Cancer of the Pylorus.

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[Handwritten notes at the bottom]
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I have selected "Cancer Of The Pylorus," as the subject of the following thesis, not from any ability or my part, to elicit anything new regarding, or to throw light upon, this incurable disease; but simply because a peculiar case of it, came under my observation last summer; it is recorded in the case book of Ward XI. of the Medical Hospital, but is I regret very imperfect the chest symptoms not having been minutely examined.

I do not profess to investigate this disease thoroughly, but to confine myself to its symptomatology and that of it, in so far as its relates to the "Case" appended.

The authors whose works I consulted, will be duly noticed as I proceed. This thesis cannot claim the an exception to the general rule, viz. "there are more complications," if I expect to be excused for not having composed some original treatise, or been more lengthy, as regards the one, if I fulfill the object for which I intend it, viz. for which I suppose a thesis is presented on the present occasion, vidi testimonium mei progressus in studio medicinali dare, quod regularae academicae regirint ex omni candidato pro summis medicinae honorebus.

--- Jacobus Sommerville Hope ---
Introduction.

Malignant disease has been the term applied by numerous pathologists, to certain forms of growth in the animal economy, constituting diseases which are incurable, and but slightly ameliorated by treatment. Cancer has been placed at the head of these so-called malignant diseases. Many surgeons likewise, called these tumors and ulcers cancerous, which they found to return after excision. Cancerous and malignant thus became convertible terms: for, before the microscope was brought to play upon these growths, there was no means of distinguishing the truly cancerous, from those other growths denominated malignant. In many cases, these, if operated on in time, were eradicated, while growths considered simple or benign, returned in many cases after excision. The term malignant being derived from the two Latin words ‘malum’ and ‘ignio’ should, I think, be applied to those growths which having once arisen, reproduce themselves, their cell elements passing to other parts of the system, and the original disease becoming there developed. Perhaps it was applied to diseases which had a peculiarly emaciating and exhausting effect on the patient, but as it has attached to it the idea of something dreadful, and since it has given rise to much confusion, it would be much better if it could be dispensed with.
The term "Cancer" seems to me, to have been first applied to those warty forms of growth, which when loosened and extracted from the surrounding tissues, presented numerous root-like processes or fibris, attached to the body of the wart, and to this crab-like appearance the name Cancer would not be inappropriate. — In a similar way, the title of "crabwise" has been given to the "Pediculus pubis" from the numerous claws arranged around its body. — Many of these crab-like forms of growth were extracted by means of poxotics, and even at the present day, there are not wanting empirics, professing to cure cancers, who extract from the skin by poxotics or otherwise, large warty growths having these root-like processes, triumphantly asserting, that a cancerous disease has been eradicated. These are the forms to which the term "epithelioma" has been applied, which often returns after it has been excised.

But the name has been extended to growths quite different in appearance and nature. Scirrhous, encephaloma, & colloid growths with their various modifications, have all been included, so that the original meaning of the term has been lost, while to which, it appears to me the name was first applied, is now excluded from the truly Cancerous growths.

As Scirrhus was the form which occurred in the case I observed, I shall describe it only, shortly.
Of all the forms, this is the hardest, being almost stry

to the feel, whence its name; it may easily be mistaken
for a fibrous tumor. When cut into, it crumbles under the
knife, and generally presents a fibrous arrangement, and a
milky juice can be squeezed or scraped from the cut surface.

It has no external marks, by which the observer can distin-
guish it, like a form of cancer. It is only by a microscopic examin-
ation of the juice, that he can decide as to its nature. This juice
contains molecules, granules and fragments of fibrous tissue
with the cells called cancer cells, which distinguish it. These
vary in size and shape, and contain one or more nuclei
between which and the cell wall is a transparent fluid
which becomes granular, while the nuclei themselves contain
granules. Water causes these cells to be distorted, syrup
makes them contract, while acetic acid renders the cell-
wall, which is well defined, transparent; in young cells this
wall is dissolved by the acid.

Since then, scirrhous and the other forms of cancer can
only be distinguished by their possessing cancer cells, there
must be a difficulty in determining its presence in the
stomach, as the symptoms will be similar to those of many
other diseases of that viscus. They are dyspeptic symptoms
pain and vomiting, constipation and emaciation, result-
ing, while a tumor may be detected in the epiploic.
General Cancer of The Stomach

The following, condensed from Walsh's on Cancer, I have selected, as it will be of considerable advantage, in pursuing the study of the following case.

