, in 1884 about 2000, and the total number of cases of cancer treated each year have probably been about 2960. As they in the replies to our series of questions for the years 1882—86 only amount to an average of about 285 for each year, it is probable, that only about $\frac{1}{10}$ of the total number of cases of cancer are mentioned. That the reports received are likewise inadequate to throw a light on the comparative extension (frequency) in the various medical districts of the kingdom may be clearly seen, when the numbers reported in reply to our queries are compared with those detailed accounts from the county authorities in the official statistics for 1882—84.

The replies to the series of questions have been received from the following counties

1.	Christiania (city of)	from 12 private practitioners and the 2 medical divisions of the National Hospital concerning 70 cases.
2.	Akershus	Amt (county) from 4 practitioners concerning 33 cases
3.	Smaalenenes	« « « 4 « 30 «
4.	Buskeruds	« « « 6 « 41 «
5.	Jarlsberg & Laurviks	« « « 4 « 32 «
6.	Hedemarkens	« « « 7 « 59 «
7.	Christians	« « « 7 « 32 «
8.	Bratsbergs	« « « 5 « 25 «
9.	Nedenæs	« « « 6 « 25 «
10.	Lister & Mandals	« « « 3 « 16 «
11.	Stavanger	« « « 2 « 2 «
12.	Søndre Bergenhus	« « « 4 « 25 «
13.	Bergen (city of)	« « 3 « 14 «
14.	Nordre Bergenhus Amt	« « 3 « 10 «
15.	Romsdals	« « « 6 « 25 «
16.	Søndre Trondhjems	«
	(including the city of Trondhjem)	« « 7 « 42 «
17.	Nordre Trondhjems Amt	« « 1 « 5 «
18.	Nordlands	« « « 2 « 6 «
19.	Tromsø	« « « 6 « 39 »
20.	Finmarkens	« « « 0 « 0 «

Total 94 « 531.

From the official medical statistics the following return of deaths from cancer in the counties has been obtained.

(Osteosarcoma has not been included amongst these).

	1882.	1883.	1884.	Total.
1. Christiania (city of)	86	90	102	278
2. Akershus Amt (county)	64	51	67	182
3. Smaalenenes « «	49	60	67	176
4. Buskeruds « «	65	78	79	222
5. Jarlsberg & Laurviks « «	61	57	59	177
6. Hedemarkens « «	60	85	84	229
7. Christians « «	55	58	65	178
8. Bratsbergs « «	52	65	48	165
9. Nedenæs « «	36	34	38	108
10. Lister & Mandals « «	27	25	33	85
11. Stavanger « «	29	31	26	86
12. Søndre Bergenhus « «	32	28	37	97
13. Bergen (city of)	33	35	35	103
14. Nordre Bergenhus Amt «	31	41	33	105
15. Romsdals « «	33	41	42	116
16. Søndre Trondhjems « «	68	55	76	199
17. Nordre « « «	38	42	42	122
18. Nordlands « «	40	44	36	120
19. Tromsø « «	17	15	18	50
20. Finmarkens « «	7	9	4	20

In order that these figures may approximately be compared with the comparative frequency of the disease in the counties, it is necessary to regard them according to the size of the population. If one reckons the percentage between the average numbers for the 3 years and 10 000 living (according to the census of 1875) the following result is obtained.

1.	Bergen (city of)	9.0	per cent.
2.	Buskeruds Amt (county)	7.25	- «
3.	Christiania (city of)	7.0	- «
4.	Jarlsberg & Laurviks Amt	6.8	- «
5.	Bratsbergs «	6.6	- «
6.	Hedemarkens «	6.3	- «
7.	Akershus «	6.0	- «
8.	Søndre Trondhjems «	5.7	- «
9.	Smaalenenes «	5.4	- «
10.	Christians «	5.01	- «
11.	Nedenæs «	5.0	- «
12.	Nordre Trondhjems «	4.8	- «
13.	Nordre Bergenhus «	4.1	- «
14.	Nordlands «	3.8	- «
15.	Lister & Mandals «	3.7	- «
16.	Romsdals «	3.3	- «
17.	Tromsø «	3.1	- «
18.	Finmarkens «	2.8	- «
19.	Søndre Bergenhus «	2.7	- «
20.	Stavanger «	2.6	- «

Sex.

