

STAFF CONFERENCE

Thursday - March 20, 1930

CASE I

Carcinoma of larynx (Delay 1 yr.)

The case is that of an elderly man, 75 years old, admitted to the University Hospital 12-5-29 and died 2-1-30 (58 days). Patient was transferred from the Minneapolis General Hospital. Chief complaints - hoarseness (1 yr), difficulty in breathing (chiefly expiratory - 3 wks), difficulty in swallowing (chiefly coarse foods - 3 wks), pain on swallowing (4 - 5 days). Well to present illness. Onset insidious. Gradual progression of hoarseness to three weeks ago when above symptoms appeared. Breathing easier when up and about. Mucous collects when quiet, relieved by coughing. Coughs less and sleeps better propped up on pillows. Other complaints - dizziness on getting up, anorexia to sweets (3 wks), weight loss?

Family history: Wife, 57, living and well. Father dead, 84, injury. Mother dead, 85, pneumonia. Three brothers living and well. One dead of injury. Two cause unknown, ages? Three sisters dead, one encephalitis, two cancer of stomach, ages?

Past history: Gonorrhoea at 55 years.

Physical examination: Fairly well nourished, elderly man, stridor (chiefly expiratory). Skin shows recent weight loss. Speech difficult. Tires easily. Arcus senilis. Xanthoma of right eyelid. Impaired hearing. Foul breath. Coated tongue. Decayed teeth. Marked pyorrhea. Small patch of leukoplakia in right cheek. Larynx in midline, freely movable, moves on respiration, no enlarged glands. Pressure on larynx causes respiratory difficulty. Lungs negative. Heart negative. Blood pressure 165/70. Pulsus celer. Abdomen negative. Mass in right scrotum (no light transmission). Injured forty years ago riding horse. Moderate inguinal and axillary adenopathy.

Laboratory: Urine negative. Hemoglobin 102, rbc. 5.18, wbc. 8.0, P. 60, L. 38, E. 2, Wassermann negative, group II.

Diagnosis: Carcinoma of trachea or larynx

12-5-29, Tracheotomy, novocain. Edema of pretracheal tissues encountered, #5 tube used. Followed by marked relief. X-ray of chest negative. Laryngoscopic examination - right cord moves more than left, Left fixed with cauliflower mass. Aperture small. Biopsy shows squamous carcinoma of undifferentiated type. Had some difficulty with tracheotomy tube. Steam relieves somewhat. Patient gets excited and nervous and will not clean tube. 12-27-29, still not accustomed to tube. 1-13-30, Operation - avertin and local anesthesia. Larynx freed except posterior wall (1st stage operation). Packed with gauze. 1-20-30, Operation - laryngectomy. Avertin (1 hr. 45 min.) Laryngofissure done and internal surface exposed. Showed bilateral tumor involvement. Both sets of cords showed tumor. No extension to surrounding structures. No enlarged glands. Diatherm knife used. Larynx removed. Trachea fixed in high position. Pharynx closed. Duodenal tube inserted in stomach and wound loosely closed.

Postoperative reaction good. 1-21-30, Restless, irrational?, worried, difficulty in accustoming himself to loss of power of speech. Steam test used. 1-22-30, Cough and expectoration. Rales and impairment of bases, probably bronchopneumonia. 1-24-30, X-ray shows probably pneumonia, left base; possible abscess. Congestion. Cough and expectoration continue. 1-25-30, Definite physical signs of bilateral pneumonia. 1-26-30, Sloughing wound, including anterior esophageal wall, nasal tube in full view in wound. Salivary fistula present. Trachea has fallen down from high position with resulting aspiration. 1-30-30, Going down rapidly. 2-1-30, Exitus.

Therapy: Elixir terpine hydrate, codeine sulphate, steam inhalation, proctoclysis, cascara, morphine sulphate, mineral oil, luminal, hypodermoclysis, allonal.

Nurses' notes: Labored breathing, relieved by tube, restlessness, cough and expectoration, takes fluids well, dysphagia, decubitus, difficulty in breathing, marked cough and expectoration, exitus.