I. The mortality from Cancer of the stomach is considerable, ranking next to Cancer of the uterus in its destructiveness to life.

II. It is primary, secondary gastric Cancer being almost unknown, unless propagated by continuity. It may be solitary, but if Colloid, spreads by continuity to other organs. Cancer, primary in the stomach, attacks other organs secondarily: the liver being generally first affected. The uterus and stomach are seldom affected together, in the same individual.

III. Colloid and milk-like Encephaloid are most common.

IV. Cancer usually exists as a tumor on the internal surface; this arises from irregular and uneven infiltration. Pure tuberiform deposition seldom occurs in this organ: infiltration, so even and extensive, that scarcely any appearance of tumor is produced, is the usual mode of deposition in this organ.

V. The pylorus is commonly affected, colloid most common in the widely spreading form. When the
orifices are attacked, the disease may spread to the duodenum or esophagus.

VI. The submucous cellular tissue is its primary seat, but the hypertrophied mucous membrane may be the nidus of formation. The mucous membrane however, possesses a notable power of resisting the encroachment of this disease; it becomes irregularly hypertrophied. The muscular coat hypertrophies, becomes less elastic and more friable. The peritoneal coat escapes, if sinusus or encephaloid is the form, while it is frequently attacked by colloid.

VII. The size of the organ is enlarged or diminished; if the disease implicate the pylorus, enlargement ensues; if the cardiac orifice undergoes contraction, diminished volume is the result.

VIII. In the progress of the disease, ulceration is slow to occur, but once set in, it makes great progress: perforation may occur, and the stomach become glued to another organ, as for instance the pancreas, which is then attacked by the disease.

IX. As regards its general etiology, it is more common in males than in females, is rare previous to the thirtieth and after the sixtieth year of life. There is no accurate proof of its being caused by mechanical...
or chemical irritants. Family taint seems to have an influence on its development, as is well exemplified in the family of Napoleon.

IX. The duration of the disease is shorter, when it occupies the cardiac orifice, than when it occupies the body of the organ.

X. The course and connection of the symptoms of the disease may be considered, though somewhat artifically, as divided into three stages:

First Stage. — Dyspeptic symptoms, appetite variable, digestion slow, weight and fulness in the epigastrum accompanied perhaps with pain, epigastric region tender to pressure, flatulence, vomiting rare, but the ejection of a small quantity of glairy fluid fluid common in the morning, if constipation accompanied with a change in the tint of the skin.

Second Stage. — The former symptoms become aggravated, vomiting occurs with frequency, appetite fails, vomiting frequent gaseous excretions may be present, while a tumor may be discerned in the epigastrum.

Third Stage. — Former symptoms more intense, constipation alternates with diarrhea, increase of pain, great weakness, vomiting of all ingesta, hiccup.
pulse feeble and filiform and attacks of syncope not uncommon, the face wears an expression of anguish and the peculiar cancræosus tint of the skin becomes developed.

The above is the train of symptoms arranged in order, but seldom meet with them all, in one individual. Pain and tenderness in the epigastrium may be altogether absent. Loss of appetite with slight discomfort after taking food, have been the only symptoms. Nausea and vomiting may be absent from first to last. If vomiting do not occur, the pylorus is probably free, if there is intense nausea, and no vomiting, but simply occasional ejection of glairy matter, with regurgitation of food shortly after ingestion, the Cardiac orifice is probably the seat.

If vomiting occurs periodically, there is probably dilatation of the organ. Where pylorus contracted, and stomach retains its natural size or is diminished in capacity, vomiting takes place shortly after ingestion.

If the omentum is implicated in the disease, perforation may follow.

XII. An operation results when the cardiac end or acrophageal orifice is attacked, then a hæmorrhage succeeds bleeding of the pylorus.
XIII. The course of the disease may be intermittent, and the malady is occasionally latent, giving rise to no symptoms.

XIV. Various affections have been mistaken for cancer, such as those, whose symptoms are vomiting, as gastralgia, chronic gastritis, haematemesis, simple chronic vomiting, hernia of the stomach.

The above observations from "Walke" I shall consider after the reading of the case. Before doing so let me direct attention to the means of diagnosis:

1. Palpation. - This may discover the presence of a tumor, which in most cases will be referred to the pylorus.
2. Percussion. - This affords no information, unless the stomach is distended, which 'Hooper' says it is, when the pylorus is affected.
3. The Microscope. - By means of it, the character of the vomited matter to a certain extent may be determined, but a certainty as to the existence of cancer cells cannot be arrived at, since the epithelial cells of the stomach come to resemble them, after being soaked in the fluids of that viscus. (Bennett on Cancer p. 324).

