fear opposition. In this way a constant campaign of education will be carried on in a conservative manner.

If the chairmen of these District Committees arrange for occasional meetings among themselves they will get the opportunity to compare their experiences and will get many useful hints to take back to their districts.

The anti-tuberculosis movement has interested the laity and committees non-professional have been formed, have done zealous work and have accomplished considerable amelioration of conditions.

I have endeavored to show you how a powerful organization might be effected in the Massachusetts Medical Society which would continue as long as the need existed and which would enable the profession throughout the state to take concerted action, so that we might all pull together and work harmoniously. We must expect to keep up our efforts for many years and must provide for the active continuance of these committees even from generation to generation.

As we begin to show results in the diminution of tuberculosis in the state we shall be assisted more and more by the enlightened co-operation of the people who will give us increasing moral and material support.

FOUR UNUSUAL CASES OF ANEURISM.

BY EDWIN A. LOCKE, A.M., M.D.

(From the service of Dr. James J. Minot, Long Island Hospital.)

AMONG the considerable number of cases of aneurism occurring in the service at the Long Island Hospital during the past five years the following are of special interest:

CASE I. Syphilis in youth; tuberculosis of both hip joints of twenty-five years' duration; double inguinal hernia; marked arteriosclerosis; relative mitral insufficiency; tabes dorsalis; chronic interstitial nephritis; deformity of spine; aneurism of left axillary artery, possibly following trauma, which reached enormous size, and finally ulcerated externally; death after five days.

W. T. B., aged fifty-four years, entered hospital Nov. 26, 1901.

Family history not important.

Personal history: As a rule excellent general health; until recently able to work steadily. Syphilis when a young man. Moderate drinker; tobacco to excess.

About twenty years ago a small lump, about the size of a walnut, appeared on the outer aspect of the right hip; it was not painful or tender. In about three weeks' time this lump softened and broke down, discharging large quantities of foul-smelling pus. Shortly after this, a similar lesion appeared on the left hip, with the same sequelæ. These two sinuses have never healed and discharge purulent material to the present day. Four years ago, after a fall, a small nodule appeared at the base of the coccyx; this was opened and curretted and healed in a short time; it has never troubled him since. He has occasional attacks of acute pain referred to either hip and radiating down legs. These pains have been unusually severe for the past few days, as a result of which the patient has been unable to obtain sufficient rest and sleep at night and is more or less exhausted.

Physical examination: Well developed and nourished.

Pupils equal and regular, but react only slightly to light; tongue protrudes in straight line, clean and moist.

Lungs: Good resonance throughout; in left back beneath the scapula, the voice sounds are a little louder than over other places; at both apices respiration harsh and voice sounds slightly increased; few moist râles heard in both lower backs.

Heart: Dullness to the left to nipple line; apex palpable in fifth interspace; action regular, slightly forcible; aortic second accentuated; no murmurs. Pulses equal, regular and of high tension.

Abdomen: Nothing abnormal made out. Liver from sixth rib to costal margin; not felt. Spleen not enlarged. Double inguinal hernia.

Extremities: Knee jerks lively; plantars normal. No edema. Over the great trochanter on either side are small sinuses which discharge a thin, purulent secretion. Motion at hip joints good; no tenderness.

Thorax: Very unsymmetrical in consequence of dorsal kyphos and very marked scoliosis with concavity to the right; anteroposterior diameter increased; right shoulder lower than left.

Treatment: Rest in bed, tonics, antiseptic dressings to sinuses.

Dec. 4, 1901. Patient has had no pain for the last three days. His appetite is good and he sleeps well. Sinuses discharge very slightly. Discharged to-day to Almshouse (Long Island).

Sept. 9, 1903 (nearly two years later), re-admitted from Almshouse, with the following history:

Six days ago, while working on the wharf, the patient received a severe blow across the front part of the left shoulder and upper portion of the left chest from the stern line of the steamer *John Howard*. He suffered considerable at the time from the result of the accident, and three days ago he noticed that there was a lump under his left clavicle, which he discovered to be pulsating. He says he had never noticed the swelling before. He has worked on the wharf regularly since spring and has felt very well. Coming up the hill he gets out of breath, his legs are weak and, for the past few weeks, has not slept well at night because of "worry." For three months he has had some difficulty in using his right arm; the disability, he says, is due to stiffness and pain. Sinus on his hip still discharges and is dressed every day.

Physical examination: Much bent over; fairly well nourished; somewhat senile in appearance; intellect clear. Left pupil 0.4, right 0.2 cm. in diameter; neither reacts to light or distance. Tongue protrudes straight in median line, slightly tremulous, clean and moist.

Heart: Dullness at the level of the third rib, $4\frac{1}{2}$ cm. to the right of the median line, $15\frac{1}{2}$ cm. to left at the level of the fourth rib; apex in fifth interspace, $3\frac{1}{2}$ cm. outside nipple line; impulse strong; systolic murmur heard with maximum intensity at apex, soft in character, transmitted outward, and with diminished force toward the base; it is also heard over both subclavian arteries; second aortic sound clear; pulmonic second sound loud. Pulses intermittent, synchronous, high tension.

Lungs: Somewhat hyperresonant throughout; occasional squeaky and sonorous râle heard at the end of expiration.

Directly below the middle of the left clavicle, inside the coracoid process, is a tumor about 4×5 cm. in diameter, with visible pulsation; it is not red or tender; on palpation it is tense and throbbing; a distinct thrill can be felt with each systole; on auscultation a soft, blowing sound is heard with each systole. Radial pulses apparently synchronous and of equal volume and tension.

Abdomen: Shortened in vertical diameter; moderately tense and tympanitic; no tenderness; no tumors felt. Areas of liver and spleen not satisfactorily made out. Double reducible inguinal hernia, each about the size of an egg. Genitalia normal.

Extremities: Knee jerks absent on both sides; no ankle clonus; plantar reflex present on both sides; no Babinski; Romberg's sign marked. There is considerable inco-ordination, but no disturbance of sensation. About 8 cm. from the left external malleolus is a rough surface over the fibula (old fracture). The left little finger is absent except for the proximal half of the first phalanx. The left forearm is distorted, being bent at the junction of the middle and lower thirds, with an anterior angle; at this point there is decided enlargement of the radius, and, opposite it, of the ulna; there is no power of pronation or supination (mal-united fracture of the left radius and ulna).

