

GENERAL STAFF MEETING
MINNESOTA GENERAL HOSPITAL
UNIVERSITY OF MINNESOTA

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EDUCATION AND ECONOMICS

According to Dr. Henry Suzzalo, president of the Carnegie Foundation for the Advancement of Teaching, "economy is consistent with improved methods both of teaching and of learning. Educational policies representing the best of the changing trends in American higher education stress (1) transfer of emphasis from teacher to learner, thus making independent study more important than class instruction, (2) broadening of curriculum, emphasizing correlation of knowledge in which interest, flexibility of mind and resourcefulness are superior to practical knowledge and skills, (3) emphasis on smaller number of educational services of high quality rather than many with minimum standards."

"It is doubtful institutional ethics to allow at present a policy of economy however necessary to lead to discharges from the academic staff. For the present, there is only one sound moral policy for administrators and trustees to pursue and that is to divide the available work that can be paid for. Thus, no professor's family, now attached to the institution, need be without a guarantee of at least a minimum living."

"In the process of formal education in a school, a certain amount of information will be acquired depending in the main on the energy and natural capacity of the pupil and the wisdom of the teacher. But as a matter of fact the acquiring of information has nothing to do with education. Education consists in training the habits and developing the power of the mind and not in acquiring knowledge. The principles are two; first, that self-help is the only way to an education. A child can be guided but he educates himself. Second, the habit of doing what is done thoroughly, accurately to the best of the child's ability (Dr. Henry S. Pritchett).

Student selection for the profession, according to Alfred Z. Reed, "has two courses open to it-- (1) to give everyone a chance and the other, (2) to attempt to choose in advance. The former is cruel to the individual and those he attempts to serve. Considering alike, individual kindness and social efficiency, there is

only one system which can be justified, i.e. educational and professional tests to determine who shall and who shall not be permitted to proceed further in his chosen career."

Comment: Students of the question of what is to be done about medical practice in Minnesota insist that there is only one way to make better conditions and that is to limit the number of medical graduates. They are now entering practice in greater numbers than can be absorbed. This does not make for better conditions but for worse, as has been amply demonstrated in the past.

Abstract from Book Notices,
J.A.M.A. 100: 1456 (May 6) 1933.

II. MEDICAL TECHNOLOGY ACCORDING TO WALTER M. SIMPSON.

"The logical places for instruction and practical training in the field of medical technology are the universities and the hospital laboratories of qualified clinical pathologists. The four-year combined courses offered at the University of Minnesota, the University of Kansas and Northwestern University provide an ideal background of broad basic training and practical experience to those who wish to make this field their life work. Other universities (about ten in number) offer special one and two year courses to those who satisfy certain prerequisites. The growing importance of this field should make it evident to the deans and faculties of American medical schools that a more or less uniform curriculum in medical technology should be offered in medical schools either as a two year course leading to a certificate or as a four year course leading to a degree of Bachelor of Science (in Medical Technology)."

J.A.M.A. 100: 1433 (May 6) 1933.

III. BLOOD FOR CHEMICAL ANALYSIS

As the manner in which blood is handled in obtaining the sample affects the accuracy of the chemical analysis (as much as the technique) a brief discussion seems to be in order.

Inorganic Phosphorus in Serum:

The blood should be drawn, avoiding hemolysis, and transferred to a clean centrifuge tube, allowed to coagulate, centrifuged within 10 minutes, and the serum removed.

Hemolysis increases the inorganic phosphorus. The cells contain organic acid soluble phosphorus. If they are allowed to remain with the serum, during the first 2 or 3 hours the organic phosphorus will increase at the expense of the inorganic fraction, thus giving low values. On longer standing (together), the inorganic fraction becomes high at the expense of the organic.

Serum calcium:

The same technique in drawing the blood should be used as for phosphorus.

The total calcium content is in the serum. On standing, the cells become permeable to calcium, thus lowering the result. The variation of cell volume in different bloods introduces an error in calcium determinations on whole blood.

Alkali Reserve by CO₂ Combining Power:

Drawing blood: Do not use a tourniquet--if it is required to locate the vein, release before withdrawing the blood. Use a syringe and sharp sterilized needle. Transfer the blood to an oxalated centrifuge tube without removing the needle which, to prevent exposure to air, extends as near as possible to the bottom of the tube. Centrifuge within 2 minutes if possible. This procedure gives the same results as if the blood was drawn and centrifuged under oil.

Exposure to air while the cells and plasma are in contact will give low CO₂ values due to the Cl. ion shifting from the cells, replacing the CO₃ ion, thus

allowing the freed CO₂ to escape from the blood.

The plasma may stand not more than 12 hours before the CO determination is made. Peter and Vanslyke (II, 252) On standing longer, the Na of the glass may effect the result.

Chlorides:

The blood is drawn with the same technique as for CO₂, thus preventing the chlorine shift which would increase plasma chlorides.

The determination of chlorides should be made only on plasma. Whole blood chlorides are of little value because the cells contain only 50% as much chloride per volume as the plasma. Thus errors are introduced due to variation in cell volume. In certain diseases, such as anemia, this may be as great as 20%; in normals 5%.

Blood Sugar:

It is preferable that blood sugars be taken by the finger tip method and immediately placed in the tungstate (Gibson's modification of the Folin-Wu sugar method is used in this hospital).

However, blood taken by venapuncture may be used, in which case, the sample should be placed in tungstate solution within 15 minutes after withdrawing. Glycolysis takes place if the blood is allowed to stand, causing the blood sugar values to be low. Normally, about 15 mgs. of sugar disappears per hour but this figure increases in diabetic bloods, according to Guest.

Glycolysis of a blood which stands for several hours, such as those from out of town, may be avoided by using Na. F as an anticoagulant.

(Laboratory)

IV. THE IMMEDIATE CAUSES OF DEATH IN CANCER.

Shields Warren, M.D.

But little information exists as

to the actual immediate causes of death in cases of cancer. This is largely because in mortality statistics cancer appears alone as the cause of death in cases of that disease. In the course of a study of the cases of cancer which came to autopsy in the laboratories of the New England Deaconess Hospital, the Collis P. Huntington Memorial Hospital, the House of the Good Samaritan and the Pondville State Hospital, the immediate cause of death in each case was determined as accurately as possible from a study of both the clinical record and the postmortem protocol of the patient.

In the present paper the findings in 500 cases of carcinoma are presented. These cases were selected at random, but sarcoma, lymphoblastoma, leukemia, etc., have been excluded. There are practically no cases of cancer in children included.

By the use of material from four hospitals the variation in picture due to the tendency of certain hospitals to have more of given types of cases than others has been largely compensated for. Moreover, among these hospitals there are not only beds for early or "active" cases of cancer, but for terminal-care cases as well, so that the proportion of deaths due to accidents of treatment is not as large as it appears to be in statistics from a general hospital.

The distribution of cases in the study series is not too far at a variance with that given for the population of Massachusetts and apparently represents a fair sample of the fatal cases of cancer.

