A Brief Statement of our Present Knowledge of Cancer

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Read before the Philadelphia County Medical Society

The solution of the cancer problem constitutes one of the most formidable tasks confronting the medical profession today. The reports of societies for cancer research show thus far no conclusive evidence as to the etiology or nature of this condition. While carefully collected statistics appear to indicate an increase in the prevalence of the disease. Owing to the great difficulties and questionable methods involved in collection of public statistics, some legitimate doubt as to the accuracy of inferences derived therefrom is usually conceded. When, however, from all countries of the civilized world in which records of any reliability are kept the figures show over a considerable period of years a steady increase in the deaths reported due to this cause, we cannot fail to consider this phase of the situation.

In a recent book on the “Natural History of Cancer,” by W. Roger Williams, of Liverpool, are given carefully tabulated statements of the death rate from cancer in different countries.

In the United States the figures from the so-called “registration area” show that the number of deaths from cancer per 100,000 living has increased from 47 in 1890 to 60 in 1900, and in England and Wales during the same period the number of deaths per 100,000 living increased from 67 to 82. In 1890 1 in 28 of all deaths recorded was due to cancer; in 1900 the proportion was 1 in 22, and in 1905, 1 in 17.

While it has been contended that more accurate diagnosis will account for some of this increase, it must also be acknowledged that this same fact, owing to the resulting early operations and cures, would also to some extent tend to reduce the mortality, and it is justly claimed that by the time cancer reaches its fatal termination in any case there is little difficulty in recognizing the condition.

However disdefined we may be to trust implicitly to the statements regarding the increase of the disease, we cannot deny that any pathological condition which during the year 1905 alone caused in England and Wales over 30,000 deaths, and in Germany over 40,000 deaths, with proportionate figures for other countries, is certainly deserving of serious thought.

One difficulty encountered in the consideration of such statistics, and, in fact, in the study of this subject in the current literature, especially in clinical reports, lies in the looseness of usage of the term cancer. This term was formerly used with some exactness by scientists to signify that particular type of malignant neoplasm which grows from epithelial cells, and to which the term carcinoma was applied. In the minds of others, however, any malignant tumor is a cancer, and official registrars and statisticians in most communities today use the term cancer in this broader sense. It would, perhaps, be as well, therefore, for the medical profession in general to accept, as many clinicians have already done, this popular usage of the term.

With the cancer problem thus before us in an acute stage of development, it is my purpose to review briefly the present status of the two main theories as to the etiology of the disease.

These are the parasitic theory and the theory of cell autonomy.

The literature of both phases of the problem is voluminous, and has been recently reviewed and carefully abstracted by a number of writers. A lecture on Cancer Problems, by Dr. James Ewing, of New York, delivered before the Harvey Society, of that city, in November, 1907, and the volume by Williams, already referred to, appear to be among the most complete summaries of the subject.

The Parasitic Theory.

The adherents of the parasitic theory of cancer base their belief upon several observations. Among these may be stated:

I. The occurrence of the disease with great frequency in certain well-defined localities—cancer districts; among the occupants of certain houses, and among members of the same family.

II. The fact, claimed by some, that the disease may be transferred from one human being to another.

III. That the disease may be transferred from one animal to another of the same species.

IV. That the disease may be transferred from human beings to lower animals.

V. The increasing prevalence of the disease.

VI. The discovery, claimed by some, of
a definite parasite within the malignant tumors.
I cannot here attempt to discuss fully all of these different points, but will merely call attention briefly to certain facts relating to them.
That cancer does occur in certain localities with greater frequency than in others appears to be a fact; yet other concomitant conditions, relations of soil and water, food and general environment may also exert an influence on the metabolism and health of individuals living in such a locality. These so-called cancer epidemics never appear to occur in crowded districts of cities or in hospitals where always some few cases of the disease are under treatment. On the contrary, Williams finds in his study of the subject in England and Wales that where hygiene is best maintained, people are well fed, general mortality low, deaths from tuberculosis and other bacterial diseases decreasing, and general prosperity advancing, cancer is increasing. Ewing makes the observation that one is no more justified in assuming a parasitic origin for cancer occurring in members of the same family than in claiming a similar origin for diabetes or insanity.
The contagiousness or transmissibility of malignant tumors in human beings has been a subject of a vast deal of discussion. It is impossible to attempt a sifting of the cases of such contagion described in the literature, but to any one who does so it becomes obvious that many at least of the cases so reported must fall to the ground on careful examination of the facts. In reports of such cases of so-called contagion, rarely, if ever, are facts given which show any attempt on the part of those reporting them to study the possible relations of environment as referred to in discussion of the cancer districts.