Skin: Numerous small petichiae are present over the chest. The face is also much injected. Over both trochanters the skin is reddened and indurated over an area 5 x 10 cm. in diameter. On the left side is a small sinus admitting a probe for a short distance; the right side is closed. (Tuberculosis of both hips.)

The spine is much distorted, being very convex posteriorly at about the mid-dorsal region, so that the depth of the lower chest is apparently half again more than normal. There is double scoliosis, to the left from the seventh cervical to the seventh dorsal vertebra, with an amplitude of about 1½ cm., and to the right from there to the sacrum, with an amplitude of about 4½ cm. at about the second lumbar vertebra. When standing the patient inclines to the left, so that the

seventh cervical spine is from 10 to 15 cm. to the left of the median line. On account of this double deformity the chest is more prominent on the left in front; the ribs are very close to both ilia, and the lower ribs on the left hand side as they approach the median line in front are bent underneath the others, making a concavity upward.

Urine: 1012; color, normal; acid; albumin, 0; sugar, 0.

Nov. 29, 1903. Very marked swelling of the left arm. Last night he was unable to sleep at all on account of pain. The aneurism seems to have increased in size, though no appreciable difference is noted from

day to day. The left arm is swollen to nearly twice its normal size, moderately cyanotic, edematous; surface cold, not tender. Pulse barely felt. Otherwise the examination is as above. Urine, as at entrance.

Feb. 11, 1904. After several weeks the symptoms above noted gradually disappeared, more or less coincidentally with a progressive enlargement of the tumor.

May 1, 1904. To-day the patient had an attack of vertigo, fell from his chair and was unable to rise. The aneurism has greatly increased in size, apparently dissecting its way down the outer wall of the chest as well as bulging prominently in front of the clavicle. It is about the size of a small cocoanut. Over an area of about 5 x 10 cm. at upper portion the skin is deeply reddened and very tense. Urine: Color, normal; 1,014; acid; albumin, slightest possible trace; sugar, absent; sediment shows many hyaline casts, some with renal cells adherent; many fine granular casts, a few of large diameter; occasional renal cells and leucocytes.

May 30, 1904. Several fainting attacks since last note. The patient complains of sensation of great tension over tumor which is rapidly growing.

June 23, 1904. Very rapid enlargement of the tumor for the past few weeks. Severe dyspnea, the respiration at times falling to seven per minute; dysphagia; marked cachexia. Over the most prominent part of the tumor is an ulcer about 9 x 12 cm.

June 29, 1904. While at stool the patient suddenly had a severe bleeding from the aneurism at the point of ulceration, with moderate symptoms of hemorrhage following. Bleeding controlled by tight compress.

July 3, 1904. Constant oozing from aneurism; dressing renewed and sloughing area about 4 cm. in diameter found at center of the ulcer. Considerable paroxysmal pain down inner side left arm.

July 6. Dressing has foul odor and an attempt to change it resulted in the loss of about two pints of blood; alarming symptoms of hemorrhage.

July 7. Profuse uncontrollable hemorrhage at 12.30 A.M., resulting in almost immediate death.

AUTOPSY No. 04.42 (718). Regular No. 16,623.

July 8, 1904. Dr. George B. Magrath. Autopsy 34½ hours post mortem.

ANATOMICAL DIAGNOSIS:

Aneurism of the axillary artery with consequent necrosis of the ribs, pectoral muscles, skin.

Scoliosis.

Chronic adhesive pleuritis.

Hydropericardium.

Edema of the lung (left).

Emphysema of the lungs.

Acute and chronic splenic tumor.

Chronic interstitial nephritis.

Multiple cysts of the kidney.

Dilatation of the bladder.

General arteriosclerosis (slight).

Body: That of a man fifty-nine years of age; length, 162 cm.; marked deformity of the trunk, characterized chiefly by a backward bowing of the spine mainly in the thoracic segment, combined with rotation to the left; accompanying this is a bulging backward and outward of the lower and back part of the right thorax; the whole trunk is deflected to the left to the extent of 10 or 15 cm.; rigor mortis present; little or no post mortem lividity; marked pallor; left pupil, 0.6, right, 0.2 cm. in diameter; slight arcus senilis. The front of the left chest presents a tumor about 25 cm. in diameter, extending from near the sternal border outward and behind the axillary line for a distance of about 8 cm. The center of this projection which is fluctuant and for the most part covered with intact

skin, presents a loss of substance 14 x 10 cm., protruding from which is a mass of laminated fibrin, the outer portion of which is dry and black; the edges of the ulcer are smooth and rounded; the mass of clot is about 6 cm. in elevation. The left forearm presents marked deformity of the bone characterized by lateral thickening at about the junction of the lower and middle thirds; the little finger of the left hand is missing. The skin over each trochanter is scarred, that upon the right side presents at its center a small crust.

Upon section, subcutaneous fat .5 cm. in thickness; muscles of the right side of the chest pale red and fairly well developed; those of the left side yellow, and upon further dissection necrotic within a region in general corresponding to the tumor above noted. Reflection of the skin of the left side of the chest reveals a large mass of gray red clot, immediately subcutaneous in its position; removal of the mass of clot (weight, 1,890 gm.) reveals an area of depression, involving nearly the whole of the front of the wall of the left chest, 17 cm. in diameter, and about 8 cm. in depth; the floor of which is composed of the second, third, fourth and fifth ribs, which are bare, eroded, and, in the case of the second and third, discontinuous; the second being separated 3 cm. from the sternum and its outer segment depressed 3.5 cm. below the inner; the intercostal muscles are necrotic, and the floor of the cavity presents much adherent clot, some of which is in a condition of puriform softening. Above, this region is bounded by a sac 10 x 15 cm., the long axis directed outward; above and to the inner side this sac presents a smooth surface, in places blood-stained, and continuous with the axillary artery outward, the subclavian inward; this sac opens downward and is continuous with the depressed area in the chest wall above described; its edges at this point disappearing in the mass of clot; the most distal portion of the sac is in the lowest part of the axilla, bounded outwardly by the humerus, and is 11 cm. below the acromion process. The inner aspect of the sac presents an oval area 3 x 2 cm., the inner side of which is continuous with the subclavian, and the outer with the axillary artery. The sac throughout the greater part of its course is overlaid with laminated fibrin, the removal of which reveals a structure faintly resembling the arterial wall.