4. Observation of symptoms. - Under this head we notice the age, expression, character of the pain, period of vomiting, matters vomiting. 

We shall now proceed to the case appended.
Case of Cancer of the Pylorus.

Charlotte Stewart, aged 50, married, is a washerwoman and usually resident in Edinburgh, has been ill 8 months, admitted 23rd May 1861.

Patient states that when she was about 20 years of age, she strained herself on lifting a tub, and felt something give way in her right side region. This was succeeded by pain in the part, and she was confined to bed for a week, during which time she was attended by a medical gentleman, who gave her powders containing Galomel. When she began to her accustomed employment after this, she was annoyed by her teeth crumbling and loosening, & shortly after caught cold. In consequence had to leave her situation that of a servant, but soon recovered. Shortly after married and gave birth to a child; labor was difficult, and instruments were employed. She soon recovered, and has had no more children.

She has been employed as a washerwoman all her married life & used to rise from bed, every morning regularly, between 3 & 4 O'Clock.
She wrought hard all day and went to bed at 10 O'clock in the evening. She never experienced refreshing sleep, and often in the morning, felt a sense of tightness across the front of her chest, never was troubled with cough for any length of time, but her appetite was never good.

At the end of October 1860, while engaged cleaning windows, she fell from a window-sill and hurt her right knee, which however soon got well. Engaged shortly after this in the same employment, she again fell: and now for the first time in her life, complained of slight constant pain in the epigastria region, and was occasionally seized with vomiting shortly after meals. This took place sometimes immediately after meals, at other times from half an hour to an hour after. Sometimes also she felt as if the bolus of food was arrested in the stomach, and returned without having entered the stomach. She states also that she once vomited matter having a dark coffee ground appearance. About a month after her last injury, during which time she was confined to bed, she was able to walk about, but felt
that she was getting weaker and weaker every day, till on the 11th May, six months after the commencement of the vomiting, she was obliged to go to bed.

On the 16th May, when attempting to rise from bed to get a drink of water, she fell to the floor on her back, through faintness I was assisted to bed by some of her friends and immediately thereafter complained of pain in the left scapular region.

On the 22nd May she was assisted up to hospital, previously having taken some tea, bread and ale, which she vomited immediately after her admission.

**Symptoms On Admission** —

**Circulatory System.** — Cardiac organ normal. Pulse regular.

**Respiratory System.** — Slight cough accompanied by trifling expectoration. Percussion normal.

**Nervous System.** — Pain in the epigastrium constant.
Digestive System. Several teeth absent, others broken. Tongue clean and moist. Appetite impaired. Bowels have not been moved for the last five days. Palpation revealed an indurated tumor in the left of the epigastric region. Liver, slightly diminished in size as determined by percussion. Vomited matters are often acid. Vomiting takes place at various periods after food as previously mentioned.

Genito Urinary System. Catamenia have been absent for 4 years.


Integumentary System. Patient cannot lie on her right side as pain is increased. Epigastric pain is increased on pressure. She is much emaciated, has sunken eyes, a haggard look with a dry, appearance of the skin.

Patient was ordered beef tea and bread in small quantities at a time. 1/4 Pub. Opium 3 gr.

Breath ox. Zfs.

Vomiting diminished during the day, but recurred towards evening, and patient complained of sore throat and parched mouth.

May 27th. Patient ordered:

Pyrethri oti. 30
Pols. Opii gr. 1

Extract of Gentiana, quantum sufficient, to be taken night and morning.

The vomited matters were observed to contain much thick gelatinous mucus and were very frothy.

May 30th. As patient's bowels have not been moved since 17th inst., and percussion reveals dullness over the region of the colon (descending), an enema of water, castor oil, and common salt was administered, but was not retained. There is much flatulence with continuance of vomiting. There is general abdominal pain, slightly increased on pressure; while continuous heavy pain is referred more to the region above the Xiphoid cartilage than to that below it.

Last night on account of the flatulence, ordered:

Py. Acidi Hydrocyanici. Dil. mxyij

Smitt. Cardam. Comp. 3ij

Aquae
Patient took a tablespoonful of this mixture last night as also one this morning. During the day cough being troublesome, Soft Cardamom, 2 1/2 and Etheris Chlorice 3/4 were added to the previous mixture and a tablespoonful three times a day ordered.

May 31st. Vomited matters are ejected at intervals and in mouthfuls. Bowels moved today the enema having been repeated.