That cancer may be transferred from one part of the patient's body to another is obvious, from the occurrence of metastatic growths constantly observed in individuals suffering from the disease. That autoinoculation may take place also by implantation of tumor material upon abraded or ulcerated surfaces must, perhaps, be accepted, although this occurs probably far less frequently than is supposed.

That all reported cases of such contact inoculation cannot stand investigation is shown by the following instance, reported in the Lancet by Dr. Henry Trentham Butlin, of St. Bartholomew's Hospital, London.

Dr. Butlin was informed that a pathological specimen, at a certain museum in London, would interest him greatly, as showing an undoubted instance of development of a secondary epithelium of the cheek as a result of contact of that surface with a primary epithelium of the gum opposite to it. Dr. Butlin writes: "I drove one day to the museum where the specimen lay. The curator of the museum met me with an expression of disappointment, and told me he was ashamed to confess that, although this specimen had been exhibited to various persons as an example of the contagion of cancer, it had never been examined microscopically until my friend had informed him that I wished to see the sections, when he had at once proceeded to cut them, with the result that, while the primary disease was typical epithelium, the ulcer of the cheek only exhibited the ordinary characters of inflammatory ulceration. Yet both he and the surgeon who had operated had been previously convinced that the disease was of the same nature in both the sores."

This inoculability, when it does occur, appears, however, to depend upon the actual transplantation of tumor cells to the new situation, where they continue to exhibit their power of indefinite proliferation. In all known infectious diseases, on the other hand, the local manifestations of parasitic growth, even when assuming tumor formation, as in tuberculosis and syphilis, result from the reaction of the host cells, the multiplication of these constituting the tumor and not the proliferation of the infecting cell.

With regard to the transference of malignant tumors from one lower animal to another, the many experiments carried on during the past few years, in Ehrlich's laboratory; by the Imperial Cancer Research Fund of London; at the Gratwick Research Laboratory of New York State, at Buffalo; at the Huntington Cancer Research Laboratory of Cornell University, New York, and elsewhere, all tend to prove that inoculation of a tumor from one lower animal to another of the same species is also dependent upon the actual transplantation of living cancer cells to the inoculated animal.

Gaylord and Clowes found that after treatment of fragments of mouse tumors with a solution of potassium cyanide of strength sufficient to destroy all bacteria and spirochaetes present, such tumor fragments, still containing living tumor cells, were capable on subsequent inoculation into healthy mice of growing and producing the adenocarcinoma of the type from which they were derived.

Furthermore, other investigators have shown that procedures which destroy the vitality of tissue cells, yet do not destroy micro-organisms—such as mechanical crushing, for example—that such procedures totally prevent the subsequent growth in animals of such crushed tumor fragments.

The occurrence of certain apparent epidemics of cancer among lower animals—as the supposed cases of cage infection of carcinoma among mice, and the simul-
taneous appearance in many individuals of
certain sorts of fish tumors, are of great
interest in this connection.

While the evidence offered here in favor
of parasitism cannot be wholly refuted,
some of the instances cited may safely—
Ewing says—"be referred to the influ-
ence of inbreeding, old age and uniform re-
action to environment." Such an epidemic
of carcinoma of the thyroid among trout
has recently broken out at one of the hatch-
eries in New York State, and offers an
unusual opportunity under absolutely con-
trollable conditions for study of the na-
ture and cause of the disease among these
animals, and it is to be hoped that this
study by the New York State Laboratory
will lead to the discovery of facts which
may have an important bearing on the ques-
tion.

This audience is, of course, aware of the
constantly recurring announcements of the
discovery of a specific cancer parasite.
Since 1886 at least fifteen such causative
organisms have been brought forward, only
to disappear again from the literature as
further observation made their etiologic
connection with the disease untenable.
These include the more familiar micro-
coccus neoformans of Doyen, the various
cell inclusions of Plimmer, Russell, Rob-
ertson and others, and the spongoplasts of
Gaylord and Calkins.