In these 531 cases the sex of the patients was as follows.

Males 278.

Females 253.

Age.

The following is a statement of the ages of the patients.

	1	2	3	4	5	6
Sex.	Age 0—9 Years.	Age 10—19 Years.	Age 20—29 Years.	Age 30—39 Years.	Age 40—49 Years.	Age 50—59 Years.
Males	1	-	1	19	31	58
Females	1	1	6	15	27	66
Total	2	1	7	34	58	124

	7	8	9	10	11	12
Sex.	Age 60—69 Years.	Age 70—79 Years.	Age 80—89 Years.	Age 90—100 Years.	Age not stated.	Total.
Males	92	62	14	-	-	278
Females	70	51	7	2	7	253
Total	162	113	21	2	7	531

In the official statistics for 1882 to 1884 inclusive the following statement of deaths according to age and sex is given as follows ;

	1	2	3	4	5	6
Males	4	4	9	56	169	388
Females	3	2	22	84	200	437
Total	7	6	31	140	369	825

	7	8	9	10	11	12
Males	474	217	41	-	-	1362
Females	395	210	53	7	-	1413
Total	869	427	94	7	-	2775

These two tables, as one may see, almost completely agree.

The age most numerously represented during all the 5 years is from 60 to 69: after which comes 50 to 59: then 70 to 79: then 40 to 49: 30 to 39 follows, then 80 to 89. Then follows with a comparatively even number of figures 20 to 29: and finally 0—9, likewise 90 to 100, which in both tables have each the same numbers. They are least represented in both the classes; 10—19.

The division of the sexes in the different classes of age is in both lists somewhat different: in the official tables for the years from 1882 to 1884 the female sex is the most numerously represented and is considerably in excess between the ages 50 to 59, whilst in our list most are found under the table of ages 60 to 69. The males are however more numerously represented in this class than females, who are almost as numerous as in the table of ages from 50 to 59.

In both there are comparatively many women between the ages of 20 to 29 and above 90 only women. In our list, between the ages of 80 to 89, the males are comparatively more numerous, but in the official report the reverse is the case. In the table of ages from 70 to 79 nearly the same proportion exists in both lists.

As regards the seat of the cancer, the replies to the series of questions state it to be as follows:

In the ventriculus it occurred in 141 men, 94 women, Total 235.

- « breasts	« « «	34	«	«	34.
- « lips — (almost entirely in the lower lip).	« « 26	6	«	«	32.

						Total.
In the uterus it	occurred in	- men,	31 women,	31.		
« « hepar	« «	17	« 15	«	32.	
« « ventriculus & hepar	« «	14	« 9	«	23.	
« « oesophagus	« «	11	« 4	«	15.	
« « abdomen (peritonæum with or without the stomach or bowels).	« «	9	« 9	«	18.	
« « skin and muscles (body & extremities).	« «	8	« 5	«	13.	
« « maxillæ	« «	6	« 8	«	14.	
« « other bones	« «	8	« 3	«	11.	
« « bowels (exclusive of rectum).	« «	6	« 4	«	10.	
« « face	« «	3	« 6	«	9.	
« « rectum	« «	2	« 4	«	6.	
« « tongue	« «	2	« 4	«	6.	
« « mouth and gullet	« «	2	« 4	«	6.	
« « penis	« «	6	« -	«	6.	
« « eyes	« «	2	« 3	«	5.	
« « bladder	« «	5	« 1	«	6.	
« « vulva	« «	-	« 3	«	3.	
« « testes	« «	2	« -	«	2.	
« « ovaries	« «	-	« 3	«	3.	
« « kidneys	« «	1	« 1	«	2.	
« « prostata	« «	2	« -	«	2.	
« « pancreas and duct. choledochus	« «	1	« -	«	1.	
« « gl. submaxillaris	« «	-	« 1	«	1.	