Temperature 98 to 102. Pulse 60 to 90. Respiration 18 to 24. Sharp terminal rise.

Autopsy: None

Clinical Diagnoses: Group I. - Squamous carcinoma of larynx

Group II - (1) Laryngectomy (2) Tracheotomy (3) Aspiration pneumonia (4) Sloughing of wound (5) Salivary fistula (6) Emaciation (7) Decubitus

Comment: (1) No mention in history for reason for delay (2) Investigation by Social service (3) Absence of metastasis (4) Sloughing of wound

CASE II

The case is that of a woman, 48 years old, admitted to the University Hospital 2-25-30 and died 3-6-30 (9 days). Chief complaints - (1) vaginal bleeding, almost constant, 12-26-29 (frequently profuse). (2) Ease of fatigue since October 1928. (3) Urinary disturbance, 1 month, (frequency, difficulty in starting the stream, and absence of feeling of satisfaction after urination). The first symptoms were in October 1928, when the patient stated she tired very easily. One month later, she noted a heavy, vaginal discharge (foul odor). December 26, 1928, had a sudden, profuse, vaginal hemorrhage. She bled intermittently for two weeks. Saw a physician January 15th, 1929, who packed her because of bleeding. Later he found a sore of the cervix and sent a specimen to the University Pathologists. A diagnosis of nonmalignancy was made and no treatment advised. 2-15-29: Chronic endocervicitis, 2-18-29: Squamous Carcinoma. Right after the biopsy was taken, she became very ill with high fever, low abdominal pain, and had to remain in the hospital for two weeks with ice bags over the pelvic region. She stayed at home for another three weeks, and April 20, 1929 went to Eitel Hospital for x-ray and radium treatment. She was given a 48 hour exposure, dose unknown. One week later, she became very sick again with high fever and severe low abdominal pain and was again taken to a hospital. She remained for a time and then went to her own home in the country, where she was in bed most of the time or just staying around the house. In the middle of June 1929, she had an attack of chills, vomiting, diarrhea, and fever. She was given a hypodermic, slept a day, and then got over her trouble. She has vomited a great deal at home. Instead of her usual weight of 120 to 125 lbs., she weighed only 90 lbs. at the end of June. However, from July on, she started to feel better and to gain in weight. One and one-half weeks ago, the hemorrhage from the vagina started again. Her local doctor brought her to the University Hospital for more radium treatment.

Past history: Gravida six, para five, one miscarriage at seven months. Sick headache and vomiting for some time. Has been getting farsighted recently. Frequently vomits after meals, but has always been an easy vomiter. Jaundice at 20, 2 weeks. Constipation recently (painful defecation) Hemorrhoids for the past 29 years, never very troublesome. Has to urinate every few hours and does not feel satisfied. Present weight 116. C. T. A. regular, 30 day type, usually a heavy flow but never painful. No intermenstrual discharge. Family history - no cancer.

Physical examination: White, emaciated, tired woman with dark circles under her eyes. Bilateral prominence of eyes (exophthalmus?). Pyorrhea. Foul odor of breath. Tonsils atrophied. Lungs negative. Heart negative. Blood pressure 148/82. Abdomen - thin walled. Both kidneys palpable, especially the left, not very tender. Rectal examination revealed many hard nodes in pelvis. Extremities - no edema, slight varicosities. Reflexes negative. Pelvic examination showed induration of the left vaginal wall. Cervix replaced by large crater (not cauliflower). Tender induration of broad ligaments. Diagnosis: Carcinoma of cervix (late), type III or IV.

Laboratory: Urine - albumen traces, many wbc. and rbc. Hemoglobin 69, rbc. 3.08, wbc. 5.80, P. 67, L. 33, group IV, Wassermann negative. 3-4-30, B.U.N. 180. 3-5-30, B.U.N. 154, Sugar. 069. CO2 Q.N.S. 2-27-30, Biopsy showed squamous carcinoma. 3-6-30, Sudden exitus (notes)

Therapy: Sodium bromides, morphine sulphate, atropine sulphate, S. S. enema, codeine sulphate, Hos K.M.N.O. for douches, morphine sulphate.