The most commonly occurring of the various causes of death is cachexia. This term is utilized only in those instances where the clinical course of the disease was characterized by progressive wasting and weakness, accompanied by increasing anemia. Cachexia has not been considered the immediate cause of death if any lesion sufficient in itself to be fatal has been discovered. It may, therefore, be regarded as considerably more frequent than is recorded here. It is striking that in almost all instances of death due to cachexia, of which there were 114 in the present series (more than 22 per cent),

there had been considerable necrosis of the tumor tissue, due either to ulceration and secondary infection or to interference with the blood supply of the tumor.

In a number of cases where death was due to definite anatomic causes cachexia was present to a greater or less degree, but in most of these cachexia could be definitely established as secondary to sepsis, hemorrhage or other lesion which was considered as the immediate cause of death.

Startling to the novice is the large number of fatal cancer cases in which excellent nutrition and, not infrequently, obesity are maintained to the end.

In carcinoma of the breast and carcinoma of the stomach one finds the largest proportion of deaths from cachexia (33.3 and 45.2 per cent, respectively), and in carcinoma of the bladder the least (4.3 per cent). When the cases of cachexia are studied in relation to organs involved the rectum-colon group becomes even more important than the stomach. The carcinomas of the breast caused over one-fourth of all the deaths from cachexia. The next most frequent lesions were carcinoma of the rectum and colon with 17.5 per cent and of the stomach with 16.7 per cent. The bladder and the prostate each were the primary sites in less than 1 per cent of the cases dying from cachexia.

The relatively high incidence of pneumonia (14 per cent), particularly bronchopneumonia, would be expected in a group such as this where the age level is relatively high and resistance to infection is naturally considerably lowered. Bronchopneumonia is much more common than lobar. There were 64 cases of bronchopneumonia and only 6 cases of lobar pneumonia. These cases of lobar pneumonia may be regarded as intercurrent infections, having very little immediate relation to the underlying disease process. With their almost inevitable interference with the respiratory passages and the excellent opportunity for inhalation and

aspiration of foreign material, the carcinomas of the lip and pharynx provided 24.3 per cent of the cases of pneumonia. Moreover, in this same group of cases pneumonia is by far the most common single cause of death, amounting to 36.2 per cent.

In the deaths from renal insufficiency (13 per cent of the total) are included those cases which died with definite signs of uremia, and where at autopsy there was found hydronephrosis, pyonephrosis, pyelonephritis or multiple abscesses of the kidneys. By far the greatest number of deaths from renal insufficiency are caused by carcinoma of the cervix uteri, 41.5 per cent. Carcinoma of the bladder accounted for 26.2 per cent and carcinoma of the prostate 18.5 per cent.

Peritonitis, occurring most frequently as a postoperative complication or as the result of postradiation necrosis and perforation, but occasionally as the result of direct extension of the tumor, accounted for 56 or 11.2 per cent of the fatalities.

Seventy-six per cent of the cases of pulmonary insufficiency are due to the metastases from carcinoma of the breast.

If we lump together the various fatal lesions affecting the lung, that is, pneumonia, pulmonary insufficiency, abscess of the lung and pulmonary embolism, the group assumes even greater numerical importance than cachexia.

Hemorrhage accounts for an extraordinarily small number of deaths from carcinoma, only 4 per cent in this series. In one-fourth of the cases of hemorrhage the carcinoma is the indirect cause only, since the presence of the tumor had produced a high degree of obstructive jaundice, the underlying cause of the fatal hemorrhage.

In 14 cases it was impossible to establish the immediate cause of death.

Although one would expect the resistance of these debilitated patients to be greatly lowered and although extensive secondary infection is often present in

the tumors, sepsis per se is an extraordinarily infrequent cause of death, amounting to less than 5 per cent.

One rather striking group of cases, though small, is that which we may call hepatic insufficiency. This group is characterized by jaundice of obstructive type, usually painless, and anorexia, nausea.

Summary and Conclusions:

1. The immediate cause of death has been studied in 500 cases of carcinoma.
2. Cachexia is the most frequent single cause, although exceeded by the total of the various pulmonary disorders.
3. Cachexia is associated most frequently with cancer of the breast, stomach and large bowel.
4. By far the commonest cause of death in carcinoma of the cervix uteri is renal insufficiency.
5. Sepsis is an unimportant factor in fatal cases.
6. The striking association of carcinoma of the buccal mucosa with pneumonia (36.2 per cent) and with lung abscess (56.3 per cent) emphasizes the role of aspiration in the production of these lesions.

Bull. A.S.C.C. XV: 5: 6-7 (May) 1933.

V. MEETING

Date: May 4, 1933

Place: Interne's Lounge, 6th Floor West Building

Time: 12:20 to 1:16

Program: Bladder Tumors

Present: 94

Discussion: C. D. Creevy
L. G. Rigler
K. W. Stenstrom

Theme: C.D.C.: The two most important things are a practical clinical classification and

after treatment. Practical classification is the combination of cystoscopic appearance with the histology of the tumor. Small pedunculated tumors that are microscopically benign are best treated by cystoscopic fulguration. If there is any histologic suggestion of malignancy, radium implants should be inserted into the base of the tumor. Pedunculated tumors that are too large for cystoscopic treatment should be excised suprapubically. If there is any histological evidence of malignancy the base is fulgurated and imbedded with radium emanation. Localized, flat infiltrating tumors should be excised together with the large border of the bladder wall. Infiltrating tumors that cannot be excised should be treated by radium implantation.

The use of radium should always be supplemented by x-ray therapy. Tumors that are likely inoperable because of their size and situation may be treated by total cystectomy and by inguinal ureterostomy or by transplantation of the ureters into the sigmoid. The former leaves the patient rather uncomfortable while the latter carried a very high mortality. Tumors that are inoperable by reason of metastasis are best treated by x-ray alone in the hope of securing some palliation. Our experience with this type of lesion is rather limited but it has not left us with a very favorable impression.

Following any form of treatment the patient should be subjected to routine cystoscopic checkup every 3 months so long as any evidence of the original tumor or recurrence remains. When the patient has gone for three months without recurrence the interval is lengthened to 6 months and later to 1 year. The total follow-up period should cover at least five years after the disappearance of the last recurrence. But this is not long enough in a recent experience (8 years).

L.G.R.: I want to call attention to one point. With intravenous urography occasionally good visualization of the bladder can be obtained.

K. W. S.: Dr. Creevy did not stress x-ray treatment. In the first place, patients mentioned here with x-ray

treatment only were treated because nothing else could be done for them. Question of palliation. Patients with radium have had x-ray therapy too, and it is a question as to how much good it does. Dr. Creevy mentioned that it is quite often that we see metastasis and for that reason it is well to radiate a large area.

C.D.C.: All patients with hematuria should be routinely studied with urological technique (except unquestionable glomerulonephritis). Urinalysis, K.U.B. X-ray, functional studies, cystoscopy and pyelograms if no bladder lesion is found.