		Total.
In the mediastinum	it occurred in 1 man, - woman, 1.	
melanosarcoma	}	
multiplex		« « « 1 « - « 1.
not mentioned		« « « 2 men - « 2.
Total M. 278 F. 253. T. 531.		

Table showing the chief seats of the disease at various ages.

	Years								No age stated.
	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80-89.	90-100.	
ventriculus, males ...	0	9	15	40	46	28	3	0	-
— females .	1	3	7	29	36	14	3	0	1
the breasts, females ..	1	3	5	8	8	9	0	0	-
the womb « ..	2	4	6	11	6	1	0	0	1
hepar, with and with- out ventriculus									
males	0	2	4	1	15	8	1	0	-
females	0	0	1	5	8	7	2	0	1
the bowels and rectum,									
males.....	0	1	1	0	1	4	1	0	-
females	0	1	3	2	0	1	0	0	1
the lip, males	0	1	3	5	8	5	4	0	-
females	0	1	0	2	1	1	0	1	-
oesophagus, males	0	0	3	0	6	2	0	0	-
females	0	0	0	2	0	2	0	0	-
the maxillaries, males	0	1	0	3	0	2	0	0	-
females	0	0	0	0	0	7	0	0	1

Under 10 years of age there were 2 patients, one with cancer in the mouth, the other with sarcoma of the eye.

Between the ages of 90 and 100, there were two women, one of whom suffered from cancer of the lip, the other from cancer in the face.

Etiology.

2. Is the patient habitually a large eater, a moderate eater, or a small eater?

I here form 2 classes: 1) cancer of the stomach, in which is included those cases, in which the ventriculus was also attacked.. 2) Cancer in other parts.

	Large eaters.	Small eaters.	Moderate eaters.	Un-known.	Total.
Cancer of stomach.	21	42	112	83	258
Cancer in other parts	11	51	119	92	273
Total.....	32	93	231	175	531

From this there will therefore be seen some excess of large eaters amongst patients afflicted with cancer of the stomach when compared with those suffering from cancer in other parts; but the small eaters are however in the majority (about double as many with cancer of the stomach, 5 times as many with cancer in other parts, 3 times as many as all cases of cancer combined). The majority in both classes, and in the same proportion, are the moderate eaters. Amongst cancer patients on the whole the large eaters are hardly more numerous than in the rest of the population (about 6 per cent).

3. Is the patient habitually a large, a moderate, or a small eater of meat?

	Much meat.	Little meat.	Ordinary fare.	Un- known.
Cancer of stomach.....	12 ¹⁾	118 ²⁾	75	53
Cancer in other parts....	12 ²⁾	115	81	65
Total	24	233	156	118

¹⁾ Of these in case not in the last 5 years. ²⁾ Of these 10 were large eaters (but 2 hardly ever touched meat). ³⁾ Amongst these 2, who were otherwise moderate eaters.

It thus appears, 1st that consumption of meat has not been more productive of cancer of the stomach than of cancer elsewhere. 2^{ndly} that the majority of both classes eat but little meat.

4. Has the patient habitually drunk beer, wine or spirits? Indicate the amount as for as you can!

I here divide the disease into 3 classes. 1st, cancer of the stomach, in which is likewise included cancer oesophagi, and those cases, in which the ventriculus is likewise affected; 2^{ly} cancer of the liver: 3^{ly} cancer in other parts.

	Intemperate.	Abstainers.	Temperate ¹⁾ .	Unknown.	Total.
Cancer of stomach.	29 ²⁾	144	70	29	227
Cancer of liver . . .	5 ³⁾	18	7	1	31
Cancer in other parts	15 ⁴⁾	115	47	51	228
Total	49	277	124	81	531

¹⁾ With these are also included those cases, which in question 4 come under the reply «No». ²⁾ Of whom 4, «not for several years»: and one «to a great extent». ³⁾ Of whom 2, «not for several years». ⁴⁾ Of whom 5, «not for several years».