Nurses' notes: Weakness, moderate vaginal bleeding, fairly comfortable, emesis 300 cc., nausea, emesis, emesis, catheterized but no specimen obtained, 3-4-30 deep x-ray therapy, emesis, rested well, weak, feels ill, inability to void (25 cc. of pus obtained by catheter), no urine, restless, thirsty, respiration shallow and rapid, exitus.

Output: - 227-30, 300 cc.; 2-28-30, 875 cc.; none after this.

Fluids - 2-27-30, 1700 cc.; 2-28-30, 1450 cc.; none after this.

Autopsy: Group I - (1) Squamous carcinoma of cervix

Group II - (1) Extension to broad ligaments (bilateral) (2) metastases to pelvic nodes (3) Metastases through ovarian vessels to hilum of left kidney (4) Metastases to preaortic nodes (5) Bilateral hydronephrosis (6) Chronic pyelonephritis (7) Cloudy swelling heart, liver, and kidneys (8) Acute pslenitis

Comment: Note character of onset - fatigue, leukorrhoea, hemorrhage.

(2) Mistake in biopsy followed by correction (3) Reaction to x-ray treatment?
(4) Fear of more treatment because of reaction (5) Tardy diagnosis of uremia?
(6) X-ray treatment at the time) (7) Cause of sudden exitus.

CASE III

The case is that of a woman, 40 years old, admitted to the University Hospital 1-24-30 and died 2-16-30 (23 days). Chief complaint - large, hard mass in left breast and axilla; large red ulcerated elevated areas in left pectoral region. Patient found a hard movable mass in the left breast January 1929, treated it with potato poultices for three weeks. Saw a physician in June 1929, who made a biopsy and a diagnosis of carcinoma. July 11, 1929, Went to a Chicago hospital where she had the breast removed. This operation was not a radical procedure. She noticed a lump in the left axilla before she left the hospital, called the surgeon's attention to it, but he said it was a muscle and would go away. Discharged July 21, 1929, no x-ray follow-up. Came back to Minneapolis in October 1929, when she noticed two small red ulcers in the axillary region. Late in October 1929, came to the cancer clinic of the University Dispensary. A diagnosis of recurrent carcinoma was made, and x-ray treatment advised. She began at once and took four treatments up to November 15, 1929 and felt very well following this. The mass became smaller, and she was free of pain. She worked every day, doing her housework but stated that she tired easily. 1-19-30, Came back to the University Hospital because of painful ulcers and bleeding, and was admitted 1-24-30.

Other complaints - near sighted since attack of diphtheria. Family history: Father, 70, living and well. Mother, 68, living and well. Three brothers, two sisters, living and well. No cancer history. Married twenty-one years; two boys and three daughters living and well. Weight 145 up to June 1928, has steadily gained since and now weighs 170.

Physical examination: Pulse 64. B.P. 142/72. Well nourished, wears glasses. Poor teeth. Enlarged, hard, movable node in left supraclavicular space. Heart negative. Chest - dullness over left pectoral region over mass. Scar from previous breast amputation, also portion of left breast. Two distinct ulcers over left pectoral region, one in midclavicular line and one in anterior axillary line, also another small ulcer in midaxillary line. Ulcers are bright red. Slight area of white necrotic tissue overlying. Ulcers are elevated, hard, and bleed easily. Well defined with indurated border. Solid hard mass in left pectoral region, extending into axilla. Abdomen negative. Extremities negative.

Laboratory: Urine negative. Hemoglobin 86, rbc. no count, wbc. 5.9, P. 76, L. 22, M. 2, group IV, Wassermann negative. X-ray of chest negative.

Operation, 1-29-30, avertin and gas (1 hr. 15 min.). Ulcerating mass excised. Size of three fists. Adherent in intercostal area, completely surrounding the axillary vein and probably the axillary artery and some of the plexus. Nodules in skin close to the area excised. It was necessary to separate the axillary mass from the main tumor because of attachment to vessel. Even after the remainder of the tissue had been removed, some invasion of the intercostal space was left behind. Bleeding was controlled. Because of patient's low blood pressure intravenous saline was started and the wound closed as well as possible, leaving an area about 4 inches in diameter wide open. A portion packed with gauze to prevent bleeding. Because of continued shock, patient was transfused at 3:50 P.M. with 700 cc. whole blood. Responded to treatment, and condition remained fair.