Gertrude Gunn
Record Librarian

VI. A SURVEY OF THE CAUSES OF HAY FEVER FOR THE STATE OF MINNESOTA.

Abstract of paper to be published elsewhere by Rudolph Koucky.

Introduction

Several staff meetings have been devoted to discussions of work done entirely by our own men. These meetings have always been most interesting and many have been high points in our year's program. Hay fever, our subject for discussion today, is the work of R. V. Ellis (Health Service) and C. O. Rosendahl (Botany). This contribution is invaluable for practitioners in Minnesota and adjacent states.

Historical

Blakely (1873), himself a sufferer, furnished the first proof that pollens were the etiological agents of epidemic seasonal hay fever, and incidentally was the first to use the skin tests. Dunbar (1905) first used pollen extracts in the treatment of hay fever. His favorable report created a stimulus for investigation which still continues. A number of surveys relative to the hay fever causing plants have been made in various parts of the world. In the United

States, 19 such surveys have been made, in widely separated districts. The surveys closest to Minnesota have been in Missouri, Montana and Illinois. These contributions are of importance but the data compiled from any survey is useful only in the locality where the survey has been made.

The distribution of the plants and the flowering periods show marked variations between such states as Missouri and Minnesota. It has been shown that, other conditions being equal, variation in the time of occurrence of a given periodical event of life activity such as the flowering of plants is on a general average 4 days for each 1° latitude and 5° longitude, and 400 feet altitude; northward, eastward and upward in the spring and early summer, and the reverse in later summer and autumn. In other words the average advance of the season per day is 17 miles northward, 62 miles eastward and 100 feet upward. It is obvious, therefore, that Minnesota Physicians using the data compiled in the various surveys in other parts of the United States will have difficulty in correlating such results with local conditions.

Problem:

In order that the prophylaxis, diagnosis and treatment of hay fever may be more rational and exact in Minnesota and neighboring states, the authors have attempted to check hay fever-causing plants of this state and have correlated this survey with skin tests and histories of fever victims. In order to analyze hay fever patients, the following questions must be answered:

1. To which pollen is the patient sensitive?
2. At what time do such pollens occur in the air?
3. At what time does the patient have symptoms of hay fever?
4. Which pollen to which the patient is sensitive are present in the air at the time that the patient has symptoms?

It appears, therefore, that the problem is not "To which pollen is the patient sensitive?", but is "Which of the pollens to which patient is sensitive are present in the air when he has symptoms?" This attitude toward the hay fever victims is considerably different from that taken by the ordinary practitioner. The authors describe the patient who had been treated with ragweed pollen without benefit. The period of his symptoms was from June 1st to July 15th. At this time, no ragweed pollen is present in the air. Such errors are probably common and are not inexcusable because there is no exact knowledge of pollenating seasons available for the state of Minnesota. A positive skin test does not determine the diagnosis. In addition to this, it must be shown that the individual has exposure to this pollen at the time that symptoms occur.

Material

The authors have collected Minnesota plants which are capable of acting as hay fever antigens (total of 175 plants). These plants have been studied in regard to their distribution through the state and in regard to the time of their flowering and pollenization. In addition, 100 hay fever victims were studied. Skin tests were made and these skin tests were correlated with the time of appearance of symptoms and the time of pollenization of the plants to which the patients were sensitive.

One-hundred and seventy-five plants obviously could not be tested for in each case. A great many of these plants are closely related, therefore the total of 175 plants is grouped into 24 sub-groups, each group includes the closely related plants. Many investigators, particularly the early ones, disregarded the species difference and attempted to make the problem of diagnosis and treatment simple by classifying all the plants into 4 groups. It was believed that a pollen extract made from any member of the group would act by sensitization to all members of

the same group. Other workers have denied this and contend that the various antigens will not inter-react with each other. The authors take an intermediate viewpoint and believe that although there is a considerable immunological overlapping between pollens of various groups the question of specificity is still an open one. The classification of the 175 plants in the 24 groups therefore is an intermediate classification. The closely related grasses are grouped together into 9 individual groups instead of all into one group. In making the test, the testing antigen was a mixture of the various pollens included within that group. By this procedure, the sensitivity of the individual patients to 175 plants is made possible in 24 tests.

Clinical applications

One hundred cases of hay fever were examined and the correlation between skin tests and the time of symptoms and pollenization is given in 4 charts. Chart 1 shows the incidence of hay fever symptoms by months. Chart 2 shows the pollenating period of the various groups of pollen. On chart 1, in addition, a correlation is made between the incidence of hay fever and the positive skin test of the various pollens which are present in the air during that month. It can be seen that the incidence of hay fever is as follows:

Month	April	May	June	July
Percent	3	24	49	56
Month	August	September	October	
Percent	89	85	59	

By way of illustration, it will be seen that 3 cases had symptoms in April. From consulting chart 2, it can be seen that groups 1 to 6 are spreading pollen during this period. Of the 6 groups which were pollenating during the period of symptoms, the positive skin test can be seen from chart 1 as follows:

Maple	Birch	Poplar	Elm	Sedges	Ash
3	1	2	1	1	3

It can be seen that if one superimposes chart 1 over the appearance of the patient's symptoms, one can obtain a distinct impression as to the probable

sensitizing antigen. On this basis, the results of skin tests are reliable concerning the actual sensitizing pollen.

The positive skin reaction becomes significant only when the patient in which it is produced has hay fever coincidentally with the flowering period of the plant or group of plants under consideration. A study of chart 3 shows that although 35 cases gave positive skin reactions to the Maple group, only 3 of these complain of symptoms corresponding to the period during which pollen is shed by members of this group. This lack of correlation between the number of positive skin tests and clinical hay fever coincident with seasonal incidence of the pollen is seen to be greatest in those groups which flower earliest. As the season advances correlation increases. Perfect correlation occurs with groups 7, 15, 18, 19, 22 and 24. The importance of the insect pollinated alfalfa group is to be noted.

Chart 4 is a summary showing the number of patients who had clinical symptoms during the pollenating periods of the groups to which they gave positive skin tests. It is obvious from this chart that a considerable number must have multiple sensitivity. The total of 533 group cases were obtained, but since there were only 100 patients involved it leads to the conclusion that there is an average of 5.33 group sensitivities in each case. This is a point which is often overlooked.

The ragweed group, as one would expect from reports from other parts of the Mississippi Valley, ranks first in importance, being a causative factor in 73% of cases. The ragweed group, however, was not the sole causative factor in the 73 cases. As a matter of fact, not more than 4 of the 73 cases were sensitive to the ragweed group alone. In this group of 73 cases, 30% were also sensitive to the wormwood group; 25% to the pigweed group; 18% to the Dock group; 20% to the Russian Thistle group; and 45% sensitive to grass groups which pollenate in the

fall period. All of the groups involved were shedding considerable pollen during the fall period, and therefore one may question the advertisements of manufacturers of pollen extracts which state that the ragweed is responsible for 80% of the cases of fall hay fever.