Drink thus appears to have most influence on cancer of the liver, then upon cancer of the stomach; the number of abstainers is however the most numerous in all cases of cancer, i. e. considerably more than half (61.5 per cent) of all those, concerning whom we have received information being abstainers, thus from 5 to 6 times as numerous as the intemperate. The number of cancer patients returned as being «temperate» is possibly not quite correct, as all the cases, in which the enquiry as to their being intemperate is replied to in the negative (and who are not stated to be abstainers) are included under this denomination —. They are about double as numerous as the intemperate.

The inebriant most commonly indulged in was native brandy (potato spirit): only in 3 cases is wine recorded, and in 2 instances beer only.

5. Was there any severe anxiety or worry shortly before the appearance of the disease? Of what kind?

The information received I have divided in the following manner:

family troubles	59 cases
pecuniary difficulties	44 «
anoyance, disappointments, }	15 «
home sickness	
«yes» without further }	10 «
particulars	
«no» without further }	258 «
particulars	
«unknown» and unanswered in	145 «

Total 531 cases.

Therefore in $\frac{1}{3}$ rd of the cases, of which we have information, this inducing cause has been shown to be present.

6. Was there any illness or indisposition previous to it's presumed appearance? Of what kind?

Trauma (contusion, vulnus, violent muscular exertion) is returned as the inducing cause of:

cancer	ventriculi	in 16 instances.
«	hepatis	« 2 «
«	oesophagi	« 1 instance.
«	vesicæ	« 2 instances.
«	mammæ	« 5 «
«	uteri	« 1 instance.
«	testis	« 1 «
«	faciei	« 5 instances.
«	linguæ	« 4 «
«	maxillæ	« 1 instance.
«	capitis	« 3 instances.
«	trunci	« 4 «
«	extremitatum	« 5 «

Total 50 instances.

Thus these are the inducing causes in 12.6 per cent of these kinds of cancer (397 cases), and 9.4 per cent of the whole.

Excessive use of tobacco is given as the cause in 47 instances; naturally almost entirely in men, therefore in 17 per cent of the total number of males. If we take into consideration only the classes of cancer amongst which this appears as a cause, and which include 340 cases, the proportion would be 23 per cent or about $\frac{2}{3}$ ths.

They are as follows:

cancer of the lip: in 18 instances out of 32 (almost all smoked short clay pipes)	(26 males).
cancer of the maxillæ in 2	« « « 13 (6 «).
« « « submaxillary . . . « 1	« « « 1 (0 «).
« « « tongue « 1	« « « 6 (2 «).
« « « mouth « 2	« « « 6 (2 «).
« « « oesophagus « 1	« « « 15 (11 «).
« « « ventriculus « 18	« « « 235 (141 «).
« « « hepar « 4	« « « 32 (17 «).
<hr/>	
Total 47	340 (205 males).

From this it appears clearly, that the regions of the mouth are very much exposed to the injurious influence of tobacco. About $\frac{3}{4}$ ths (64 per cent) of all the male patients with cancer in these parts have used tobacco in excess. It is worthy of notice, that the only patient with cancer of the submaxillary had used tobacco in excess, and this was a woman.

Previous inflammation in the same organ or one

connected with it is reported in the following number of instances:

cancer ventriculi	61 instances	
(of which chronic gastritis and chronic dyspepsia ¹⁾	58 instances, ulcus simplex in 3 instances).	
« hepatitis	4	—
(icterus with hypertrophy of the liver in 1 instance (?) chronic gastritis and dyspepsia in 2 instances, chronic catarrh of the bowels in 1 instance).		
« maxillæ and oris	3	—
(without further details)		
« of the breast	1	— (mastitis).
« oris of and lips	2	— (old ulceration).
« of the nose	2	—
« vesicæ	1	—
« renis	1	— (calculi & hydronephrosis).
« of the womb	4	— (endometritis catarrh. chr).
« femoris	1	— (periostitis cum fistulis).
« parietis abdominis	1	— (phlegmone).
« glutæi	1	— (furunculus).
« cruris	1	— (ulcus varicosum).

¹⁾ Some of these are no doubt uncertain, as the duration is not always given. In many instances however «for many years» is stated.