Dr. Ewing states: "One may well pause,
while reviewing this battleground, to ac-
knowledge that no other problem of med-
cal science has resisted such strenuous
efforts towards its solution."

While some of us feel compelled to ac-
knowledge that the parasitic theory of can-
cer offers so many vulnerable points of at-
tack as to be unsatisfying in the face of
facts at our command thus far, we cannot,
however, deny that the origin of certain
tumors is related to and consequent upon
trauma, or, in other instances, chronic in-
flammatory conditions. Such chronic in-
flammations may be due to irritation of
micro-organisms, but rarely, if ever, do
such micro-organisms persist throughout
the course of the subsequent tumor, nor
are they found following its ramifications
or metastases.

In this respect surely the neoplastic proc-
ess differs from those processes known to
be due to specific infecting agents.

THE THEORY OF CELL AUTONOMY

Briefly stated, the theory of cell auton-
omy is based upon the conception that each
individual animal cell possesses within it-
self a certain potential energy for growth
and multiplication; that as the organism de-
velops this power inherent in each cell is
directed by those surrounding it, and dif-
ferentiation of cells, tissues and organs
proceeds in an orderly fashion for the ad-
vantage of the entire organism and con-
trolled by the mutual relations of the entire
mass of cells.

This conception as it is developed today
traces its origin to the studies of Remak,
Thiersch, Cohnheim and others whose in-
fluence is still evident. Cohnheim's theory
of embryonal remainders is familiar to all.
It has become obvious, however, that all
neoplasms cannot be explained as develop-
ments of misplaced embryonal groups.

Ribbert believes that any cell of the or-
ganism possesses inherently a capacity for
limitless growth, but under normal condi-
tions of what he calls tissue tension this
growth is controlled. Any disturbance of
this control may serve to allow the sudden
revival of the "habit of growth," as Adami
expresses it.

Ribbert's conception of tissue tension in-
cludes several factors:

Mechanical pressure of cells on one an-
other.
Influence of specialized functions.
The distribution of nutriment.
Organization.

Concerning the mechanical pressure of
cells on one another little need be said.
The removal of any mass of cells by trauma
is certainly followed to a greater or less
extent by proliferation of cells bordering
the injured area, until the gap is filled up.

The influence of specialized function is
of greater importance in the development
of the theory. Cells developed to the per-
formance of a special function for the good
of the entire body rarely exhibit the power
of growth to any extent. When, however,
the function of such cells is checked, there
being little demand for its performance,
such cells are particularly prone to undergo
what we term malignant change, to mani-
fest their energies again in revival of the
power of growth and multiplication so long
suppressed. A notable example is found
in the occurrence of carcinoma in the senile
breast.

The distribution of nutriment may be
found to have a fundamental bearing on the
growth of tumors, and the influence of
definite internal secretions on the develop-
ment of certain organs is related to this
phase of the subject, and offers a wide
field for speculation and research.

The influence of the organization as a
factor in tissue tension Ewing believes to
be the most fundamental conception of the
theory.

All studies of regeneration, in lower
forms of animal life at least, show that
every cell has an enormous power of de-
veloping, of reproducing a very large part
of the organism which may chance to be
destroyed. This regeneration is an extra-
ordinary manifestation of power of pro-
iferation—but it is in response to the de-
mands of the organization, the needs of
the whole require and control it. Even in
higher animals the power of regeneration
is observed to a certain extent, each cell
having undoubtedly its quota of power to
drop its special function and send its energies toward proliferation; but always for a purpose, for the good of and controlled and limited by the organization.

When, however, the balance of tissue tension is upset, the control of the organization is removed, the proliferation continues in a purposeless and irresponsible fashion, and a tumor results.

That the stimulus which destroys the normal control of the organization may be an external one, and therefore, may be a parasite, must be admitted, although this is not considered necessary by those who hold this theory of cell autonomy. To quote from Ewing:

"When one considers the importance of Cohnheim's discovery of the embryonal character of the cells of origin of many tumors, the evolutionary significance of neoplasms, the influence of specific substances presiding over the nutrition and growth of many tissues, the general altruistic relations of cells and organs, the enormous regenerative capacities of mechanically injured cells in man and lower animals, the conclusion slowly but inevitably results that the destructive growth of tumor cells is adequately explained by the theory of tissue tension and cell autonomy, and that a parasite is unnecessary."