Treatment with hay fever pollen, of course, will not give satisfactory results. The other pollens acting alone are able to produce severe hay fever and it is unreasonable to suppose that where multiple sensitization exists, the patient may be relieved by the administration of one pollen extract alone. Unless this multiple sensitization is looked for, not only is the diagnosis incomplete but an unsatisfactory result from treatment is inevitable.

Impression:

A study of 100 student victims of hay fever is reported. A study is also reported of pollenating plants, trees and grasses in Minnesota. Skin tests, time of pollenization, and dates of symptoms give accurate data for use of antigens in treatment.

VII. CASE REPORT

HAY FEVER, ASTHMA

(Koucky)

Case is 8 year old, white boy admitted to Minnesota General Hospital 9-2-30, and discharged 9-14-30 (12 days). Followed in O.P.D from April 1930 until September 1932.

Onset

8- -26 - First developed symptoms of hay fever. Nasal discharge, frequent sneezing, watering of eyes, photophobia and hard, noisy breathing present. Had similar attacks every fall. Attacks begin about August 15th and continue until first frost. Attacks last 2 to 3 days a week, patient usually has to go to bed.

Escape by Change

1929 - Family spent latter part of summer in northern part of state. Child did not have any attacks. Was well until returning to Minneapolis when he had

another severe attack.

Desensitization

4- -30 - Admitted to O.P.D. for treatment of hay fever. 12 vaccine injections given of pollen (type not stated), which were carried out through summer.

Past History

Frequent sore throat. Tonsillectomy 1928. Measles at age of 9 months. Eczema since 2 months, being treated in O.P.D. and healed except for a small area behind the ear. No asthma or hay fever in the family (migraine or eczema?).

Admitted

9-2-30 - Physical examination: Blood Pressure 100/60. Examination negative except for small patch of eczema behind ears and occasional sibilant and sonorous rales in lungs, posteriorly. Laboratory: Urine - negative. Blood - Hb. 100%, wbc's 6,800, Ppn's 73%, L 26%, M 1%.

X-ray

Of chest, sinuses: Marked thickening of mucous membrane in both maxillary sinuses, the appearance being characteristic of a chronic sinusitis with possible some acute exacerbation. The frontal sinuses are only moderately developed. The remaining sinuses are all clear. A single plate of the chest shows a moderate increase in the bronchovascular markings suggesting possibly a slight bronchitis.

Conclusions: Bronchitis. Bilateral chronic maxillary sinusitis.

Course and Progress

While in the hospital, patient had one day during which there was some evidence of hay fever. The remainder of the time, he was quite comfortable, which may have been due to the frequent administration of ephedrin and oil (every 2 hours). 45 skin tests done. These substances included various types of vegetable and organic matter and the following grasses: June grass, timothy, giant ragweed and ragweed. All these were negative except ragweed which showed indefinite reaction.

Discharged

9-14-30.

11-24-30 - O.P.D. Few asthmatic rales.

2-24-31 - Mother brings child back to O.P.D. for advice as to what to do to prevent asthma and hay fever in the future. A slight attack of asthma had been present about 2 weeks prior to visit. Otherwise no symptoms except the persistent eczema.

7-7-31 - Rhinitis (indefinite nature).

Treatment (better)

7-8-31 - Protein sensitization done. Types of antigen not stated. Ragweed positive.

7-15-31 - Hay fever vaccine started.

8-2-31 - 11 treatments with vaccine.

On this day, had slight hay fever attack.

8-25-31 - Another treatment. Has slight symptoms of hay fever.

8-28-31 - Condition same. Another treatment.

9-2-31 - No symptoms.

9-5-31 - 1 slight attack.

9-11-31 - Feels well.

10-10-31 - Series of 20 vaccine injections had been given.

6-4-32 - Child brought back again to O.P.D. Only complaint was frequent colds. Mother wants advice as to the program for subsequent care.

Another year

6-11-32 - Symptoms were definitely limited (middle of August to frost.) The 5 groups of plants pollinating during this time are chosen and 5 skin tests done in groups. These 5 groups include 22 individual plants. The significant reactions are obtained with groups 21, 22 and 24. Desensitization which combines vaccine, including ragweed, sage and grasses recommended.

8-17-32 - Total of 34 injections carried out. No symptoms.

8-27-32 - No symptoms.

9-1-32 - Child was playing in the afternoon on the damp lawn and following this he had an attack of hay fever and asthma.

Patient did not return to clinic after the last visit (because of no further attacks?)

VIII. CASE REPORTHAY FEVER, POLLEN ASTHMA

(Koucky)

Case is 15 year old girl admitted to Minnesota General Hospital 9-27-32 and discharged 10-17-32 (20 days).

Asthma

1919 - (2 yrs. old) - Began having attacks of asthma during summer. Subject to 4 attacks a year. The time of onset of symptoms in relation to the season is not stated. As the years progress, the number of attacks and duration increase. Given medicine by family physician with some relief. No relation of attacks to contact with any particular types of food or activity. One historian records that the attacks have been more severe and frequent in the later summer and early fall.

Admitted

9-27-32 - Physical examination: Child is rather pale and nervous type. There is some tenderness over left maxillary sinus. Tonsils absent. Scars are present over both mastoid processes from old operative incision. Few wheezes in chest. Laboratory: Urine - negative. Blood - Hb. 91%, wbc's 13,500, Pmn's 43%, L 37%, M 1%, E 19%. Wassermann - negative. X-ray of sinuses - there is very slight thickening of the mucous membrane in both antra and ethmoid sinuses. Findings, however, are minimal.

Course and Progress:

While in hospital, pulse, temperature and respirations normal. No asthmatic or hay fever symptoms. In hospital for observation and skin tests. Skin test - A total of 76 skin tests done. These included the various vegetable and animal foods, weeds and grasses and miscellaneous substances. This total group of 76 skin tests showed the following positives: Timothy, June grass, orchard grass, ragweed, red top and lamb.

Child was discharged with instructions to return to O.P.D. for beginning of course of desensitization with mixed vaccines.

IX. AN EARLY MINNESOTA CONTRIBUTION
to Development of Hay Fever
Treatment.

H. L. Ulrich: Some notes on hay fever,
J.A.M.A. 62: 1020-1022 (Apr. 18), '14.

Twenty years ago, ideas regarding hay fever were remarkably different from today. Blakely (1893) had shown the relation of pollen to the disease but with the development of bacteriology his ideas were overshadowed by theories of bacterial origin. The writings on etiology became quite fantastic. Dunbar (1903) is credited with first using pollen extract. Other workers, Noon and Freeman, Clowes, extended this work. Whereas, we now regard these works as the first attempts at treatment with pollen as we now know it, Ulrich, a contemporary worker, states that these men believed they were dealing with an infectious agent similar to bacterial infection. Dunbar's product was an anti-toxin developed in horses. The author expressed his belief that the disease was a protein toxicosis.

Ulrich developed a pollen extract and used it in the treatment of 12 cases in 1913. This appears to be the first clear instance of pollen desensitization (called "antihypersensibility") in the modern sense.