June 6th. Since last date patient has been taking a grain of opium daily, vomiting is generally about during the forenoon, patient taking porridge to breakfast, but after dinner it occurs, and is severe towards evening. She is getting very weak. Veepure. Instead of opium ordered Naphtha Medic. 3/4, Ex Card. long. 3/4 t. agree 3/4 h. a tablespoonful at bedtime. An enema containing beetroot, an egg and an ounce of brandy was administered but was not retained.

June 9th. Opium was repeated yesterday. Patient slept well last night, but today is much exhausted, pulse being very weak. At 2 o'clock, P.M., patient thirsty and tongue dry. Towards evening sickness took place. At 9 o'clock, pulseless, tracheal rattles death following shortly after.
Autopsy.

The body was examined June 10th, 15 hours after death, and was observed to be much emaciated.

Thorax. Heart small but healthy.

The Left Pleura. There were firm adhesions over the lower part of the left side of the chest. When these were broken down, the surface of this part of the pleura was found studded with little round flattened masses, which varied from one to 3/4ths of an inch in diameter.

These were of an opaque yellow color and presented all the physical characters of tubercle. Examined microscopically they consisted of much granular matter and aborted cells quite resembling the so-called tubercle corpuscles.

There was a little mucuspulent matter in the bronchi of this lung (the left); but it was otherwise natural. The Right Pleura was natural.

In the upper lobe of the right lung, a firm patch was felt; when cut into there was found a mass of the size of a walnut, which on pressure broke down into a slate-grey colored mucilaginous
map having a fetid odor. Some of the bronchial glands were enlarged and contained blood pigment and old tubercular matter.

Abdomen — The stomach was much displaced, the pylorus being situated to the left of the umbilicus. It felt hard and had a puckered up appearance. The stomach was not distended and when it was laid open, a cancerous mass, about the size of a chestnut, was found growing from the great curvature of the stomach near the pylorus, and beyond this there was a small hernia (a projection downwards) of the same wall, and immediately beyond this, was a cancerous structure of the pylorus, which just admitted the little finger. The mucous membrane of the stomach was entire, but on the projecting mass of cancer it seemed much thinned. The remainder of the intestinal canal was contracted, but natural in structure.

Several of the mesenteric glands were enlarged, and contained yellow cheesy tubercular-looking matter, which under the microscope had all the characters of tubercle. — Adherent to the capsule of the liver and projecting into its substance, were little yellow mapes of the size of hempseeds, having the physical and microscopical characters of tubercle.
On examining microscopically some of the mafs, and of the indurated tissues around the pylorus, characteristic cancer cells were found, that is, cells of comparatively large size, of rounded or oval form, and with relatively large, and very distinct nuclei.

The above account of the Post Mortem examination was extracted from the Register of Questions Vol. 88, p. 481.

Commentary.

I shall now consider the former observations of Helsham in so far as they relate to the above case. I. Death resulted from emaciation and exhaustion, nausea and vomiting being induced, and thus the function of nutrition was not performed. There appear to be few cases of death directly attributable to cancer of the pylorus; generally, the lesion is so extensive, and other organs are affected with different diseases so that, acute inflammation and symptomatic fever are the prominent, and direct causes of death.

II. No other organ was affected with the disease in this case; this was no doubt due to the hardness of the mafs, few cancer cells being present in this scirrhus variety. If softening had been present in all like likelihood, other organs would have been affected, and the
liver, probably first. The softer the mass, the greater the quantity of milky juice is present, and cancer cells occur in greater abundance in all their stages of development. They believe to become affected secondarily, from its venous connection with the stomach by means of the portal system, cancerous juice being thereby conveyed from the stomach.

III. Hoofer states that scirrhous is the most common form, of which this case affords a marked example. The mass containing but little milky juice. The medullary or Encephaloid form appears to be very rare.

IV. This might at first appear to be an example of pure tuberculous deposition, but probably the mass described as being of the size of a chestnut, was at first continuous with the evenly infiltrated thickening of the pylorus, the two portions becoming separated by the subsequent formation of the hernial sac.

V. The pylorus seems to be the part of the stomach, which is by far most frequently affected, and whatever be the form, it spreads widely, more especially if the mass has softened at some part.