1-30-30, Condition still good. Drainage from wound marked. Dakin's irrigations. 2-8-30, Chill, lasting one-half hour. Felt very warm, vomited a great deal. Negative throat. Findings in left base suggested beginning consolidation. 2-9-30, X-ray (portable) showed probable pneumonia of left base, possible pleural effusion, left base, with a subcutaneous emphysema, left. 2-12-30, Feeling better. 2-15-30, Cough and expectoration, left chest findings still indicate involvement. X-ray showed possible pneumonic consolidation, left base; probable enlarged glands, right superior mediastinum; probable pleural effusion, right base. Oxygen tent ordered. Exitus at 3:30.

Therapy: Morphine sulphate, ephedrine, intravenous glucose, hypodermoclysis, hyperventilation, mineral oil, Dakin's solution pack, luminal, calcium carbonate, Steam inhalations, aspirin, phenacetin, force fluids, elixir terpin hydrate phenol with glycerin in ear.

Autopsy: Group I - (1) Carcinoma of left breast and axilla

Group II - (1) Recurrence of carcinoma (2) Partial absence of breast (3) Recent operation wounds (4) Metastases in both axillae, left supraclavicular space, superior mediastinum, hilus (5) pulmonary congestion and edema

Comment: Delay due to home treatment (2) Insufficient operative procedure (3) Questionable attempt after recurrence to remove tumor? (4) Effect of transfusion on shock (5) Metastases in opposite axilla (6) X-ray demonstration of involvement of mediastinum.

CASE IV

Carcinoma of the stomach (Delay 3½ years)

The case is that of a man, 59 years old, admitted to the University Hospital 1-3-30 and died 1-28-30 (25 days). Chief complaints - stomach trouble. Patient had gastric distress following meals in 1926, small emesis of green material, no blood. Consulted a physician at that time who made a diagnosis of stomachache and gave him pills without relief. He saw this physician once in 1926 and once in the fall of 1928, and he gave him more pills without relief. He started taking patent medicines in March 1929. Did not see another physician until six days before admission. This doctor made an x-ray examination and found a tumor of the pylorus which he thought was probably carcinoma. The last five weeks, the symptoms have been worse. The patient ascribed the increase to heavy lifting. At first he was unable to eat certain foods such as greasy foods, cabbage, and turnip because of gas and mild abdominal pain produced by them. Three years ago, patient began to vomit once in a while if disturbing food was eaten. These spells of nausea followed directly after eating, but did not occur more than once or twice a month. About a month ago, patient was working in a lumber yard lifting, and felt something tear loose in his abdomen. Was ceased with severe abdominal pain and nausea. Worked the rest of the day, but has not worked since. Stools

subsequent to this incident were very dark (tarry?) for several days. Since then the pain and discomfort after eating has increased more rapidly. Vomiting occurs after each meal. Vomiting is more painful and more difficult of late. Vomitus is usually bitter and greenish in color. Had dysentery nine years ago, lasting four months with complete recovery. No history of jaundice or hemoptysis. Father and one brother both dead, had similar condition to patient. Present complaint - dull pain in region of epigastrium, extending from right costal margin in this area to the left, following along the left costal margin, also along the right costal margin and straight across the upper abdomen (8 years duration) Regurgitation of material after meals, only about a mouthful, somewhat watery with mixed food at times (3 years duration). Until very recently, patient complained of gas after meals, usually lasting for about 2 hrs, (3 years duration).

Physical examination: Fairly thin tall man (5 ft. 1 in.), white, intelligent, and very cooperative. Has a large, fairly hard, movable lump on the back of his neck. Six teeth in lower jaw, gums in poor condition. Neck no adenopathy. On right side, just below angle of jaw, are several small scars from previous discharging lymph glands. Rales in apices; bases normal. Slight dullness in right apex. Heart normal. Abdomen slightly emaciated, no irregularities to be seen, no bulging masses liver dullness, 5 cm. below costal margin. Edge not felt. In epigastric region, there is a resistance to pressure, very uniform, but no irregular mass was outlined. Pain on pressure in mid epigastrium. Tenderness along costal margin anteriorly. Inguinal gland palpable. Extremities negative except for a few scars over the shins. Slight varicosities. Genitalia normal.