Thus the occurrence of a certain type of immunity to cancer has been demonstrated by Gaylord and Clowes and by Beebe and Crile, in regard to mouse tumors, and by Beebe and Crile, in regard to the lympho-sarcoma of dogs. Not only are spontaneous recoveries from tumors among these animals recorded, but such animals fail to take a second transplant of a tumor to which they were previously susceptible.

These results have led to much experiment in this direction, though the evidence thus far gained proves little for or against either theory. The discovery of a hemolytic substance in the blood of cancer patients is a fact which may in the future prove to be of some practical value, though the matter is at present undeveloped.

The chemical study of tumors thus far has thrown little light on the subject. No definite reasons are apparent for considering cancer cells essentially different in nature from other somatic cells. Their unusual susceptibility to destructive influences, enzymes and bacterial toxins, may perhaps, be due to the fact that their power of self-protection has been lost or suppressed by the extraordinary development of the proliferative capacity, and this heightened susceptibility would serve to explain the curative effect noticed in certain cases of intercurrent infections, of injections with toxins, as of streptococcus, bac. prodigiosus, etc., and also of yeasts and trypsin.

The action of these substances is not specific. In experiments in cases of sarcoma in dogs at the Huntington Cancer Research Laboratory, New York, sterilized cultures of staphylococcus pyogen. of b. coli communis were found quite as destructive to the tumor cells as were cultures of streptococcus, either alone or in mixture with b. prodigiosus as used by Dr. Coley.

While these measures may retard the tumor growth, or appear in a few cases to effect cures, we must still acknowledge that surgery alone, an early radical removal of the proliferating tumor cells, offers at present the only hope of cure.

While the advocates of both theories are striving with such zeal and perseverance for more facts we must hope with confidence for the ultimate solution of the problem.

It is unfortunate that a Buffalo surgeon of such wide reputation should put himself on record at a recent meeting in Brussels in the statement that "these men"—referring to those who do not yet consider the parasitic origin of cancer as probable—that "these men are delaying progress and making regular pathology ridiculous in that they are making heavier demands upon the imagination and far deeper inroads upon the truth than can be made by any reasonable presentation of and insistence upon the parasitic theory."

A problem attacked from as many different points of view as possible is surely more likely to be promptly solved than if all approach it from the same direction.

And, whatever our point of view may be, whether the condition appeals to us as a question of an invading parasite or as a question of diathesis, we must agree with Ewing's conclusion that "information of fundamental importance is still to be obtained by the very minute observation and analysis of the general and local conditions surrounding the early stages of cancer. This is the exclusive opportunity of the clinician, medical, surgical and special, but it is often neglected. In it lies the chief hope, for the present generation, of a reduction in the mortality from cancer, by the earlier recognition of the precancerous stage of the disease and the elimination of some of its accessible factors."

Dr. N. — "This, then, is a gun-stock fracture."

Miss C. — "Was that named after a man?"
Women and Medicine

How often do we hear the question, "Is it desirable that women should study and practice medicine?" The reason given by women for their choice of medicine as a profession, "I like it," is met by the assertion that they ought not to like it, or that at least they ought not to be allowed to have what they like. Yet, for the most part, the objections brought against it, instead of being sound and reasonable, are mere prejudices suggested by the instinctive conservation of ignorance. It has been said that such study tends to injure the finer qualities of womanhood, but well-balanced thought proves such assertion groundless.

The serious study of a scientific subject can hardly be injurious to any one and the possession of special safeguards, or the absence of special temptations would suggest that women are peculiarly adapted to approach the great science in the attitude of students.