Thorax: (Internal examination): Height of diaphragm, fifth rib on right side, sixth on left.

Pleural cavities: Left occluded in its lower and front part by firm fibrous adhesions uniting the lung with the chest wall; right presents a few old fibrous adhesions at its apex.

Pericardial cavity: Contains about 50 cc. clear straw-colored fluid.

Heart: Weight 340 gm.; upon section, cavities contain a very small amount of red clot; myocardium pale brown red. Wall of left ventricle 1.3, of right 0.3 cm. in thickness. Mitral valve 11, aortic valve 9, pulmonary valve, 9, tricuspid valve, 12 cm. in circumference. Depth of left ventricle 10.3 cm. Valves normal; cavities slightly dilated. Coronary arteries show a very slight degree of sclerosis.

Lungs: Left, at the site of the adhesions to chest wall, which is about the middle of the front border, is some superficial necrosis beneath the adhesions; consistence soggy; general color gray, with moderate carbon pigmentation; upon section, cut surface bathed in abundant frothy fluid; the upper lobe faintly crepitant. Right, at the apex, shows a small puckered scar; upon section, gray red; fairly crepitant throughout; somewhat downy.

Abdomen: Peritoneal cavity interrupted by fibrous adhesions uniting the great omentum with the spleen.

Spleen: Weight, 400 gm.; symmetrically enlarged;

upon section, follicles prominent on a brick red field; pulp much increased, considerable turbid, semi-fluid material being yielded on gentle scraping; consistence fairly firm.

Pancreas: Negative.

Gastro-intestinal tract: Negative.

Liver: Weight, 1,500 gm.; surface smooth; general color pale brown; upon section, markings faintly visible; consistence normal.

Gall bladder: Normal.

Kidneys: Weight of left 150 gm.; length 11, breadth, 5 cm.; capsule adherent to a finely granular surface; the outer border presents two smooth-walled cysts, the largest 2 cm. across; mottled gray red; upon section, markings fairly distinct; cortex .5 cm. in thickness; consistence tough. Right: Weight, 55 gm.; length, 9, breadth, 4.5 cm.; by two transverse furrows the organ is divided into three lobules; upon section, cortex .3 cm. in thickness; in other respects similar to the left kidney.

Adrenal glands: Negative.

Bladder: Dilated, length 16 cm.; inner surface smooth.

Prostate: Normal.

Aorta: Upon section, the arch almost wholly smooth, a few calcareous plates present on its descending portion; the abdominal segment shows a few slightly elevated, yellowish plaques and a few depressed calcareous plates; similar plates are present at the origin of the iliac arteries.

Vertebral column: Viewed from in front presents a marked curvature to the left, involving the lower thoracic and the lumbar segments, the amplitude of the curve about 8 cm.; associated with this is some twisting to the left of the upper thoracic segment and to the right of the remainder of the column. There is some thickening of the bodies of the vertebrae, most noticeable in the mid thoracic and the lower lumbar regions.

Cranium: Not examined.

Spinal cord: Not examined.

In the above case we were fortunately able to observe the aneurism throughout its entire course, covering a period of approximately ten months. The sequence shown here of early syphilis, followed in later years by arteriosclerosis, tabes dorsalis, and, finally, aneurism, seems a most definite one, and although the direct injury appears to have been the immediate cause, the dependence upon the antecedent syphilis can hardly be doubted. Sansom¹ believes the relation of syphilis to aneurism to be a very close one, estimating that in 82% of all cases there is an antecedent history of lues. Etienne² in 240 cases found a history of syphilis in 70%. Heiberg³ in 28 cases, 43%. Camac,⁴ as a result of his study of 340 reports of autopsies on aneurism, states that aneurism is attributable to syphilis in about 32% of cases. The rupture externally is somewhat unusual, in Huchard's⁵ 350 cases occurring but twenty-one times. Boyd⁶ collected 142 cases of aneurism from the London hospitals and but 8 of these were of the axillary artery.

CASE II. Arteriosclerosis; aneurism of the transverse aorta, the first sign of which was a sudden attack of hematemesis; nine days later a second attack with

¹ Sansom, A. E.: *Twentieth Century Practice of Medicine*, 1895, iv.

² Etienne: *Ann. de Dermatologie*, 1897, 3 s., viii, p. 1.

³ Heiberg: *La Semaine Med.*, July 27, 1892.

⁴ Camac: *Am. Journ. Med. Sc.*, 1905, exxix, p. 857.

⁵ Huchard: *Maladie de Cœur*.

⁶ Boyd: *Encyclopedia Medica*, vol. i, p. 215.

death after ten hours, from ulceration and hemorrhage into the esophagus at the level of the bifurcation of the trachea.

E. P., colored woman, of sixty-six years, an inmate of the Long Island Almshouse. Transferred to hospital Jan. 14, 1903. The patient's mental condition made it impossible to obtain an accurate history.

Family history: Negative.

Past history: Patient has always been well. About ten years ago she vomited a small amount of blood; no history of gastric symptoms. Menstruation always regular. She has had two children, both of which were carried to full term, but they weighed only a pound and a half and soon died. She has had no miscarriages.

Present illness: While at breakfast patient suddenly vomited about five ounces of blood and gastric contents and had three more attacks before removal to the hospital. At the time of entrance she was in a somewhat syncopal condition. She has had no pain at any time; sleeps very poorly; has a good appetite; bowels are regular. She denies the use of alcohol.

Physical examination: Well developed and nourished; obese. Pupils equal; react to light and distance. Tongue protrudes straight; moist; slight white coat.

Lungs: Resonance good; occasional coarse, moist râle over both sides.

Heart: Moderately enlarged to left; action regular and forcible; systolic murmur at apex, not transmitted; pulmonic second sound accentuated. Pulse slightly irregular; good tension; arteries moderately sclerotic.

Abdomen: Large and thick walled. Liver from the fifth space to 2 cm. below the costal margin. Spleen not felt.

Extremities: Knee jerks present; no ankle clonus; plantars normal.

Urine: Normal.