Laboratory: Urine negative. Hemoglobin 91, rbc. 4.93, wbc. 7.10, P. 60, A. 20, B.U.N. 52.57, Chlorides 495. Stools - positive occult blood test. Gastric expression free hydrochloric none. Total acidity 47 degrees, 22 degrees, 30 degrees, 12 degrees. Chlorides 352, 292, 419, 437. Bile stain in all. No lactic. Group Iv. X-Ray of stomach shows infiltration in distal portion. Large number of rarefactions, while appearance being characteristic of malignant infiltration, probably a polypoid type of carcinoma. Above this infiltration, the stomach appeared quite normal. The duodenum filled out fairly well and appeared normal. At the end of six hours, the head of the meal was in the ascending colon, and the stomach was empty. Diagnosis: Polypoid carcinoma of stomach. Single plate of chest shows old fracture of fifth rib; negative lungs.

Operation (1-22-30), time 1 hr. 15 min., anesthesia swinocain. Abdomen explored, no rectal shelf. Small nodule on superior surface of liver. Mass at distal end of stomach fixed to liver and seems to have invaded it. Numerous nodes along the lesser curvature which seems to be involved. Nodes in the omentum and on the greater curvature also involved. Lesion of stomach very hard and fixed to surrounding tissue. Posterior gastro-enterostomy done to the left of the transverse colon. Patient has had preoperative gastric lavage, 1-15, 1-18, 1-19, last time only 75 cc. obtained. General condition was considered good before operation. Lavage day of operation.

Postoperative condition: Considerable pain in abdomen. Vomited foul smelling, brownish material. Perspired freely. Very uncomfortable and restless, but general condition good. Vomiting continued to the next day. 200 cc. of material obtained by tube. Resembled old blood. 1-24-30, Began coughing slight amount of blood streaked sputum. Temperature has remained continually high. Bronchovesicular breathing and crackling rales at bases. Impression - possible beginning pneumonia, both bases. Throat showed signs which indicated follicular tonsillitis. 1-27-30, X-ray plates showed postoperative coalescent bronchopneumonia. Uncomfortable and regurgitating brownish, foul smelling material for the past three days. Has been lavaged. Getting fluid subcutaneously, supplemented by proctoclysis. Abdomen soft; no signs of peritoneal irritations. Respirations shallow and rapid. Pulse rapid. Oxygen tent. Intravenous glucose, subcutaneous

fluids, proctoclysis. Exitus 3:19 A.M.

Medication: Cascara, castoroil, allonal, special liquid diet, morphine sulphate, hyperdermoclysis, proctoclysis, sodium bicarbonate, steam inhalations, oxygen tent, intravenous glucose, caffeine sodium benzoate.

Nurses' notes: Preoperatively, patient comfortable, severe abdominal pain, nausea, worried, hungry but refuses food, small emesis, very hungry, gastric distress except after stomach is pumped. Postoperative, slight pain, nausea, emesis, profuse perspiration, blood streaked sputum and cough, weaker, restless, beginning decubitus ulceration, lavage, red purplish area on right buttocks, breathless, cyanotic, exitus.

Preoperative temperature 98 to 102, postoperative 99 to 106. Pulse 80 to 80, postoperative 90 to 160. Respiration 18 to 40.

Autopsy: None

Clinical Diagnoses: Group I - (1) Carcinoma of stomach (polypoid type)
Group II - (1) Metastases to liver, lesser curvature, omentum, greater curvature, posterior gastric structures (2) Posterior gastroenterostomy (3) Ileus? (4) Acute bronchopneumonia (5) Probable peritonitis?

Comment: Marked delay in treatment (2) Clinical suggestion of tuberculosis, right apex with involvement of glands of neck (in the past) (3) Postoperative pneumonia (4) Cause of Abdominal symptoms?