Again it is said that the practice of medicine tends to develop in women an unfeminine amount of self-reliance and that much of the graceful brightness which should refresh and sweeten the social atmosphere is lost. It must be conceded that a woman physician requires a considerable amount of self-reliance and firmness. Vacillation would be as fatal to her reputation as it is to a man's. Her patients must realize that beneath all possible gentleness of manner, there is no self-distrust, no shrinking from responsibility. The medical profession, however, is not alone in thus developing the quality of self-reliance. Women who manage their own estates and households, those engaged in teaching, all who are engaged in professional or business enterprises, learn sooner or later that they cannot afford to exercise the so-called sweet and womanly grace of helplessness. But is it a grace? Ought the standard of what is perfect and beautiful ever to stop short of the best that can be reached? Does not a perfect development of womanly character rest upon a basis of strength moral, mental and physical, rather than upon the absence of strength?

A cultivated judgment, self-possession, courage and energy are intrinsically good qualities whether present in men or women, whether stamped with the approval of men or not. It is not true that a woman when obliged to be self-reliant, must necessarily cease to be gentle. The habit of self-reliance need not engender presumption, or interrupt the exercise of any womanly grace. It does not make a woman less tender, or less sympathetic or less generous and it certainly is not likely to make her less able to appreciate and to reverence the noble qualities of others.

M. E. B., '10.

An Anomalous Crus of the Diaphragm

One of the recent subjects in the dissecting room—the one, by the way, on which "The Missing Link" was discovered—disclosed a matter of anatomical interest. The left crus of the diaphragm was anomalous, being in this case much larger than the right crus, the right arising as is normal at the level of the third lumbar vertebra, while the left took origin as low down as the fourth, passed up the median line where it roofed in the aorta, covering the latter entirely from this point upward in its course through the abdomen.

The muscle at this point was very tendinous and resistant, though comparatively thin. The right crus was fairly round and cord like, while the left seemed to have spread out for the express purpose of hiding the aorta, and measured fully two centimetres in width.

Because of this anomaly the arched opening, which usually exists for the aorta, was entirely obliterated. One could hardly say that the aorta had an opening. The inferior mesenteric was the first of its branches to arise
“in the open” as it were. The superior mesenteric emerged laterally on the left, and the renals had no trouble in escaping, but the celiac axis was “cabin'd, cribb'd, confined.” It divided under cover of the crus, but even then its branches seemed to have difficulty in getting out.

No other anomalies were found on the subject, as far as dissected; the organs were normal and the muscles unusually well developed. Pathological changes were few, excepting in the kidney (the subject was registered as dying of nephritis) and a few tuberculous foci in the lungs.

A. A. M. '12.

“The Anti-Vivisection Show”

For those who haven’t been to the “anti-vivisection show” we would like to draw a pen picture of this most interesting exhibit. The building used for the purpose is very appropriately situated on Chestnut street, and the show is in keeping with the chosen site.

The first object to attract one’s attention is the left window, in which is a heart-rending spectacle of a vivisected dog, bound to a board, his mouth open, and all bespattered with red paint gore! There are no details in regard to the scientific investigation of which he was a victim, and the gullible public is made to imagine that vivisection is an end in itself, its object being the amusement or morbid interest of the vivisector.

Entering the hall, one is truly surprised to find a large, and apparently “bona fide” collection of autograph letters from world-famous literary men and women who have committed themselves as opposed to vivisection. Even a quotation from Shakespeare is torn from its context and made to do service as an opponent of this twentieth century atrocity. There is no excuse to be made for this part of the exhibit. It stands simply as a “solemn folly” of an emotional, sentimental class, and as such we pass it without further comment.

The pictures and posters are worth pondering over; there are life-sized dogs, and cats, and rabbits being starved, and cut and baked alive. There is a pathetic scene representing Powell “Dogs” depicted in all manner of agonies. Dr. Bernard is classed as an arch-fiend, and his atrocious experiments are graphically flaunted, singular and significant silence being preserved about his extraordinary and extremely practical discoveries.

The “petition” is shown off to the best possible advantage, for the sheets are glued together and extend nearly twice around the hall. In it hundreds of ignorant, impressionable people have gone on record as being opposed to what they are pleased to term “scientific” tortures.

And, lastly, the exhibitors deserve a passing remark. It is almost needless to say that they are women, and women who indicate by their attitude and conversation that they are neither educated, well read, nor fair minded. They obviously belong to the class who would not believe “tho’ one rose from the dead” to convince them. They are comparatively harmless, for fortunately the public generally thinks for itself, and the majority of people will not be lead by the frantic fanaticalism of these sensationals.