The results were quite satisfactory. The idea of prophylactic desensitization had not yet been developed so the extract was used only as treatment of active cases. (Soon after this, the production of such extracts was taken up by drug-houses. It is of interest that the author chose ragweed pollen because it was the plant pollenating while his patients had symptoms.)

X. NEWS

1. Married.

Genevieve McCabe, B.S.,
Medical Technology, Minnesota, to
Luther C. Fisher, M. D., Tulane,
Saturday, May 6th, 1933, at Virginia,
Minnesota, home of the bride. News
leaked as Boarding House Keeper Paine
bemoaned the loss of his star boarder.
Congratulations and best wishes.

2. Elected.

News has just been re-
ceived of the election of Owen H.
Wangensteen, Chief Surgeon, Minnesota
General Hospital, to membership in
American Surgical Society - most
exclusive of all surgical organiza-
tions. We are honored.

Number of cases

0 10 20 30 40 50 60 70 80 90

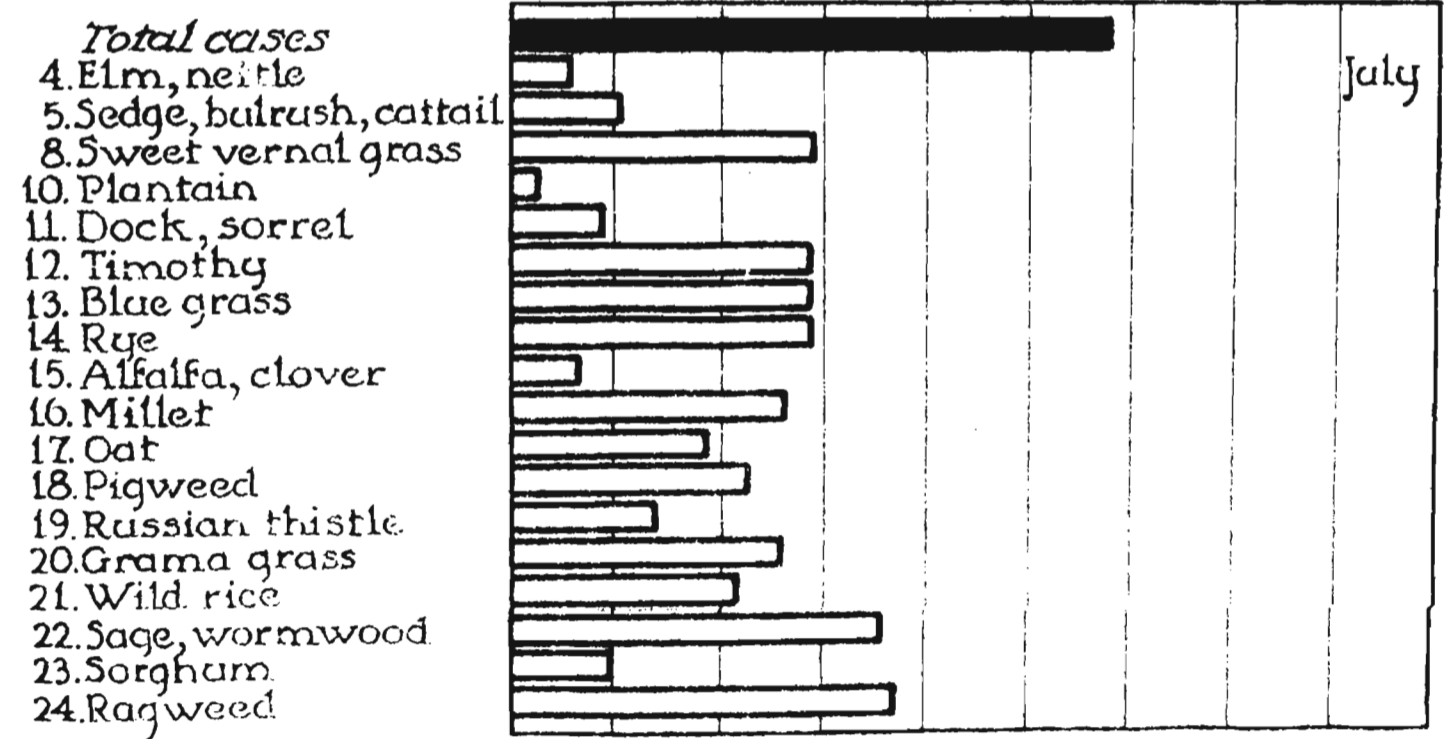
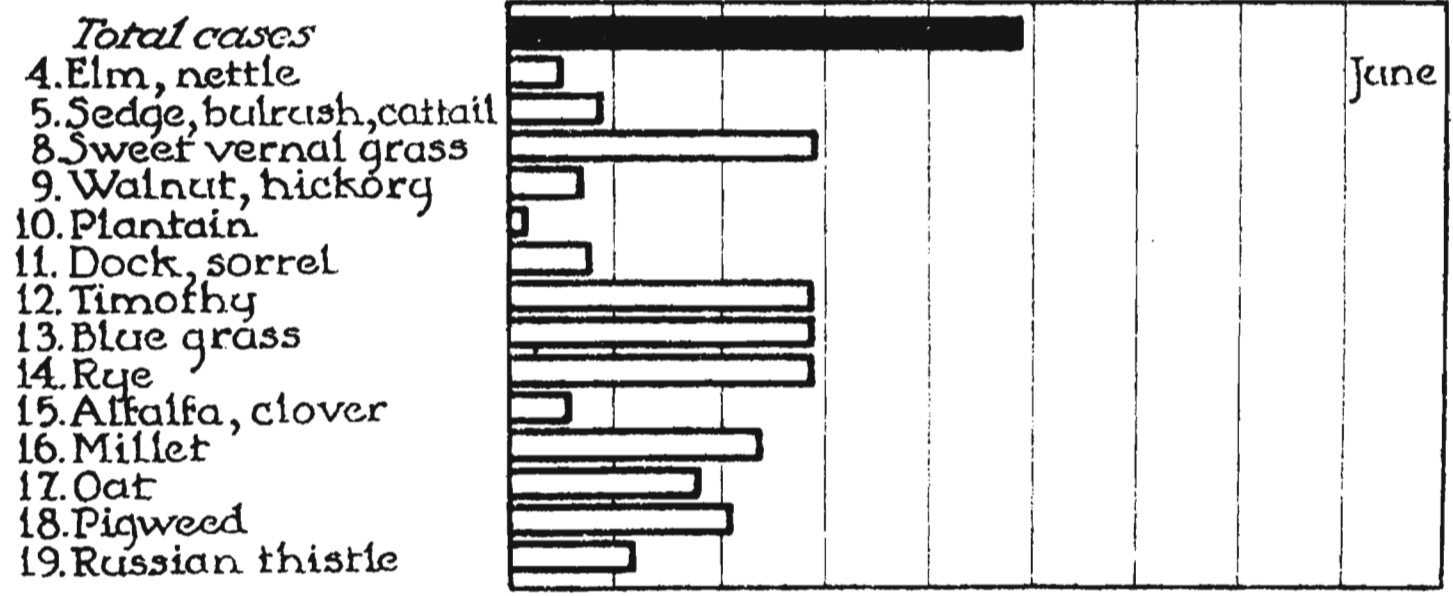
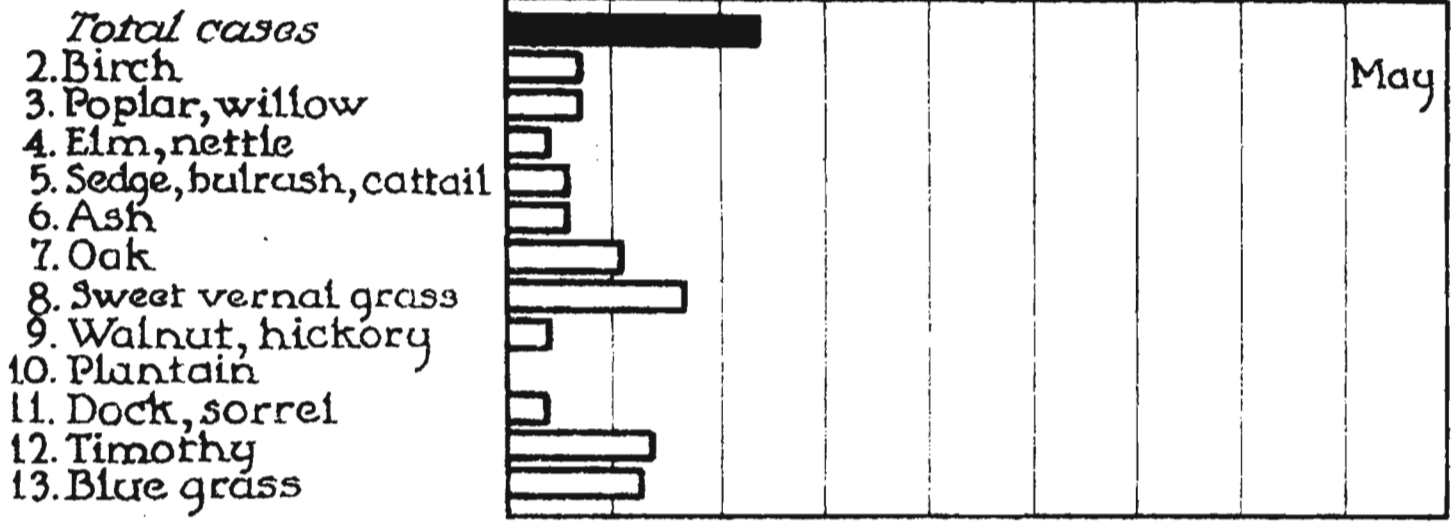
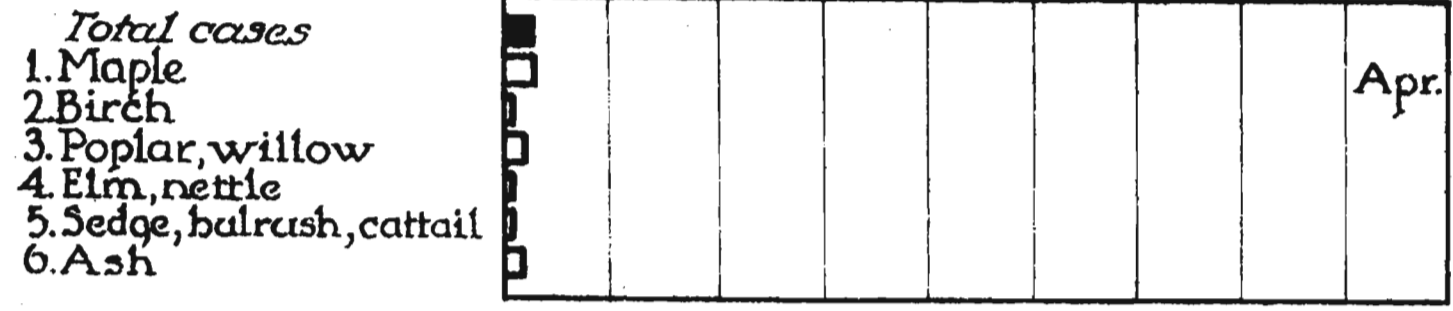
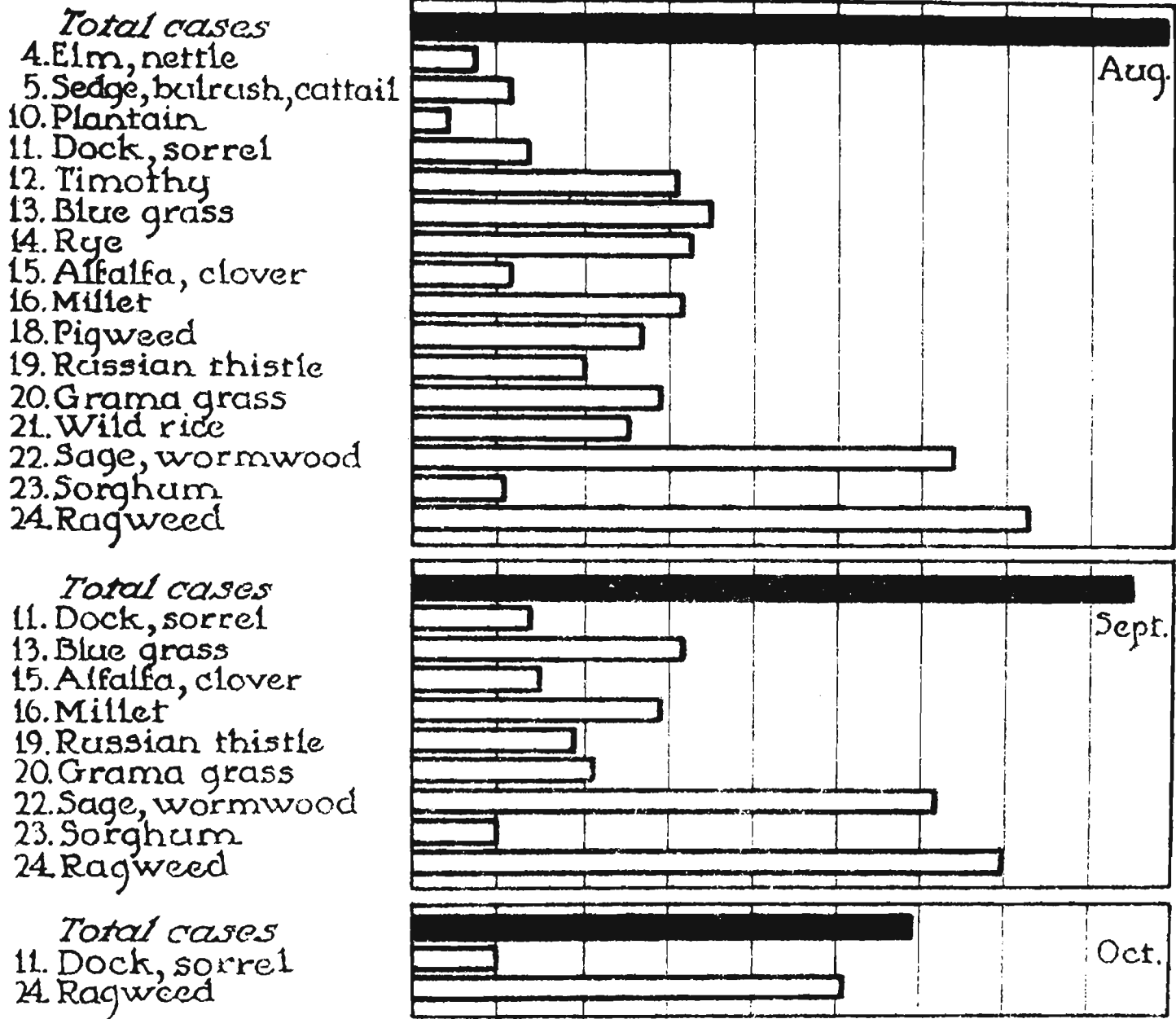