OUR GRADUATES

Herman Julius Wolff, St. Paul, Minnesota, (brother of Benno S. Wolff, honor student, University of Minnesota, B.A., L.L.D. 1927) graduate Central High School, St. Paul 1923, Salutatorian, member of debate team, member of tennis team, degrees B.S. University of Minnesota 1927, M.B. 1929, M.D. 1930, internship University Hospital 1929-30, honors Alpha Omega Alpha, student research "Pneumococcus Serum Experiment for Agglutination Power", advisor Dr. W. P. Larson, (unpublished observation), first place, section B, Plans - appointment as a fellow in medicine, minor pathology, Mayo Foundation for Medical Education and Research. Interests - Toxic myocardium as a factor in sudden death, member Halpesh Fraternity, St Paul chapter. Ambition - clinical and medicine and research. Desires to thank the faculty and hospital staff for their kindness and interest. Leaves well pleased with his internship. Suggests that clinical research (statistical.) probably would be stimulated by allowing one months free time during the internship for this activity. Thinks that the number of interns should be increased so that fewer patients would be allotted to each man, allowing more time for study of his own patients and those on other services.

Sam Leonard, Minneapolis, Minnesota, graduate North High School, Minneapolis 1920, dental Student University of Minnesota 4 years, degrees B. S., 1927, M.B. 1929, M. D. 1930, University of Minnesota, internship University Hospitals 1920-30, Athletics boxing, amateur light weight champion, University of Minnesota, 1922-23, professional boxer (more than one hundred bouts). Plans - private practice, Minneapolis, Minnesota, to be followed by graduate work. Is very well pleased with his internship. He desires to thank all who have made his stay so pleasant and profitable. Believes that the University Hospital internship is very desirable, and offers unlimited opportunities for those who desire to work. Will be badly missed at the game table in the internes' lounges, where he was very adept at cards.

The staff desires to thank both Drs. Wolff and Leonard for faithful and conscientious service. They wish them well in their new fields and trust that

they will always look to the University Hospitals as their own institution.

SPECIAL NOTICE

The metabolism laboratory has been moved from M-4 to M-1 in the old dental rooms. Six beds and two machines are now available, and we trust that the number of examinations desired by the staff will be promptly cared for in the new arrangement. Please limit the number of emergency requests by looking ahead on patients to be discharged.

NEXT MEETING

There will be no meeting Thursday, March 27, 1930, on account of spring vacation. The next meeting will be held Thursday, April 3rd, at the usual time. The subject will be "Complications of Mastoid Infections". Illustrations of sections from annual reports from other institutions will also be presented.

EXTRACTS FROM THE COMMONWEALTH

VOLUME 16
No. 4

OCT.--NOV.--DEC.
1929

ADULT HYGIENE

MASSACHUSETTS
DEPARTMENT OF PUBLIC HEALTH

The Massachusetts Cancer Campaign to Date.

In the past three years the Massachusetts Cancer Program has emerged from a nebulous beginning to an established status. It comprises hospitalization, clinics, education and statistical research.

A hospital with provisions for eighty-five patients is running to capacity. Cancer, in all stages of the disease, is being admitted. From June 21, 1927, to August 1, 1929, there have been 1,246 admission, 846 discharges, and 320 deaths. The Out-Patient Department holds a weekly clinic and averages twenty-five patients. New construction, now under way, will furnish better accommodations for this department and some twenty additional beds for the hospital.

There are now twelve clinics functioning in seventeen cities and towns. Two or three additional clinics will probably be established. Between December 17, 1926, and August 1, 1929, 5,066 patients have attended these clinics, 27.7 per cent of whom have had cancer, with approximately one-half of these in the operable stage with a chance for cure.

Educational activities have continued throughout the period. Most of the work in the clinic centers is being done by the local educational sub-committees of the clinics, while ⁱⁿ the non-clinic communities the work has largely been done by the personnel of the Department of Public Health.