C. W. S. '10

THE BABIES. “GOD BLESS 'EM!”

The babies at Maternity

Send greetings to your feast today;
And, since you think us worth a toast,
We're glad to say our little say.

Perhaps you think us immature;
You're quite mistaken if you do;
We have opinions fully formed
On students and on doctors, too.

You need not count our feelings nil
Because we make so little fuss;
We keep a pretty clear account
Of all the things they do to us.

They take that old pelvimeter
(With metal knobs that feel so fine!)
And pinch our heads and gravely state:
“This biparietal is nine.”

If one of us is singled out
It has no cause for being vain,
For this is all the praise it gets:
“The suture here is very plain.”
"Just feel the edges of the bone,
Observe with care each fontanelle.
Their fingers poke in eager search,
And then they wonder why we yell!

You'd think, perhaps, they'd sympathize
Or try to soothe us when we cried.
Oh, no! They say, "Quick, now's the chance
To notice if the tongue is tied."

If we turn yellow in the night
They do not seem to take a fuss,
But take the time to demonstrate
A jaundice hematogenous.

If they roll up our little shirts
'Tis not to praise our tummies plump,
But with long words to dissertate
Upon the umbilical stump.

In vain we curl our pinky toes;
They see no piggy—wigs in line,
But tickle us upon the soles
To illustrate Babinski's sign.

Of course, we try to understand,
They do not mean to turn us pink;
And when you think how young they are,
Perhaps we really should not mind.

But what's the use of being born
If people will not pet you up?
It's mighty hard to find the drop
Of sweetness in our bitter cup!

If we sometimes wail aloud,
It's not that we're innately bad;
If you were in our place awhile
You'd find enough to make you mad.

Still, since you think us worth the toast,
We'll show that we're forgiving, too,
And since you're kind enough to say
"God bless us"—why then,
"God bless you."

DR. ALICE W. TALLANT.
(At the Junior-Senior banquet, 1908.)

Social

On the evening of April 1st the seniors were entertained by the Y. W. C. A. As the honored guests arrived each suffered the ordeal of having her silhouette cast.

Fool's day "stunts" were indulged in; the intellectual effort of the evening being the identification of the silhouettes. Miss Smith, 'io, laboring under some form of mental confusion, recognized Queen Elizabeth, Cleopatra, Empress of China, Dr. Walker, etc. It may be that such types of greatness lurk in embryonal form in the class of 1910 and the future will fulfill such prophecy. However, the stern facts of the present compelled the committee to award the booby to this romantic lady, and to Miss Aizawa the prize of merit.

"A little nonsense now and then is relished by the wisest men." Our only regret is that such opportunities are not more frequent, that our pleasures and successes may be more closely interwoven.

THE HISTOLOGICAL CONTEST

Dr. Cushing has this year, for the first time, awarded a series of prizes, for the purpose of creating and maintaining additional interest in the study of histology on the part of the students of the various classes in college. It was prompted by visits of the different upper class girls to the laboratory, and the interest they took in identifying slides. The contest was held on Saturday afternoon, April 16th.

Four students each of the Junior, Sophomore and Freshman classes entered the contest. Thirty slides were examined by each student and the correct identification of each slide counted ten points, thus making it possible for each class to win 300 points. The Juniors scored the greatest number of points, lacking only 8 points of the 300 possible; the Freshman were second, lacking 12, and the Sophomores third, lacking 15.

The Junior contestants were Misses Weaver, Clark, Davies and Brydon; the Sophomores, Misses Heath, Conover, Polk and Huse; the Freshman, Misses Sassen, Price, Gottschall and Zabarkes.

The prize, a book, "Pain," by Rudolph Schmidt, M. D. (Vogel-Zinsser translation), was awarded to the Junior class, each of the four contestants receiving a copy.

Dr. Cushing, Dr. Cleveland and Dr. Lichtenwalner-Myers acted as judges. They were very much pleased with the remarkable record attained and the accuracy with which the girls studied the slides.

The staff trusts that the interest will grow, and that next year all
THE ESCULAPIAN

classes will enter.

Is the 1911 pennant to remain on the walls alone so long as they are in college?