Jan. 15, 1903. Patient passed a comfortable night and seems in fair condition this morning. No pain or vomiting. No gastric symptoms. She has been ordered soft solids which she eats with apparent appetite.

Jan. 25, 1903. The patient seemed perfectly comfortable until to-day. While eating breakfast this morning she was suddenly seized with an attack of vomiting similar in nature to that which occurred on the 17th. The vomitus consisted of food and frothy blood of a bright red color, and was profuse enough to quickly cause severe anemia and grave symptoms. She responded quickly to treatment and within an hour appeared to be resting comfortably. Examination of the lungs showed only a few scattered râles. The heart sounds rapid and weak but fairly regular; soft systolic bruit at apex; pulmonic second sound louder than aortic. Pulse very weak and rapid.

About six hours after the first attack the patient vomited two pints of bright red blood. She failed slowly, not responding to treatment, and finally died at 5 P.M.

AUTOPSY No. 03:11 (564). Regular No. 13,668. Feb. 1, 1903. Dr. George B. Magrath.

ANATOMICAL DIAGNOSIS:

Hypertrophy and dilatation of the heart.

Hemorrhage into the stomach.

Umbilical hernia of the omentum.

Cholelithiasis.

Chronic pelvic peritonitis.

Multiple myomata of the uterus.

Aneurism of the arch of the aorta.

Erosion of the esophagus.

General arteriosclerosis.

Body: That of a mulatto woman, sixty-six years of

age; length, 165 cm.; well developed; obese; rigor mortis absent; slight lividity of dependent parts; pupils equal, 4 cm. in diameter.

Upon section, subcutaneous fat, 7 cm. in thickness; muscles, red, thin and fatty infiltrated. Just above the umbilicus the peritoneum presents a circular opening, 2 cm. in diameter, communicating with a pouch lined by peritoneum, and lying wholly within the substance of the abdominal fat; this cavity is occupied by a segment of the great omentum. Vermiform appendix and mesenteric lymph nodes normal.

Thorax: Height of diaphragm fifth rib on right side, fifth interspace on left.

Pleural cavities: Left, normal; right contains about 300 cc. of serous fluid.

Heart: Weight, not taken; removed in continuity with the lungs and aorta; upon section, myocardium brown red and fairly firm. Wall of left ventricle 1.3, of right .3 cm. in thickness. Epicardial fat abundant, infiltrating extensively the wall of the left ventricle. Aortic valve, 7 cm. in circumference. Depth of left ventricle, 10.5 cm. Valves normal. Cavities somewhat dilated.

Lungs: Alike; the fronts gray; backs bluish red; generally crepitant; the backs of slightly increased consistence.

Abdomen: Peritoneal cavity as above noted.

Spleen: Weight, 75 gm.; upon section, brick red; markings fairly distinct; pulp not increased; consistence lax.

Stomach: Somewhat dilated and distended; upon section, contains about 1,500 cc. of bloody fluid containing large masses of currant jelly clot.

Intestines: Not remarkable.

Pancreas: Normal.

Liver: Weight, 1,450 gm.; surface smooth; general color brown; upon section, tubules distinct, consistence friable.

Gall bladder: Shrunken; its walls closely investing a soft brownish calculus, 1.5 x 3 cm.

Kidneys: Weight of both 290 gm.; upon section, capsule strips easily from a smooth surface; pale; markings fairly distinct; cortex 0.6 cm. in thickness; consistence normal.

Adrenal glands: Normal.

Bladder: Normal.

Genitalia: The oviducts are attached to the rear wall of the pelvis by old fibrous adhesions. The uterus is of irregular contour, presenting multiple nodular elevations upon its peritoneal surface, 1 to 2 cm. in diameter, which, upon section, are fleshy, and sharply defined from the myometrium in which some of them are embedded. Ovaries normal.

Aorta: Upon section, presents marked arteriosclerosis, with calcification and some general dilatation; its circumference 3 cm. above the aortic valve 10.5 cm., its inner surface furrowed and marked by closely set, yellowish, slightly elevated areas, alternating with others, depressed, opaque, yellow and shell-like; many of the latter are eroded. The floor of the transverse portion of the arch, opposite the origin of the left subclavian artery, presents a circular opening, 2 cm. in diameter, with smooth, rounded edges; this opening communicates with a sac the upper part of which is bounded by everted portions of the wall of the aorta, which is generally spherical in form, and about 6 cm. in diameter; this sac is filled up to within 2 cm. of the opening with fairly firm laminated clot; it lies in general below and behind the arch of the aorta, being bounded on the right by the trachea and right primary bronchus, and behind by the esophagus, on the left by the aorta and the left primary bronchus, and behind by the esophagus; the latter presents a backward flexion over the sac, and upon section, at a point oppo-

site the bifurcation of the trachea, presents upon its anterior wall an irregularly oval area, its long axis vertical, 1.5 x 2.5 cm., within which there is loss of substance; the edges are ragged, greenish-red, the floor consisting of tough, laminated clot; a probe inserted into the mouth of the sac passes freely along the left side of the latter into the ulcer of the esophagus.

Organs of the neck: Esophagus presents conditions above described.

Cranium: Not examined.

Spinal cord: Not examined.

This case is remarkable, first, because of the point of rupture and, second, because of the unusual length of time (eleven days) between the first and the fatal hemorrhage. Among 4,593 autopsies, Kelynaek⁷ found 32 of ruptured thoracic aneurism, only 3 of which, or 9.37%, were into the esophagus. Huchard's⁸ 250 cases of aortic aneurism include only 6 which ruptured into the esophagus. The character of the aneurism found at autopsy readily explains the delay in the fatal termination. A small saccular chamber nearly filled with laminated clots and with a small opening on one side into the esophagus and on the other side into the aorta probably afforded the proper anatomical condition for an intermittent partial or complete closure of the opening into the esophagus.

CASE III. *Syphilis; twelve years later multiple saccular aneurism of the aorta with rupture into the retroperitoneal tissue and subsequent erosion of vertebra, hydrothorax and atrophy of left kidney; arteriosclerosis; exploratory laparotomy; death four months after onset of symptoms.*

F. Q., a laborer of thirty-eight years, entered hospital Oct. 16, 1905. (No satisfactory history obtained because of patient's mental impairment.)

Family history: Apparently negative.