CHART I (Cont'd)

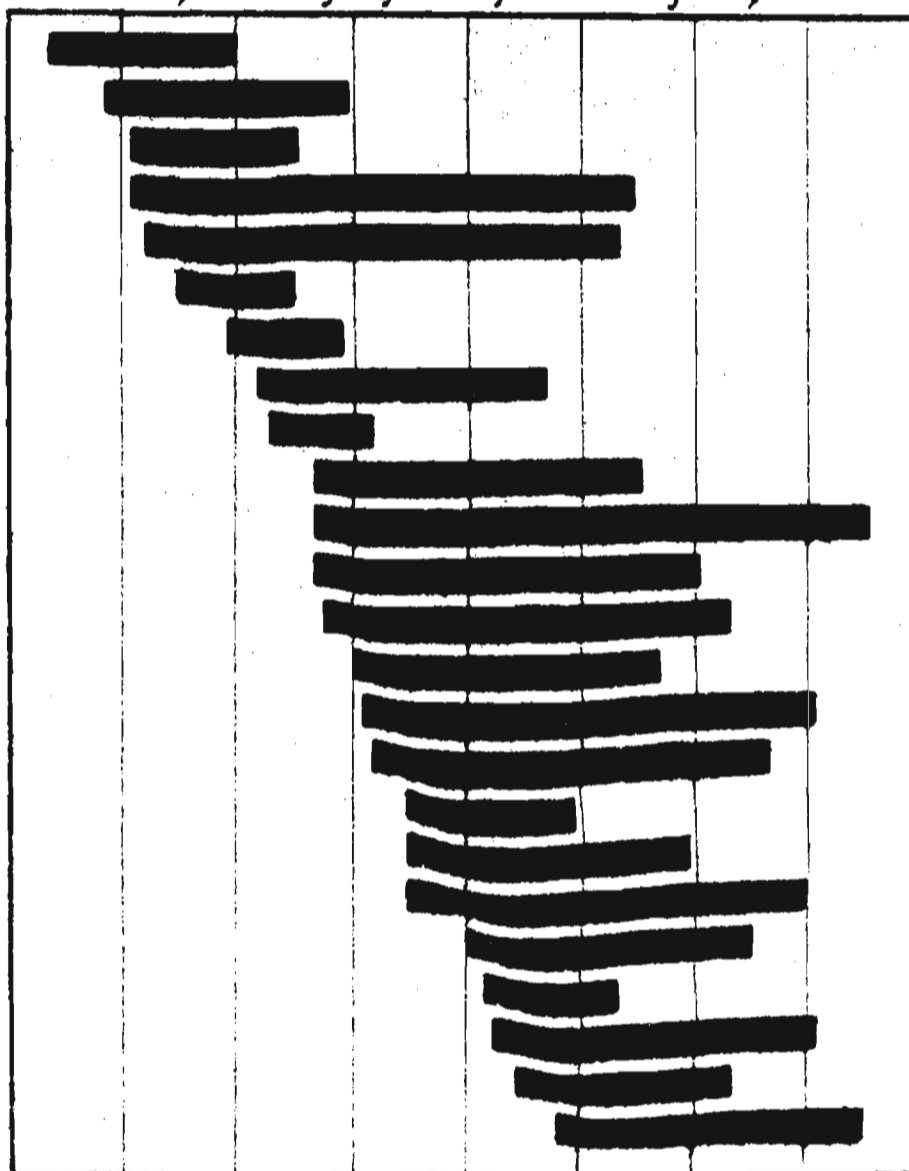


THE INCIDENCE OF SYMPTOMS BY MONTHS IN ONE HUNDRED CASES OF HAY FEVER AND THE RELATIVE IMPORTANCE IN THESE CASES OF THE VARIOUS POLLENS IN THE ATMOSPHERE DURING THE MONTHS IN WHICH THEIR SYMPTOMS OCCUR