A number of statistical studies have been conducted. Some of the most outstanding findings are as follows:

1. Massachusetts has the highest cancer death rate of any state in the Union. This is largely due to the large number of foreign extraction groups in the state.
2. There are approximately, at any one period, 10,000 cancer patients in Massachusetts.
3. The foreign born and the children of foreign born have a high death rate from cancer of the gastro-intestinal tract.
4. The Median duration between the first symptoms and consultation with a physician is a little over six months.
5. Probably 30 per cent of all cancer patients can be cured if proper treatment is instituted early in the disease, and the present delay results in nearly 1,000 needless deaths yearly.
6. For every patient attending a state-aided clinic, twenty-two go to the office of the private physician.
7. Nearly half the patients attending the clinics do so because of newspaper publicity.

CANCER STUDIES IN MASSACHUSETTS

4. Why Do People Delay?

By HERBERT L. LOMBARD, M.D., Director, and MARY P. CRONIN, Secretary,
Division of Adult Hygiene

In the Special Report of the Department of Public Health and Public Welfare (House Document 1200) it was found that cancer patients in Massachusetts averaged an eight months' delay between first symptom and first consultation with a physician.

At the suggestion of Dr. Walter D. Cannon, a study has been made to ascertain the reasons for this delay. The records obtained in the cancer clinics have been used and the clinic social workers have collected special information regarding 221 cancer patients who had either attended one of the State-aided cancer clinics or the Pondville Hospital. In the investigation both the reasons for the delay before consulting the physician and the reasons for the delay before beginning treatment were ascertained. For convenience, this group of 221 cancer cases will be designated "Study Group."

During the thirty-three months ending August 31, 1929, 1,252 individuals with cancer and 4,083 individuals without cancer attended the State-aided cancer clinics. The median interval of delay between first symptom and first consultation with a physician for the cancer patients was 6.5 months and for individuals without cancer, 6.3 months. The percentage of the cancer cases who came within eight weeks of first symptom was 34.1 and of the non-cancer cases, 35.9. When these groups were sub-divided into sex the median interval for the non-cancer patients for males was 6.5 months and for females, 6.3 months. The percentage of the non-cancerous individuals who consulted a physician within eight weeks after first symptom was 35.6 for males and 35.9 for females. This difference, 0.3 ~~±~~ 1.7, is not statistically significant. In the cancer group the median interval for males was 8.2 months and females, 5.4 months. The percentage of males who came within eight weeks is 30.8 and of females, 37.6. This difference, 6.8 ~~±~~ 2.7, is statistically significant, and indicates that females with cancer consult physicians at an earlier period than males, in part probably because of location.

When the cancers are sub-divided by location, females are shown to delay less than males in all groups with the exception of skin (Table I).

TABLE I. - MEDIAN DELAY BY TYPE

	Male.	Female.	Total.
Buccal and esophagus	5.3	2.7	4.7
Uterus		1.9	1.9
Skin	13.6	14.3	13.7
Breast	*	4.2	3.9
All Others	4.0	3.6	3.8

*Too few cases to compute a median.

When the cancer patients for 1928 and 1929 are subdivided by the nativity of their parents we find that those whose parents were both born in the United States, 29.1 per cent of the males and 32.3 per cent of the females went to a doctor within eight weeks. This difference, 3.2 ~~±~~ 5.0, is not significant. The percentage of males with both parents born abroad who consulted a physician within eight weeks is 32.7 and for females, 37.7. This difference, 5.0 ~~±~~ 4.0 is not significant. The differences between the foreign males and the native males, 3.6 ~~±~~ 4.4, and between the foreign and native females, 5.4 ~~±~~ 4.6, are not significant.

The study Group resembles the Total Clinic Group in the age of the patients, the median age of the males in both groups being sixty-three and the females, fifty-seven. The types of cancer differ somewhat (Table II).

TABLE II.- PER CENT OF CANCERS BY TYPE

	Study Group (221 Cancers)	Total Clinic Group (1,252 Cancers)
Buccal and esophagus	16.8	21.9
Uterus	17.6	9.5
Skin	28.0	34.9
Breast	23.0	16.9
All Others	14.6	16.7

The median delay in the Study Group for males was 8.4 months, compared with 8.2 in the Total Clinic Group; for females of the Study Group, 7.2, and of the Total Clinic Group, 5.4. While there is a considerable difference in the median delay for females between the two groups, this difference is not apparent if the last year only of the clinic records are used.