Other complaints, which are returned as the inducing cause of cancer ventriculi :

In 1 instance: complete toothlessness for 20 years.

« « « : ruminatio.

« « « : neuralgia intercostalis sinistra.

« « « : strong and lasting bronchial catarrh with abuse of chloral and morphia.

« « « : piles.

« « « : chronic pneumonia lob. inf. sinistri.

« « « : Ménière's disease.

« « « : many years disease of the womb.

cancer hepatis:

in 1 instance: eczema chronicum.

cancer of the womb:

in 1 instance: proctorrhagia chronica.

« « « : fibromata uteri.

« 2 instances: prolapsus uteri chron.

« « « : many confinements.

« 1 instance: chronic rheumatism.

cancer ovariorum:

in 1 instance: syphilis during her first marriage, (10 years previously, by contagion from the husband. Married a second time after 8 years widowhood, 2 years before the outbreak of cancer).

cancer of the breast:

in 1 instance: ischias 2 or 3 years previously.

cancer of the penis (præputii) in 1 instance: condylomata præputii [3 years previously, which were in a different part to that affected by cancer.

cancer of the lower lip:

in 1 instance was that of a deaf and dumb person, from perpetually sucking the lower lip.

cancer antri Highmori:

in 1 instance: polypus in the nose and snuff.

cancer faciei:

in 3 instances: old warts.

cancer lacunaris cranii:

in 1 instance: old wounds on top of the head from burns in childhood badly treated and not attended to and hidden under a wig for very many years.

cancer genu:

in 1 instance: hydarthrus traumaticus.

cancer hallucis:

in 1 instance: old open sore.

7. Hereditary predisposition or the prevalence of cancer in the family, is mentioned in the following instances:

1. The father suffered from cancer in 15 instances: in 4 of these cases the sister, brother, or the paternal uncle also were afflicted. In 1 instance the seat of the disease was the same. In 4 of the 15 instances the circumstances were not quite established.
 1. a. paternal uncle in 2 instances.
 1. b. paternal aunt and maternal aunt in 1 instance.
2. The mother had cancer in 14 instances (including 1 case, where the disease was not established but supposed to exist).

In 3 instances the patients sisters also. (In two of these, 1 sister, in the 3rd, 3 sisters): in 1 case both the brother and maternal grandfather had cancer.

2. a. The mothers sister in 2 instances. In one of these cases the mother's sister's son was also a sufferer from cancer. The seat of the disease being the same as in the patient, namely the lip. Tobacco was not the cause.
2. b. The mother's sister and father's sister at the same time. (See above 1 b).
3. Father's parents, in 3 instances (1 in the grandfather, 2 in the grandmothers).
4. Mother's parents in 1 instance (the mother's father); in this case both brother and mother were also affected. (See above under 2).
5. Brothers and sisters in 30 instances (of which however 6 instances uncertain). In 1 instance 3 sisters. In 3 instances 2 brothers and sisters. In 6 instances also the father (3 instances) or the mother (3 instances).
6. The son had died in 1 instance 5 years previously from cancer. A cousin in one case. «Cancer in the family» without further particulars is returned in 1 instance.

«No relatives suffering from cancer» is given in 230 instances.

The question is unanswered, or «not known» is the reply in 240 instances:

The relationship is thus stated concerning 65 cases, of which however 11 are uncertain. Deduc-

ting these 54 remain, which amongst the 291 cases, where the circumstances are given, amount to. 18.55 per cent.

If the whole number of cases of cancer are taken (531), the amount would be 10.17 per cent.

In 9 of the 54 instances the patients were doubly related or more than doubly related to other sufferers.

Finally it may be added, that 2 cases are mentioned, in which both husband and wife suffered from cancer, not at the same time, but within the space of 6 months to 3 years. One of these might possibly have arisen from contagion. The patient was a man of 85 with cancer of the lip, who certainly had smoked tobacco though but little. He lived with his old wife in a wretched cabin (hut). The wife had died 3 years previously of a terrible putrid cancer in the face. Cancer was unknown in his family.