Personal history: Always a vigorous man; no serious illness. Syphilis twelve and gonorrhea five years ago. Two months ago sharp pains suddenly appeared in the lower back, extending around to the groins. The pains are cutting, constant and somewhat relieved by lying down. Now severe pains over abdomen as well.

Physical examination: Well-developed, muscular man. Pupils react to accommodation, but not to light; tongue protrudes straight in median line, not tremulous.

Lungs: Breathing and resonance normal throughout; no râles.

Heart: Normal size; sounds clear; regular; no murmurs; second sound accentuated.

Abdomen: Rather full and general voluntary spasm of muscles which prevents satisfactory examination; nothing definite made out. Rectal examination negative.

Spine: No deformity but motion in all directions is almost entirely in dorsal and lumbar regions, the least flexion causing great pain. Even with aid, the patient can sit up in bed only with agony. Considerable tenderness on deep pressure in left back and side below costal border, but none over nerve trunks. No signs of any abnormality in hip joint. Chain of small lymph nodes in groin.

Patella reflexes lively; plantar normal; no clonus; no ataxia.

Scar on glans penis. Temperature normal.

Urine: Normal color; 1,034; albumin, trace;

⁷ Kelynaek: *Lancet*, July 24, 1897.

⁸ Huchard: *Maladies de Cœur*.

sugar, 0; sediment consists of many compound granular cells and fine granular casts, with few renal cells.

Blood: Erythrocytes, 5,216,000 per cmm.; white corpuscles, 7,100 per cmm.; hemoglobin, 70%.

Nov. 12, 1904. Patient's condition remains about the same. Almost constant cutting pain deep in abdomen and through lumbar regions, more severe on left and greatly aggravated by any attempt to move about or, in fact, by any position except on his back. The abdomen is more tender and tense than at entrance; nothing felt; dull in flanks. In left lumbar region is a large, pulsating, very tender area with indefinite limits.

Dec. 5, 1904. Patient now has a distinct pulsation in left epigastrium and extending round to back; nothing definite felt because of muscular spasm; very tender, soft bruit heard over this area. The pain is more severe and frequently extends down left leg and to the left testicle. Repeated examinations of the urine have shown essentially the same characteristics as at entrance.

Dec. 9. Area of visible pulsation increased especially to the right; bruit much louder and synchronous with the pulsation in abdomen. Patient suffers greatly and lies on back with thighs flexed. The condition seems serious and exploratory laparotomy advised.

Dec. 10. Operation. Dr. J. H. Cunningham. Incision of 6 in. along left border of rectus muscle. On opening the peritoneal cavity a very large pulsating tumor seen to occupy nearly the entire upper left quadrant, obscuring the left kidney and apparently postperitoneal. Patient's condition and evident hopelessness of operative interference made further operation inadvisable. Considerable shock.

Dec. 15, 1904. Good recovery from operation, and patient doing well until to-day, when he suddenly collapsed, giving symptoms and signs of hemorrhage. Later he became very anemic. Failed rapidly and died Dec. 16, 1904.

AUTOPSY No. 04.73 (736), regular No. 20,685. Autopsy, thirty-six hours post mortem. Dr. G. B. Magrath.

ANATOMICAL DIAGNOSIS.

Retroperitoneal hematoma.

Multiple saccular aneurism of the aorta.

Erosion of the vertebra.

Chronic adhesive pleuritis.

Hydrothorax.

Dilatation of the left ventricle.

Anthraxis.

Atelectasis.

Edema of the lungs.

Emphysema of the lungs.

Acute purulent bronchitis.

Bronchopneumonia.

Acute splenic tumor.

Cloudy swelling of the liver, kidneys.

Hemorrhagic infarction of the kidneys.

Atrophy of the left kidney.

Compensatory hypertrophy of the right kidney.

General arteriosclerosis.

Body: That of a man thirty-nine years of age; length 176 cm.; powerfully built; fairly well nourished; rigor mortis present and full; faint lividity of dependent parts; pupils equal, 0.6 cm. in diameter; tattoo marks of the inner aspects of both forearms. The skin of the abdomen presents an incised wound 15 cm. in length, extending from a point 2 cm. below the costal margin downward parallel with the median line, and 5 cm. to the left of the umbilicus; the edges are clean and somewhat fresh; wound closed by sutures.

Upon section, subcutaneous fat .3 cm. in thickness; muscles red and rather thin; the great omentum attached to the anterior wall of the abdomen along a line corresponding with the incision above noted, by rather easily separable fibrinous adhesions; the peritoneum along the line of incision shows some ecchymosis and is overlaid in places with a thin layer of fibrin; the adjacent coils of intestine are overlaid with a small amount of red clot; the peritoneal cavity contains, chiefly in its lower part, a moderate amount of thin, bloody fluid containing fragments of red clot; the peritoneum in general smooth, that of the left iliac region dark bluish red and elevated as though from contained clot beneath; the meso-ileum throughout the greater part of the middle portion of the intestine, along the line of attachment of the latter, is of dark purplish red color within a zone about 2 cm. in diameter.

Thorax: Height of diaphragm fifth rib on right side, fifth on left.

Pleural cavities: Left: Presents one fibrous band in front and contains 1,000 cc. of clear, brownish fluid in which are occasional flakes of fibrin; right, interrupted by fibrous bands which are edematous in the upper, back and lower parts, and contains about 200 cc. of clear fluid.

Pericardial cavity: Normal.

Heart: Weight, 330 gms.; epicardial fat fairly abundant; upon section, cavities of the right side contain red and white clot; those of the left side empty; myocardium pale brown gray. Wall of left ventricle 1.2, of right, .2 cm., in thickness. Mitral valve 10.2, aortic valve 6.6, pulmonary valve 7, tricuspid valve 12 cm., in circumference. Valves normal; cavity of left ventricle slightly dilated. Coronary arteries normal.

Lungs: Both show extensive carbon pigmentation, and are of slaty gray color, the apices showing puckered scars. Left: Collapsed upon removal; the upper lobe downy and feebly crepitant; the lower considerably retracted, of increased consistence, and but slightly crepitant; upon section, dark gray red; the cut surface moist and transparent; bronchial mucous membrane pink; bronchial lymph nodes black. Right: Rather voluminous; the pleural surface at the apex bears a few edematous fibrous tags; the upper lobe of downy consistence, the middle and lower non-crepitant and soggy; upon section, the upper lobe gray red and moist; the lower dark red; the cut surface in the main transparent, under pressure yielding abundant frothy fluid; studded with fairly numerous, slightly elevated, pink, granular areas from 2 to 3 mm. across, many of which under pressure yield plugs of pus; the bronchi of the lower lobe, somewhat dilated, containing rather abundant mucopurulent material; bronchial lymph nodes black.