A SUMMARY—NON-PATHOLOGICAL

The last time that the sophomores went to the park to study, they had quite an adventure. It was near the mill, which stands on the river bank. They were sitting about on grassy Knowles, studiously Read-ing their text-books. One of them strolled off a little way to Con-over the latest Es-culapi안, when, suddenly looking back toward the girls, she saw a young Bullock about to Radom. Although astonished to have Met-a-calf in such a place, she succeeded in diverting its attention to herself, and, as it was about to Horn-er, climbed a tree. Looking about for help, she spied, on the river, a boat in which was a Man-

"Ship ahoy!" she shouted, and the man, quickly propelling his boat to the shore, grasped a Reddy Coyle of rope and lassoed the Bullock, even as the great Teddy would have done, his boat, meanwhile, floating off down the river. Our sophomore then descended from the tree and thanked him very Sweet-ly, expressing, as Well's she could her re-Morse at causing him to lose his boat. As they chatted, she observed that the sun was sinking, coloring the sky with many Hughes, so, bidding Charlie adieu, she rejoined her classmates, who had been watching the affair from a safe distance. The excite-

ment proved too much for Miss Mims, so they borrowed a Morris-chair in which to Carrie her. As they Polk-ed along homeward over the Heath, the girls agreed that it had been quite an adventure, and resolved never to go near the Mill-igan.

E. C. W., '12.

Freshmen having their pictures taken on the college steps:

Miss Kipnis—I can't find my keys.

Miss Farr—Maybe the camera took them.

AN OUTING

The junior class and a number of seniors enjoyed a visit to Mulford's vaccine laboratories, at Glenolden, last week.

The day was perfect and the beautiful green and gold meadows were a treat for city eyes.

The antitoxin laboratories were the first visited, the bleeding room being most interesting. The horses used are strong, healthy western stock, and prance around as though nothing had happened after having five or six quarts of blood removed from their veins. In about six weeks they are ready to have the process repeated. The pseudo-globulin in the blood contains practically all the antitoxin, and is separate from the inert substances by many interesting processes.

The vaccine laboratories were very interesting. The operating room, where the animals are vaccinated and the virus removed, resembled that of a regular hospital, while the incubat-

ing stable was the picture of cleanliness.

During the walk to the building where the glass syringes, points, etc., are made, many of the girls were tempted to loiter and pick violets, which grew in great abundance.

Thousands of guinea pigs are kept in houses nearby and are used in testing and standardizing the prepara-

tions.

The tuberculin laboratory was the last visited and contained an incubating room where thousands of flasks were seen containing tubercle bacilli in all stages of development. These, after passing through various pro-
cesses, are used for curative purposes, while the serums are used for the tuberculin tests.

The company evidenced its insight into the feminine mind, by the presenta-
tion to each girl of a box of candy and literature on the subjects above discussed.

Miss Kinzie, who has been very ill at the Woman's Hospital, is improving.
We are pleased to announce that Mrs. Valentine, '16, who has been suffering from typhoid fever, is convalescing rapidly and will be able to finish the year with her class.

Miss Pippy recently enjoyed a visit from her brother, of St. John's, Newfoundland.

We extend our sympathy to Miss Sweet in her recent bereavement, in the loss of her sister.

The bud is in the bough and the leaf is in the bud. Even so anxiously ponder the sophomore: Be she a leaf of junior nipped by the frosts of May.

Freshman coming over the bridge whistling, hailed by upperclass member:

Freshman—"I'm going over to Dr. Collins to be examined for appendicitis.

Second person—"You don't seem very gloomy about it.

Freshman, confidently—"Nothing doing. I never was known to pass an examination."

The poets who sing of the springtime have never perused the April bulletin of W. M. C. Stern realities have never been harmonized in the meter of joyful song.

Every man has his price, they say, but Mr. Ivory has the only Price around here.

OBITUARY.

Dr. Sarah R. A. Dolley, of Rochester, died at her home in that city December 27, 1910, aged 80 years. Dr. Dolley was reputed to be the second woman to graduate from an American Medical College, having taken her medical degree in 1851 at a Syracuse Eclectic Medical College now extinct. She taught obstetrics in 1872-3 at the Woman's Medical College in Philadelphia, and served as a delegate to the American Medical Association at the Newport meeting, 1889.—Buffalo Medical Journal.