The Medical practitioners, who have replied to the series of questions are:

Augestad, (Brandbo, Hadeland). Berner, (Christiania). Binneballe, (Sundal). Birch, (Holmestrand). Blich, F (Arendal). Blich, P. (Arendal). Blomberg, (Christiania). Bugge, (Ringsaker). Bull, (Evje). Bull, E. (Christiania). Bøckmann, (Trondhjem). Conradi, (Selbo). Dannevig, (Tønsberg). Dietrichson, N. (Fron). Dreier, (Aasnes). Dørum, (Elverum). Eger, (Kabelvaag). Engh, (Indre Sogn). Frost, (Vossevangen). Gjestland, (Tysnæs). Glatvedt, (Drangedal). Graarud, (Holmestrand). Grøn, A. F., (Christiania). Hansen,

Kl. (Bergen). Hartwig, (Kragerø). Heimbeck, (Langesund). Heidenreich, (Opdal). Henriksen, (Trygstad). Hoel, (Birid). Holm, O., (Christiania). Holm, W., (Næs, Hedemarken). Holmboe, Gvarv, (Thelemarken). Holmboe, (Tromsø). Holst, (Drammen). Holst. F., (Tin). Holter, (Eker). Holtermann, (Fredrikstad). Hørbye, (Christiania). Jebe, (Trondhjem). Johannesen, (Bærum). Johnsen, (Sarpsborg). Jønsberg, (Hønefos). Kaurin, (Molde). Kjær, (Lom). Kjelland, (Trondhjem). Kinck, (Strandebarm). Kittel, (Arendal). Kionig, (Christiania). Knutsen, (Solør). Kolbjørnsen, (Søndre Land). Krüger, (Os, Søndre Midthordland). Langberg, (Follo). Lindboe, (Ljan). Lindemann, (Brumundal). Lossius, (Farsund). Lund, Ivar, (Trondenæs). Martens, A., (Bergen). Meyer, (Vik, Sogn). Mohr, (Tromsø). Müller, M., (Røros). Nielsen, E. (Stegen, Vaag, Nordland). Nielsen, I. F., (Vignæs, Haugesund). Olsen, A., (Jevnaker). Oxholm, (Mandal). Parelius, (Lyngen). Randers, E., (Aalesund). Rode, E., (Christiania). Rummelhof, (Risør). Rømcke, (Aal, Hallingdal). Schjelderup, (Trondenæs). Scheel, (Christiania). Schou, (Søndfjord). Schøien, (Namdal). Schmidt, (Sandviken). Selmer, (Balsfjord). Selmer, (Surendal). Smith, A. F., (Molde). Sommerfeldt, (Spydeberg). Sontum, (Lyngdal). Stang, (Sandnæs). Steenstrup, (Fredriksværn). Støren, (Brandbo, Hadeland). Synnestvedt, (Rollag). Sørdring, (Aalesund). Tandberg, (Risør). H. J. Thue, (Christiania). Vetlesen, (Hamar). Wiesener, (Bergen). Wildhagen, (Drammen). W. Wille, (Melhus). E. Winge, (Christiania). P. Winge, (Christiania). The assistant medical officers Gade and Hopstock on behalf of the National Hospital.

Report

on

the investigations concerning some points in the etiology

of

Urinary Calculus.

by

Prof. J. Nicolaysen.

In order to obtain replies to the questions herein contained the committee for collective investigation appointed by the Medical Society in Christiania sent out the approved series of questions to all the qualified medical practitioners throughout the country.

Up to the middle of March 1887 52 replies had been received; of these 26 gave particulars of cases observed during the years 1882 to 1886 inclusive, while 26 shewed, that no cases has been observed during the said period.

In order to give a general idea of the geographical distribution throughout Norway of urinary calculus on account of its rare appearance and the thin population, it has been thought best to treat of its appearance separately in each of the 4 great divisions of the country, which are bounded by the 2 mountain chains, which divide the land:

1) In the district lying north of the Dovrefjeld, which extends from the 63rd parallel to the Arctic ocean, and the southern district, which is broader and comparatively more inhabited, and which in its turn is divided by a chain of moun-

tains extending from north to south, which towards the south spreads itself into several branches, which divide it, and forms:

2) The Østenfjeldske (Eastern):

3) The «Søndenfjeldske» (Southern), the most southerly part):

4) The Vestenfjeldske (Western) districts of Norway.