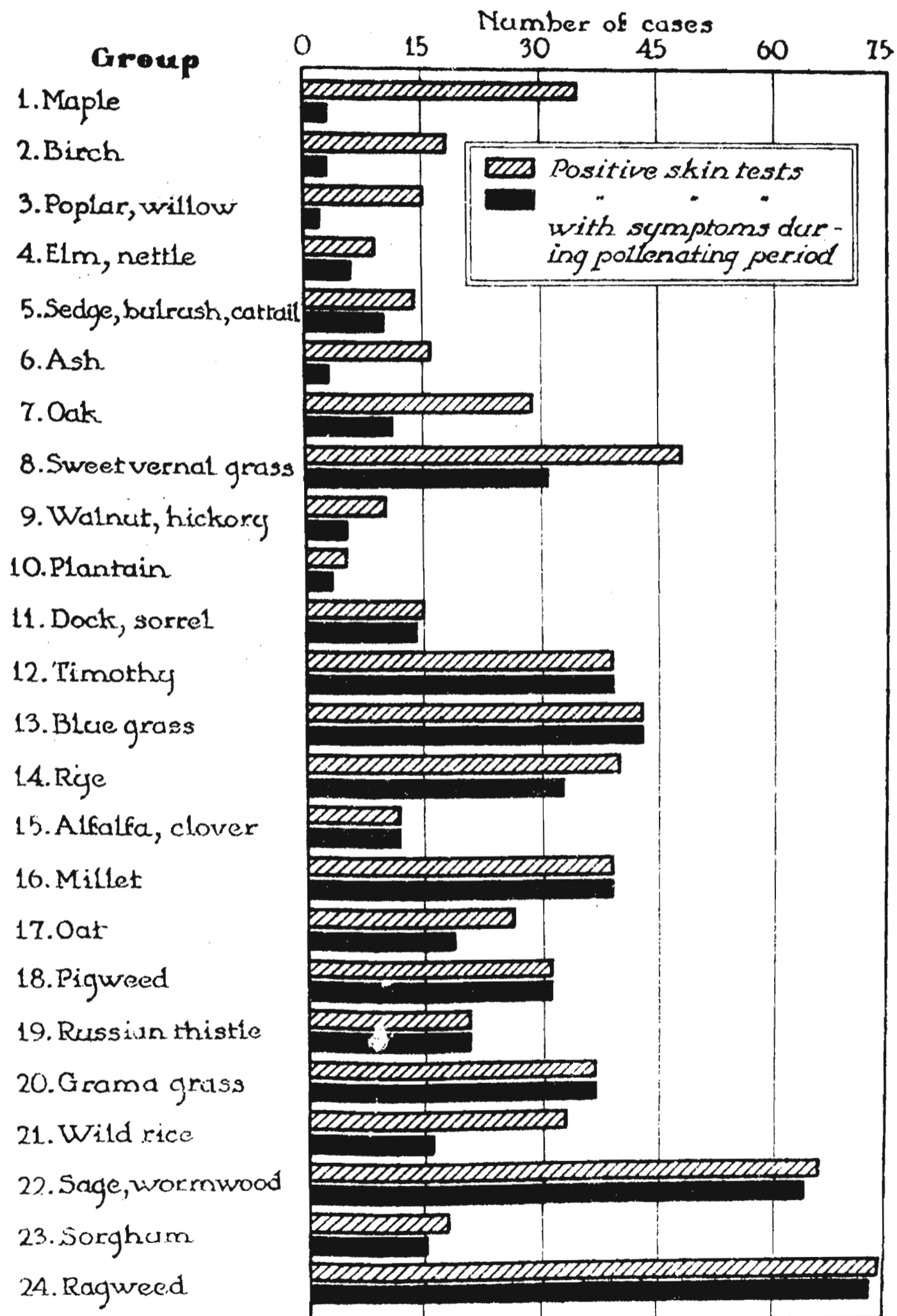
Group

Mar. Apr. May Jun. Jul. Aug. Sept. Oct.

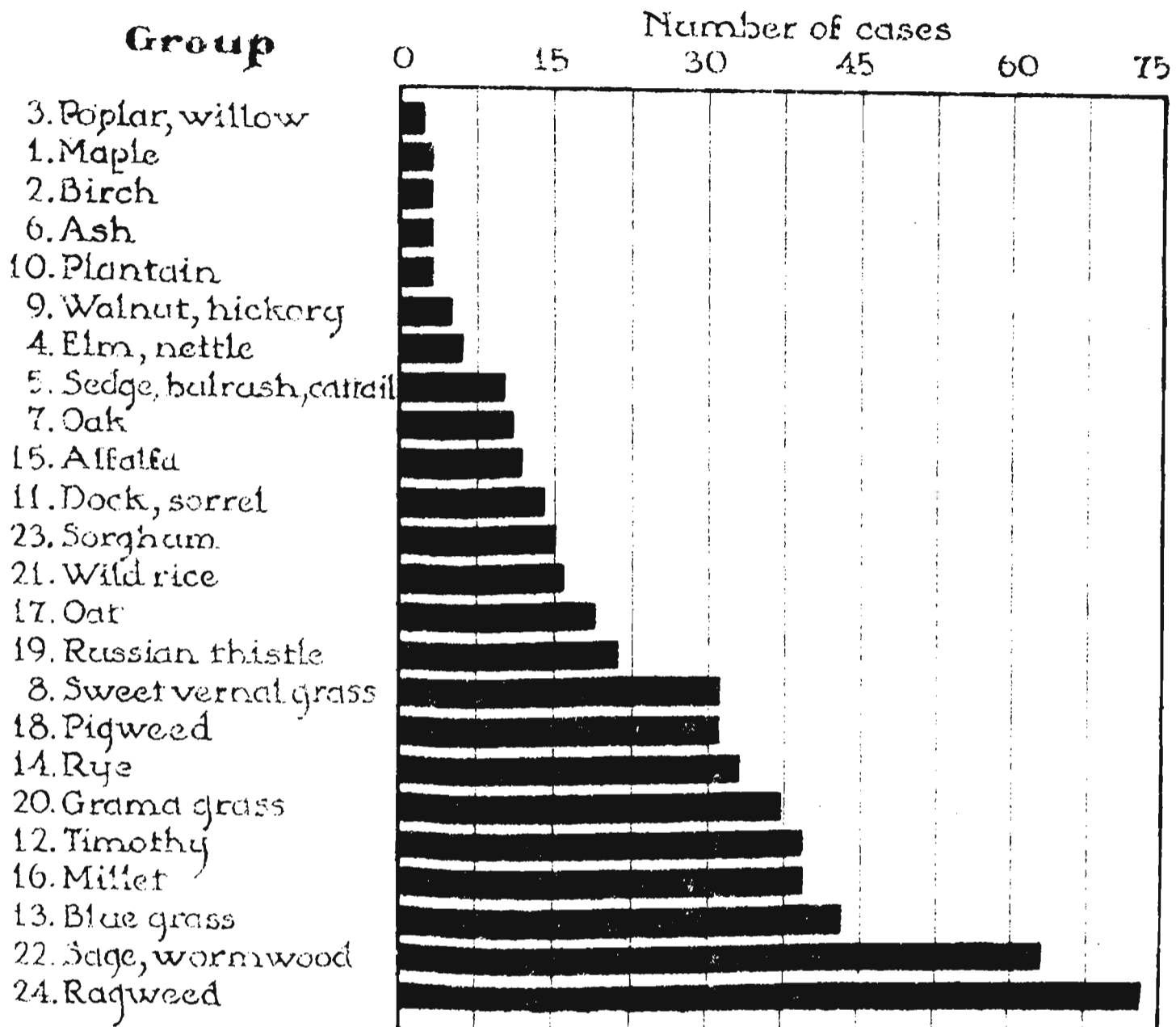
1. Maple
2. Birch
3. Poplar, willow
4. Elm, nettle
5. Sedge, bulrush, cattail
6. Ash
7. Oak
8. Sweet vernal grass
9. Walnut, hickory
10. Plantain
11. Dock, sorrel
12. Timothy
13. Blue grass
14. Rye
15. Alfalfa, clover
16. Millet
17. Oat
18. Pigweed
19. Russian thistle
20. Grama grass
21. Wild rice
22. Sage, wormwood
23. Sorghum
24. Ragweed



THE POLLENATING PERIODS OF THE SEVERAL GROUPS OF POLLENS USED IN THIS STUDY



THE IMPORTANCE OF EVALUATING THE POSITIVE SKIN TEST IN TERMS OF THE PERIODS OF POLLENATION AND OF SYMPTOMS IS INDICATED BY THE LACK OF CORRELATION BETWEEN THESE FACTORS.



THE RELATIVE IMPORTANCE AS CAUSES OF HAY FEVER OF THE SEVERAL POLLEN GROUPS INCLUDED IN THIS STUDY, BASED UPON THE NUMBER OF CASES HAVING SYMPTOMS CORRESPONDING IN TIME TO THE POLLENATING PERIOD OF THE PLANTS TO WHICH THEY GIVE POSITIVE SKIN TESTS