Abdomen: Peritoneal cavity in general as above noted; the tip of the gall bladder attached to the great omentum by fibrous adhesions; vermiform appendix and mesenteric lymph nodes normal; the front of the stomach at the cardiac end near the entrance of the esophagus, shows an adherent, 3 x 8 cm., dark red, somewhat elevated subperitoneal clot; adjacent to this is a small mass of free red clot.

Upon removal of the stomach, intestines and liver the posterior wall of the abdomen from the lower border of the pancreas downward to the lateral portions of the pelvis is projected forward, presenting as a vague, somewhat lobulated mass, 20 cm. in length and about 12 cm. in average breadth; the anterior surface of this mass is 6.5 cm. from the level of the tip of the ensiform cartilage; it is continuous with the subperitoneal clot in the left iliac region; the overlying peritoneum is in general smooth and of a dark bluish red color;

it is traversed from right to left (below upward) by the meso-ileum and by the duodenum. The upper portion of this mass projects as a hemispherical body into the left hypochondrium, at this point being in apposition with body wall; the mass is limited above by the diaphragm. Above the diaphragm presents a saccular mass traversed in front by the aorta and apparently continuous with it, 7 cm. in diameter; the entire mass, including the aorta, the kidneys and the retroperitoneal connective tissue, removed *en bloc* and further dissected from behind. Upon this aspect it is closely adherent to the vertebral column and the contiguous portions of the chest wall; the bodies of the vertebrae, including the eighth and twelfth, are extensively eroded, the eighth and ninth, throughout the greater part of their extent; the tenth, eleventh and twelfth, chiefly upon their left lateral aspect; the intervertebral discs are spared and project strongly; the erosion of the eighth and ninth vertebrae is of a depth of from 1 to 2 cm. Below, the mass is continuous with extensive retroperitoneal clot extending downward mostly upon the left side, to the symphysis and into the pelvis.

The mass removed and viewed from behind presents upon the left a mass of rather freshly formed red clot about 500 gm. in bulk; removal of this reveals an irregularly oval cavity the posterior limits of which correspond with the vertebral column and the wall of the chest; its long axis vertical, 13 cm. in diameter, its breadth 10 cm.; above, the cavity is bounded by a mass of clot beneath the peritoneum and extending upward to the diaphragm; in front, laterally and below, by similar extensive masses of clot, retroperitoneal and to a certain extent within the substance of the psoas muscle. Internally it is continuous through an aperture 5 cm. in diameter, with the aorta; this aperture which is in the left antero-lateral wall is at the level of the renal artery; a probe inserted into the latter at the hilus of the kidney enters the cavity at a point upon its anterior wall, 4 cm. from the median line of the aorta. The edges of the opening between the cavity and the aorta are rounded and over them is reflected the inner wall of the aorta which is continuous through a considerable part of its extent with the inner surface of the sac, presenting a smooth, lustrous surface with many ecchymoses; the cavity further contains in its deeper parts a considerable amount of laminated red and white clot, portions of which are rather friable. At the level of the diaphragm and above it the aorta presents a saccular dilatation springing from its posterior wall at a point 2.5 cm. above the sac already described; bounded posteriorly by the bodies of the eighth and ninth thoracic vertebrae; its posterior walls wanting upon removal, and communicating with the aorta through an opening 3 cm. in diameter, with rounded edges; the inner surface of the aorta is continuous with that of this sac throughout its anterior and lateral portions; behind, its walls contain considerable laminated clot infiltrating between them and the vertebral column and the diaphragm; at a point 6 cm. above the opening of this sac from the aorta, and upon the left lateral aspect of the latter, is a shallow, saccular pocket 1 cm. in diameter, and about the same in depth, corresponding with the origin of the intercostal artery; at the base of this there is slight loss of substance, the surface grayish red, soft, and bearing some attached clot. To the right and in front of the aorta the retroperitoneal tissues are extensively infiltrated with dark red clot several centimeters in thickness, surrounding the inferior vena cava and to some extent the kidney.

The aorta itself, in its abdominal segment is deflected to the right about 3 cm. from the median line; its inner aspect in the lower portion of the abdominal segment

is smooth, save for a few very slightly elevated and vague, yellowish areas of irregular outline and less than 1 cm. in diameter; in the thoracic segment the inner surface presents a considerable degree of wrinkling, longitudinal, shallow and rather fine furrows alternating with linear elevations of slight degree and yellowish white in color; in the transverse arch these wrinklins are irregular; there are present in addition slightly elevated areas of irregular outline, .5 to 1 cm. in diameter, some of which show a faint umbilication at their centers; in the vicinity of the small lateral sac above noted the wrinkling is more extensive, and in the vicinity of this sac are several very shallow, small out-pocketings; one such is also present on the anterior wall a short distance below this; the inner surface at a few points shows slightly opaque, yellowish areas, 1 to 2 mm. across; the walls are throughout soft, without calcification and without macroscopic ulceration. One lymph node at the arch is 2 cm. in diameter, and wholly calcareous. The ascending arch just above the aortic valves shows a faint transverse ring of yellowish white, nodular elevations; above this for a distance of 2 cm. the inner surface is studded with similar areas of less elevation, and 1 to 2 mm. across.

Spleen: Weight, 220 gm.; symmetrically enlarged; its anterior aspect near the border shows a faint area of depression 1 x 5 cm., within which the capsule is thickened; upon section, pale brick red; cut surface nearly diffuent; markings wholly indistinct; pulp greatly increased; consistence soft.

Stomach: The front wall of the cardia presents the mass of clot above noted; upon section, negative.

Intestines: The meso-ileum along the line of its attachment to the intestines presents the zone of ecchymoses already described; upon section, negative; colon, negative.

Pancreas: The head to some degree infiltrated with blood clot from behind; otherwise negative.