The population in these 4 divisions (the population of the towns and country included) as nearly as possible amounts to:

In the Østenfjeldske (Eastern) district	—	780,000	inhabitants.
« « Søndenfjeldske (Southern) «	—	250,000	«
« « Vestenfjeldske (Western) «	—	500,000	«
« « Nordenfjeldske (Northern) «	—	400,000	«

Total in Norway 1,930,000 inhabitants.

For each individual division the numbers may not be absolutely precise but are sufficiently accurate to enable the per centage of the cases of urinary calculus to be calculated in the various districts.

In the 26 replies giving particulars of cases observed the appearance of urinary calculus from various causes is stated as regards:

District.	1882.	1883.	1884.	1885 & 1886.	Total.	Popu- lation.	Per cent per 1000.
Østenfjeldske (E.) .	7	7	9	26	49	780,000	0.063
Søndenfjeldske (S.)	1	-	1	6	8	250,000	0.032
Vestenfjeldske (W.) .	-	-	4	8	12	500,000	0.024
Nordenfjeldske (N.)	.	-	3	3	6	400,000,	0.015
In the whole of Norway.....	8	7	17	43	75	1,930,000	0.039

In the 43 cases mentioned as occurring in 1885 & 1886, the stone was composed as follows:

In 22 cases of.	uric acid.
« 13 « «	oxalate of lime.
« 2 « «	phosphate of lime.
« 1 « «	{phosphate of ammonia and magnesia.
« 5 « «	the composition of the stone was unknown.

It is stated that the stone came from

the kidney in . . .	27 instances.
« bladder « . . .	4 «
« urethra « . . .	1 «
« un known « . . .	11 «

In the 22 cases of stone composed of uric acid 18 occurred in men of an average age of 57.88 years, and in 4 women of an average age of 51.25 years.

In the 13 cases of stone composed of oxalate of lime 6 occurred in men of an average age of 53.84 years, and in 7 women of an average age of 47.29 years.

Stone composed of phosphate of lime was met with in 2 women of an average age of 57.50 years.

Stone composed of phosphate of ammonia and magnesia was found in 1 man 50 years of age. Stones of unknown composition were found in 4 men of an average age of 45 years and 1 woman aged 50.

Stone was thus met with in 29 men = 67.44 per cent and in 14 women = 32.56 per cent.

The profession or occupation, where the stone was composed of uric acid:

2 public officials.

9 tradesmen, ship owners, or brokers.

- 2 engineers.
- 1 school teacher.
- 2 overseers.
- 2 farmers.
- 1 public official's wife.

In 3 instances no profession or occupation is mentioned. Where the stone consisted of oxalate of lime, the profession or occupation is stated:

- 3 public officials.
- 2 artists.
- 1 landed proprietor's wife.
- 1 tradesman's wife.

In 6 instances the profession or occupation is not stated.

In one public official, and 1 married woman oxalate of lime as well as uric acid was present. Phosphate of lime, which composed the stone in 2 married women, in one case proceeded from the kidney, in the other (during pregnancy) from the bladder.

Where the composition of the stone was not stated, it appeared in:

- 1 public official.
- 2 farmers.
- 1 workman.
- 2 workwomen.

Amongst the 22, who suffered from stone composed of uric acid, 17 had resided for most part of the time in one place and in the same district: this is at once apparent, when it is seen, that their average ages were about 60 years, and the average number of years of residence in the same spot was 50.

The other 5 had come from other districts or foreign countries (India, England, Spain, Sweden) and were of the average age of 44 years, while the average duration of residence within the district was 7 years.

Amongst the 13, who suffered from stone composed of oxalate of lime, 3 men and 1 woman had come from other districts (from 1 to 15 years ago).

Those suffering from other kinds of stone had always resided in the same district.