There has been a slight increase in the median delay during the three years experience of the cancer clinics. In 1927 the delay was 6.0 months, in 1928 it was 6.6 months, and for the first eight months of 1929, 7.2 months. This increase can be explained in part by the change in the type of cancers which are coming to the State-aided clinics. Table III Shows that the percentage of skin cancers which have a long period of delay are increasing, while breast, buccal-esophagus, and all other cancers with short periods of delay are decreasing. Cancers of the uterus are increasing, but the short delay of this group does not compensate for the others. Moreover, the skin cancers show an increase in the period of delay from eleven months in 1927 to twenty-four months in 1929.

TABLE III.- PERCENTAGE DISTRIBUTION OF CANCERS BY LOCATION

	1927	Total 1928	1929*
Buccal and esophagus	23.8	21.9	21.5
Uterus	8.2	8.9	11.8
Skin	29.8	36.1	36.8
Breast	21.0	15.7	15.5
All Others	17.2	17.3	14.3

* Eight Months.

DELAY BEFORE CONSULTING A PHYSICIAN

The greatest single cause for delay was among those individuals who considered their condition a minor illness. Warts, moles, indigestion, and other maladies were thought to be the trouble. (Table IV) Forty-eight per cent of the individuals attributed their conditions to these minor causes. Ten per cent delayed on account of negligence; 9 per cent because the symptom was not severe; 12 per cent felt the delay was too short to be considered; the remaining 21 per cent attributed their delay to either fear, economics, opposition to doctors, ignorance, the use of home remedies, bad advice, or a few miscellaneous reasons.

There are significant differences between the sexes in their relation to fear and thinking their condition to be a minor malady. There are borderline significances between the sexes in their opposition to doctors and accepting poor advice. Males were more apt to delay than females because they thought their condition was a minor malady; whereas, fear,

Ignorance should be taught the danger signs of cancer. Those who delay on account of fear should know that cancer is not a hopeless disease. For those who do not consult a physician because of economic conditions a knowledge that State-aided clinics furnish free diagnosis should be given. Those using home remedies, receiving advice from quacks, and opposed to doctors should know that surgery and radiation are the only proven methods for the cure of cancer. Those who delay because the symptom is not severe should realize that pain is not usually an early symptom of cancer. To the negligent, the knowledge that in some forms of cancer the chance for cure decreases 4 per cent a week should be known.

The reasons given for delay between first visit to physician and first treatment point toward a better knowledge of cancer on the part of some physicians and greater activity on the part of the social worker. The physicians in the State who are somewhat backward in their methods of diagnosis and treatment should avail themselves of such educational resources as the Graduate Courses in Cancer offered by the medical society, the various cancer clinics held widely over the State, and the like. The figure of 12 per cent in the Study Group who received poor advice is somewhat better than the 14 per cent figure reported by Simmons and Daland, but there is still evidently need for further education. The social worker should endeavor to allay fear, improve family cooperation, arouse the negligent, and point out the resources of the State available to everybody.

CONCLUSIONS

1. The median delay between first symptom and first consultation with a physician for individuals with cancer coming to the State-aided cancer clinics in Massachusetts is 6.5 months.
2. Males delay longer than females except for skin cancers.
3. The greatest delay is in cases of cancer of the skin and the shortest delay is among those patients having cancer of the Uterus.
4. Thinking the condition was a minor malady is the largest single cause of delay. Among the males, this reason is considerably greater than among the females.
5. The greatest single cause of delay between consultation with physician and treatment was because of poor advice on the part of the attending physician.
6. Forty-five per cent of the cancer patients had a median delay of six months after consulting a physician while 55 per cent received treatment within a short time following diagnosis.
7. The median interval of delay is increasing each year since our first figures in 1927. This is profoundly disappointing in view of the intensive medical and lay education carried on. Possibly it is in part due to the fact that the percentage of individuals with skin cancers attending the clinics has increased as this group delays much longer than any other. Our current figures, however, indicate that the delay in skin cancers is increasing, while other types remain about the same.