Liver: Weight, 2,150 gm.; surface smooth; edges somewhat rounded; color of the free surface dull brown red; upon section, lobular markings visible, the centers red, the borders pale brown; consistence normal.

Gall bladder: Normal.

Kidneys: Weight not taken; removed in continuity with the aorta. *Left:* Lies well forward and upon the upper and outer aspect of the general mass already described; length 10.5, breadth 6 cm. upon section, capsule slightly adherent to a faintly granular surface; general color pale grayish brown; the lower pole deep red; cortex .4 cm. in thickness; the pyramids and cortex of the lower portion of the kidney are deep bluish red, the free surface here ecchymosed; a renal vein at the hilus contains a non-adherent, but rather firm, grayish clot. *Right:* Length 12.5, breadth 7 cm.; pale gray; cut surface somewhat opaque; capsule strips easily from a smooth surface; cortex .7 cm. in thickness; glomeruli faintly visible and pale.

Adrenal glands: Negative.

Bladder: Distended; upon section, normal.

Genitalia: Tubules of testes thread easily; otherwise negative.

Abdominal wall, left lateral: Upon section, through the peritoneum a mass of underlying clot for the most part cruor presents, 5 to 6 cm. in thickness, extending from the costal margin into the pelvis; this region was continuous below with the general mass in the abdominal cavity.

Cranium and spinal cord: Not examined.

The above is chiefly remarkable for the extent of the hemorrhage into the post-peritoneal tissue and for the considerable prolongation of life (nearly two months) following the rupture.

CASE IV. *Male of eighty-one; general arterio-sclerosis; multiple aneurism of the abdominal aorta with ulceration into the third portion of the duodenum and hemorrhage into the stomach and intestines. Symptoms extending over a period of three months; death four days after rupture.*

J. S., a plasterer, aged eighty-one years, admitted to hospital April 25, 1904.

Family history: Unimportant.

Past history: Patient had measles and pertussis when a child. Never sick otherwise except for a day or so at a time. Denies venereal.

Recent illness: nine weeks ago patient began to have sharp pain in the small of his back, and on this account he has been unable to work. After the pain disappears he feels weak. He says his back is not stiff, but he has extreme pain on rising or sitting. Some dyspnea on exertion. Otherwise he feels fairly well. Appetite poor; bowels constipated.

Physical examination: Fairly well developed and nourished; thin; senile. Pupils equal; react normally to light and distance; arcus senilis. Tongue protruded straight in median line; slight white coat. Pulse: Regular, 80, of fair volume and increased tension. Considerable sclerosis of radial artery. Chest: No dullness; breathing normal except for somewhat prolonged expiration; no râles; no change in fremitus. Heart: Area of dullness not increased; sounds very faint; no murmurs heard; aortic second increased.

Abdomen: In the epigastric region, just above the umbilicus, is felt an oval tumor about 3 x 1½ in. in size; this tumor pulsates and is slightly tender. Liver not enlarged. Spleen not palpable.

Knee jerks present; normal plantars; no Babinski. Varicose veins of both legs.

Urine: 1,018; color, normal; acid; albumin, 0; sugar, 0.

Diagnosis: Arterio-sclerosis; varicose veins; aneurism of the abdominal aorta.

May 11, 1904. Patient complains of same symptoms in back, otherwise his general condition is fair.

May 13, 1904. Last night he fell out of bed, after which he vomited blood and also passed considerable blood by rectum. He felt weak, but the pulse remained of good quality. This morning he is comfortable.

May 16, 1904. No subsequent vomiting, and after twenty-four to forty-eight hours the stools again become normal. There are no gastro-intestinal symptoms. He is very weak and appears somewhat anemic. Patient felt very comfortable up to five o'clock this morning when he suddenly collapsed and remained unconscious until his death at 5.30 P.M.

AUTOPSY No. 04.33 (708), regular No. 20,097. May 17, 1904. Dr. G. B. Magrath.

ANATOMICAL DIAGNOSIS.

Chronic adhesive pleuritis.

Chronic tuberculosis of the lungs.

Emphysema of the lungs.

Edema and congestion of the lungs.

Hypertrophy and dilatation of the heart.

Chronic interstitial myocarditis.

Chronic perisplenitis.

Cholelithiasis.

Chronic nephritis.

Multiple aneurisms of abdominal aorta with

Ulceration of the duodenum and

Hemorrhage into the stomach and intestines.

Fatty degeneration and necrosis of the psoas muscle.

General arteriosclerosis.

Aneurism and dilatation of the aorta.

General anemia.

Body: That of a man eighty-one years of age; length 165 cm.; well-developed and fairly well nourished; rigor mortis present; faint post mortem lividity of dependent parts; thorax barrel-shaped; pupils equal, .3 cm. in diameter; arcus senilis; the dorsum of the left hand, near the base of the thumb, presents a horny elevation about 1 cm. in diameter; the right shin presents a copper-colored area of pigmentation, about 5 cm. in diameter. Upon section, subcutaneous fat .3 cm. in thickness; muscles red and thin; vermiform appendix and mesenteric lymph nodes normal.

Thorax: Height of diaphragm fourth rib on right side, fifth on left.

Pleural cavities: Both present a few old fibrous adhesions, chiefly at their apices.

Pericardial cavity: Contains about 25 cc. of clear serous fluid.

Heart: Weight, 350 gm.; epicardial fat fairly abundant; upon section, myocardium brown red, a patch of about 1.5 cm. in diameter, of the wall of the left ventricle near the aortic valve, white and fibrous. Wall of left ventricle 1.3, of right .4 cm. in thickness. Mitral valves 10.5, aortic valve 9, pulmonary valve 8, tricuspid valve 12 cm. in circumference. Depth of left ventricle 9.5 cm. The curtains of the aortic valve somewhat sclerosed at their bases; cavities a little dilated; the tips of the papillary muscles white. Coronary arteries upon section, sclerotic, considerably calcified, and somewhat dilated in the upper part of their course; the descending branch of the left, 3 cm. from its origin, considerably narrowed.