As regards food and habits, it is stated, that 12 men and 1 woman suffering from stone of uric acid lived chiefly, most of them abundantly, on animal food; alcoholic drinks (spirits, wine, beer), were freely indulged in by 6 of the men and by the woman.

6 men and 3 women lived on mixed diet, and either did not touch alcoholic liquor or only drank ale or wine in great moderation.

As regards the 13 cases of patients afflicted with stone composed of oxalate of lime, it is stated, that 4 (1 man, 3 women) lived on abundant animal food, and 2 women besides habitually took alcoholic drink.

9 (4 men, 5 women) lived on a mixed diet and either did not or if so to but a moderate extent consume spirituous liquors. Concerning the others suffering from other kinds of stone the food as regards 7 is stated to have been mixed or chiefly vegetable, also that they never or else to a very moderate extent drank any spirituous liquor. 1 (a public official, the nature of the stone unknown) lived on abundant animal food and regularly took alcoholic drinks.

In 28 instances the drinking water is stated to have been:

soft without iron in 28 instances.
 « with a little iron « 5 «
 hard « 9 «
 not stated « 1 instance.

Thus stone of uric acid in 71 per cent of the cases occurred, in which soft water without iron was employed; 14 per cent in parts, where soft water with a little iron was used, and 14 per cent, where the water was hard.

As regards stone of oxalate of lime:

soft water without iron is mentioned respecting 67 pc. of cases,
 « « with a little iron « « 15 « « «
 hard « « « 15 « « «

As regards all other kinds of urinary calculus the water generally employed by half the number is described as soft without iron, and as hard by the other half.

Complications observed are:

rheumatism in 13 cases	}	6 had stone of uric acid.
		6 « « « oxalate of lime.
gout « 5 «		(5 had stone of uric acid.)
diabetes « 1 case.		
psoriasis « 1 «		
diarrhæa « 2 «		
catarrh of the stomach in 1 case.		
hypospadiæ with	}	« 1 « (stone in the urethra).
atresia urethræ		

The disease urinary calculus has been observed in the parents (one or both of them) in 18.6 per cent of cases, in the brothers and sisters in 7 per cent, in the relations in 2 per cent.

The practitioners, who have furnished details concerning the subject here treated of, are as follows:

A. Augestad, (Hadeland). H. Berner, (Kristiania). Binneballe, (Sundalen). H. Birch, (Holmestrand). F. Blich, (Arendal). Chr. Bull, (Nedenæs). E. Bull, (Kristiania). P. Conradi, (Selbo). Dietrichson, (Nordre Fron). Chr. Eger, (Kabelvaag). J. Th. Frost, (Vossevangen). H. Gjestland, (Tysnæs). P. B. Glatved, (Drangedal). G. Graarud, (Holmestrand). F. Grøn, (Kristiania). C. Hartwig, (Kragereø). Heidenreich, (Opdal). J. W. Holm, (Hedemarken). O. Holm, (Kristiania). J. Holmboe, (Thelemarken). I. Holmboe, (Tromsø). Fr. Holst, (Thelemarken). I. C. Holst, (Drammen). C. Holter, (Eker). Hørby, (Kristiania). A. Johannesen, (Bærum). O. Johnsen, (Sarpsborg). R. Jønsberg, (Hønefoss). E. Kaurin, (Molde). K. Kielland, (Thronhjelm). C. J. Kiønig, (Kristiania). C. A. Kjær, (Lom). Krüger, (Os). Leegaard, (Laurvik). H. Lindbo, (Lian). I. Lund, (Harstad). Meyer, (Vik). J. Nicolaysen, (Kristiania). A. Olsen, (Jevnaker). Rummelhoff, (Risør). A. Scheel, (Kristiania). C. Schjelderup, (Harstad). L. Selmer, (Surenadal). P. M. Selmer, (Søndmøre). Smith, (Molde). J. G. Stang, (Sandnæs). Synnestvedt, (Numedal). Sødving, (Aalesund). H. Thue, (Kristiania). H. Vetlesen, (Hamar). Wiesener, (Bergen). W. Wille, (Melhus).