VI. The tumor in the present case, by its pressure, had caused atrophy of the mucous membrane, as it is stated to have been much thinned over it; this being at a part
too, where the mucous membrane is thicker than at any other place in the organ, where the gastric glands are more sacculated, and the luteiform follicles in greater abundance, when the viscus is in its normal state. The existence of the hernial sac might be due to the inelastic nature and friability of the attenuated muscular coat and if so, would be of recent date. This form seems to arise between the mucous and serous coats, destroying the muscular, and if ulcerating, acting on the mucous lining: while Colloid projects outwards beneath the peritoneum, not interfering so much with the muscular coat.

VII. The organ in this case was slightly contracted, thus contrasting with the general proposition, viz, that when the pylorus is affected, dilatation ensues. Generally, when the stomach is enlarged, it is found distended with fluids after death; while when contracted, there is hypertrophy of the muscular coats. Here, we might say that there was constriction of both orifices of the viscus, for we find in the history, that the bolus of food was sometimes ejected apparently before it reached the stomach; this was found to be due to the displacement of the organ it being rather twisted upon itself at the cardiac orifice.
VIII. When the tumor is soft, probably ulceration will soon occur; here the mucous membrane was thinned, but no other sign of impending ulceration was visible. After ulceration has set in, and destroyed and destroyed both mucous and muscular coats, the peritoneum is also attacked, an opening forming, when also the stomach becomes at this part, adherent to some other organ, as the pancreas, or the contents of the stomach escape, causing general peritonitis.

IX. I do not think, that we can have much influence on the development of cancer of the pylorus, yet many females are attacked at an age when the catamenia cease, and when the appetite is liable to be deranged. In our patient the menstual function had ceased four years previous to the appearance of any peculiar symptoms, and it is stated that dyspepsia was her common complaint.

I believe that this disease is a result of irritation, like an ordinary inflammation, and sometimes traceable to chronic inflammation of the stomach. From the history of many persons we find that they had no symptoms, although extensive organic lesions were present. In like manner we find serious inflammations arising in various visceral organs the symptoms being so slight that the patient pays no attention to them. Why should we have a cancerous, instead of a simple exudation; or rather, why should the normal exudation
following congestion, instead of forming lymph or pus, assume the form of cancer? We attribute it to a certain state of the constitution, the nature of which we are ignorant. Hooper says, the causes are such as produce congestion and inflammation with the 'cancerous diathesis,' which last expression, appears to be a cloak for ignorance.

X. If the mere contact of ingesta with the cancerous mass or ulcer is the cause of vomiting, then we might expect the disease to terminate more rapidly when the cardiac end is the seat, because the food will come first in contact with it. So in this case, the food came readily in contact with the mass and sometimes immediate vomiting resulted, but often it took place from an hour to an hour and a half afterwards. The duration of the disease was short, being only about seven months.

XI. The course of the symptoms in the present case cannot be conveniently divided into stages: the vomiting was only occasional in the earlier stage. The period preceding the attack was I believe favorable to the development of inflammation in the stomach, patient being troubled with impaired appetite, and not getting refreshing sleep. The exciting cause of the vomiting was distinctly traceable to the falls, which she experienced. The period of vomiting was remarkable,
it taking place sometimes immediately, and again from half an hour to an hour after taking food, while in the later stages, it was absent during the forenoon. From its occurring immediately after mastication of food, we would have supposed that the cardiac end was the seat of the lesion, and this opinion would have been confirmed by the bolus of food being ejected apparently before it reached the stomach. This however is explained by the post-mortem examination when it was seen that food entering the stomach, would descend immediately to the region of the trachea. Why the vomiting was occasionally delayed for an hour, might be due to the position assumed by the patient in bed, lying on her left side, the food thus gravitating to the cardiac end, not being in close contact with the cancerous mass, but as soon as the food was sufficiently acted on by the gastric juice, then it would come to affect the pylorus, by the greater contraction of the walls of the organ; or it is probable that the stomach was not so irritable on these occasions. It was remarkable that the porridge which she had to breakfast, was never vomited, the only reason we can assign, is, that the irritability of the organ was diminished in the morning,
owing to the previous night's rest, combined with the
salutary effect of the morning dose of opium.

Constipation was a marked feature, the bowels
having been only once moved while the patient was
in hospital, and that after a period of fourteen days.