Alumnae

Dr. Josie H. Dobson, '08, who is the medical director of gymnastics at the University of Wisconsin, recently underwent an operation for appendicitis at the College Hospital. Dr. Ella P. Everitt performed the operation, and the patient made an uneventful recovery.

Dr. Sarah E. Coker, '08, has received an appointment at "St. Anthony's Hospital"—on the coast of Newfoundland. She will be one of Dr. Grenfell's assistants.

All things are comparative: One method of judging the results of the training provided by the Woman’s Medical College of Pennsylvania is that of comparison. A letter from Dr. Maude A Powell, Class of 1906, written while a patient in the Massachusetts General Hospital, says, "The physicians have been very accommodating and courteous in putting every facility at my disposal to investigate or study in any line I desire.

"I am in the nerve clinics every day, and have had a good post-graduate course in nervous diseases. At present, I am following the work with the fourth year Harvard students in that line (this is essentially ‘Harvard,’ you know), I have also had a splendid chance in skin diseases.

"I think I know quite a few more things than I did last spring if I have been on the sick list, and one of the things in which I take most satisfaction is that I appreciate more every day the training I had at the W. M. C. of P.; coming in contact with students from other colleges has emphasized that fact clearly."

The engagement has been announced of Dr. Louise J. Zimmerman, of 87 Pleasant street, to G. Stanley Meikle, of 98 Pleasant street, New Bedford, Mass. Mr. Meikle is consult-
ing engineer at the north works of the American Steel and Wire Company.

(Dr. Zimmerman is a graduate of W. M. C. of Pa., class of 1904.)

The office of President of the County Medical Societies of Delaware and Tioga Counties, Pa., is at present held by graduates of the W. M. C. of Pa., namely, Dr. Frances N. Baker, class of 1877, and Dr. Edith Flower Wheeler, 1897, respectively, while Dr. Clara Shetter-Keiser, 1885, holds the office of Vice-President of the organization in Berks county, Pa. In the Mecklenburg County (N. C.) Medical Society, the office of President has just been vacated by one of our graduates, Dr. Annie L. Alexander, 1884.

Basket Ball

The match games of the basket-ball season closed with a series of three games between the juniors and sophomores. The line-up was as follows:  

Juniors. Sophomores.  
Miss Love, '11. . . . . Forward . . Miss House  
Miss Cook, '13. . . . Forward . . . Miss Wells  
Miss Brydon, '11. . . . Centre . . Miss Morris  
Miss Clark, '11. . . . Guard . . Miss Metcalf  
Miss Wright, '13. . . . Guard . . Miss Polk  
Miss Thompson substituted for the sophomores in the first half of the second game.

Dr. Large and Miss Davis acted as referees and a number of students assisted. The score stands:  

Juniors. Sopho.  
First game . . . . . 28 11  
Second game . . . 14 28  
Third game . . . 12 16

The last game was the fastest, cleanest, most exciting game of the season.
Dr. Mary R. Noble, of W. M. C. of Pa., teaches in this college. The hospital is large; the number of patients treated in one year (1908) being about 21,000, and surgical operations, 1,100.

RUMMAGE SALE.

Early in October the Y. W. C. A. will hold its annual rummage sale, for paying the debt for Brinton Hall improvements. While packing for the June exodus, will every girl please discard some of her wardrobe and let it be stowed away at the hall to be sold next year? A list of things that can be used is on the bulletin poster.

Brinton Hall exists for the convenience and comfort of all who feel the need of a social centre and who will avail themselves of it. We plan for larger things—an adjoining building of the present one—more rooms to rent—a well equipped kitchen and laundry for the incorrigible housekeepers among us—a large, comfortable lounging room with every facility for study and reading—but first finish paying this debt. Bring on your rummage!

Some pleasant airy rooms will be available for the summer at Brinton Hall. If you expect to be in the city, why not be comfortably located? Miss Sassen has charge of the rooms. "First come, first served."

Those wishing to use Brinton Hall for any special event are requested to arrange for same with the chairman of the House Committee, Miss Sassen.
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The Invention which took the prize offered by the Managers of the Woman's Hospital of Philadelphia.


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KATHERINE L STORM, M.D. 1612 Diamond Street PHILADELPHIA