— Much stress has been laid by some authors on the
"cancerous tint" of the person affected. It is described
as a peculiar palloriness, or peculiar yellowish hue
said to be characteristic of organic visceral disease.
I think the appearance is in no way characteristic
of cancer, and may naturally appear in the individual
independent of any cancerous affection. In many it
is altogether absent. In disease of the suprarenal cap-
sules a similar tint has sometimes been observed.
I have observed this in a patient afflicted with fa-
cial neuralgia, also in another, who had a cystosar-
coma removed exterior to the mamma. In our case
this tint of skin was observed, but could hardly be
called sallow, it was rather a brownish appearance
described in the case as dingy. Sir C. Bell says
the hue is "slightly leaden." — Emaciation is a gen-
eral accompaniment of cancer, the result of imperfect
nutrition caused by pain and vomiting, and often
aids the physician in diagnosing the disease—
XII. When the esophageal orifice is attacked, vomiting results more immediately from dysphagia, while when the cardia end is attacked, and the orifice there is free, vomiting immediately after digestion will be the cause of the emaciation. As we have already seen, in this case, vomiting results from the vomiting simulated that which occurs when the cardia end is attacked; as there was no sloughing of the pyloric diaphragm never occurred.

XIII. The symptoms did intermit to a certain extent in this case, viz. in the forenoon, while food was present in the viscus. Probably the disease was present for some time previous to the commencement of the vomiting, for it only arose on the application of the exciting cause, which was the fall which she sustained; and I think the absence of symptoms in some cases, is due to that want of irritability of system in them, which in others, renders them peculiarly liable to the manifestation of those symptoms.

XIV. The diagnosis of cancer of the stomach is very uncertain. We depend most on the age of the patient and the presence of a tumor. In ulcer of the stomach, patient is generally below 30 years of age, the pain comes on after the introduction of food, it is described as heavy, while in cancer it is almost constant, and generally
lancinating or burning. Vomiting relieves pain in both cases to a certain extent. In ulcer of the pylo-
ous the patient will be almost altogether relieved
by recumbency on the left side. When blood is vom-
itied we believe that ulceration has likely taken place.

Cancer of Tubercle.

In this case we have an example of tubercle and can-
cer occurring together, but since we know that tubercle oc-
curs most frequently about puberty, we cannot suppose
the two lesions to have been simultaneous in their origin.
The yellowish appearance of the tubercular masses on the
surface of the pleura, lead to the supposition, that it
was of old standing. Now referring to the history, we find
that about the age of 20, she 'caught cold' but con-
sidered this a trifling affair. Cough and expectoration
were no doubt part of the symptoms; these followed the
exhibition of Calomel, which was succeeded by crum-
bling of the teeth. Here the primary digestion would be
impaired, and tubercle insidiously might form. This
'cold' proving so severe that she had to leave her situation,
give good ground to suppose, that this was the period
of tubercular deposition. Some have thought that
those affected with tubercle in their youth, are more liable to be attacked with cancer as age advances, but examples of this appear to be few in number. Indeed the two diseases offer a remarkable contrast. Tubercle may be considered as a Phthisis (wasting) of the young, cancer as a wasting (Phthisis) of the old, the first due to disorder of the primary digestion, the second to that of the secondary digestion, the one dependent on deficient organization of the seceded liquid sanguineus, the other being marked by the most perfect forms of cell development, the former permeated by no bloodvessels, the latter being a remarkably vascular growth.

Though differing thus widely in nature and origin, it is very probable that the constitution giving rise to a tubercular exudation in youth, may pour out a cancerous one when the middle period of life is past. These perinatally weak when young becoming perinatally strong when old, just as the flexible bones of rickety children become uncommonly dense when they grow up; tubercle being the result of a low state of vitality in the exudation, while cancer is an example of a very high state of cell-development.
Treatment—

The treatment in this case consisted in attempting to palliate the vomiting, by means of quinine, bismuth, hydrocyanic acid, and naphtho medicinalis. The remedies succeeded to a certain extent, but were by no means able to cope with the disease. Opium does not give this relief too much, for this reason is objectionable, although it is a powerful sedative. Chlorodyne has been observed to be very efficacious as an antispasmodic, and reliable to clear up the appetite; and probably it might be substituted for opium in the treatment of this disease. Hydrocyanic acid is a powerful sedative, its secondary effects being the promotion of the digestive powers, and in many instances acting on the bowels. These are the remedies which I think most effectual as palliatives. But above all the stomach should be subjected to as little irritation as possible, hence strengthening emetics are invaluable. But each case will require its own peculiar treatment, according to the period at which vomiting occurs. Complications always aggravate these cases, and they are very liable to occur, owing to the weak state of the patient. We have but few data on which we can ground a hope for cure, yet it might be greatly prolonged.
Four of the cancer cells seen in the growth are here represented.

Diagram to represent the position of Fig. 2. The stomach as well as of the hernial sac and the tumor close to it.