Lungs: In general alike; voluminous; the fronts with moderate carbon pigmentation; the surfaces reddish red, of slightly increased consistence and faintly crepitant; at the apex of each is an area of induration, with puckering and some calcification; the lower lobe of the left lung, in the mid axillary line, near its apex, presents a puckered scar 3 or 4 cm. in length, beneath which is an area of induration, which, upon section, shows two areas, elevated, irregularly oval, about .8 cm. in diameter, gray, homogeneous, dry, and very faintly granular; in the vicinity of these areas are a few vague nodules 1 to 2 cm. across; the back of the lung dark red and moist, the front gray and fairly dry; bronchi contain brownish mucus. Right, in general similar to the left; upon section, the posterior part red, of somewhat increased consistence and leathery.

Abdomen: Peritoneal cavity normal.

Spleen: Weight, 120 gm., attached to parietes by fibrous adhesions; capsule presents nodular thickening; upon section, homogeneous, brick red; consistence soft; pulp increased.

Stomach: Distended with fluid contents; length 29, depth 15 cm.; upon section, contents consist of semi-fluid and partially clotted blood; the largest masses of clot about 15 cm. in diameter; volume of the contained fluid about 1,200 cc.; mucous membrane negative.

Intestines: The duodenum and the greater part of the ileum are moderately distended with dark red semi-fluid and partially clotted blood; the third portion of the duodenum in the median line projects forward, apparently overlying a vague, irregular mass about 7 cm. across, the overlying peritoneum somewhat thickened. Upon section at this point the duodenum presents on its posterior wall an opening 2 x 1.5 cm., which upon pressure yields a small amount of gray red clot; the edges of this opening are rounded, somewhat irregular, and drawn downward. Upon further dissection this opening communicates with a sac partly filled with blood clot, and in continuity with the aorta through an opening in the anterior wall, 4.5 x 3 cm., the long axis vertical, the edges rounded

and infiltrated; the intervening sac about 5 cm. in diameter, its inner surface overlaid with laminated clot; the cavity for the most part empty; a probe inserted into the opening in the duodenum enters this cavity obliquely. Adjoining this sac and communicating with the aorta is an oval opening 3 cm. in diameter. To the right of and in continuity with the opening in the aorta already described, is another cavity about 4 cm. in diameter, lined with laminated mixed clot, bounded in front by the inferior vena cava, behind by the lower lumbar vertebræ, and externally by the psoas muscle; this cavity is for the most part empty. This muscle is pale brown, streaked with yellow and mottled with areas of necrosis and hemorrhage in its lower and back part.

Pancreas: Negative.

Liver: Weight, 130 gm.; surface smooth; pale brown; upon section, lobules faintly visible; cut surface anemic; consistence normal.

Gall bladder: Upon section, contains numerous calculi, in size varying from .3 to 2 cm. in diameter, the larger grayish yellow and faceted, the smaller black or yellow; one of the larger lodged at the origin of the cystic duct; the gall bladder contains a small amount of clear mucoid fluid; its walls 2 to 3 cm. in thickness.

Kidneys: Weight of both 340 gm.; capsule slightly adherent to a faintly granular surface; upon section, pale gray red; cortex .6 cm. in thickness; glomeruli faintly visible; pyramids nearly white; consistence tough; pelvic fat somewhat increased. The right kidney near the hilus shows a cyst cortical in position and about 2 cm. in diameter.

Adrenal glands: Normal.

Bladder: Contracted.

Genitalia: Prostate 5.5 cm. in transverse diameter; upon section, the right lobe shows a lobulated elevation 1.5 cm. across, bordering upon the urethra; otherwise negative.

Aorta: In addition to the aneurisms above described which lie 4 cm. below the renal arteries, the organ presents marked arterio-sclerosis with dilatation; the circumference at the level of the pelvic axis 6.5 cm., in the middle of the thoracic segment 8 cm.; at the level of the left subclavian artery, 7.5 cm.; the inner surface marked by alternating areas of elevation and depression, the latter calcareous, the former in some instances soft; on section, containing mortar-like substance, and overlaid with fragile thrombi; many of the areas are ulcerated.

Cranium: Sinuses and dura normal.

Brain: Weight, 1,180 gm.; notably anemic; the vertebral and basilar arteries marked by a few small, yellow plaques; the internal carotids extensively calcified; otherwise negative.

Spinal cord: Not examined.

From the onset in the above case, the diagnosis of abdominal aneurism was clear as also the origin of the malena and hematemesis. But very few cases are to be found in the literature of ulceration from an abdominal aneurism into the duodenum. In the above mentioned statistics of Huchard⁹ of 250 cases of aortic aneurism, in only one instance was there rupture into the duodenum. The relatively long interval (four days) between the initial and fatal hemorrhage is further noteworthy. Bailey¹⁰ records a case of abdominal aneurism with ulceration into stomach which death took place three days after the first evidences of hemorrhage. The extreme age of the

⁹ Huchard: *Loc. cit.*

¹⁰ Bailey: *Brit. Med. Journ.*, 1891, 2, p. 76.

patient (eighty-one years) is exceptional. On this point Camac¹¹ gives statistics based upon 340 cases of aneurism collected from the literature. The maximum number, 102, or 30%, occurred during the decade 31 to 40, with each succeeding decade diminishing very rapidly until 71 to 80 is reached, when there were but 3 or .9%. After 80 there were none. The complicating tuberculosis of the lungs suggests also the question of any possible relation between the two conditions. Camac¹¹ in his study of 340 autopsies on aneurism found 16% in which pulmonary tuberculosis was present, and therefore believes the relation to be a definite one.

SOME REMINISCENCES OF THE HARVARD MEDICAL SCHOOL OF FORTY YEARS AGO.*

BY DAVID COGGIN, M.D., SALEM, MASS.

On the first Wednesday in November, 1865, the medical lecture room of the Massachusetts Medical College, on North Grove Street, Boston, was filled with physicians and students.

On the platform were seated Dr. Thomas Hill, the president of Harvard, the revered and venerable Dr. James Jackson, the oldest living professor *emeritus* of the University, and the members of the faculty of the Medical College.

The introductory address, on "The Relations of Health and Disease," was given by Dr. Calvin Ellis, who had recently been appointed adjunct professor of clinical medicine. (Two years later he was made professor, which position he amply filled till his lamented death in 1883.)

The senior class was the largest in the history of the school, as one hundred members were graduated in the following June. Several had been serving in the army during the Civil War, which had ceased only six months previously.

One, at least, was said to have received the thanks of Congress for valiant conduct on the field of Gettysburg. Some of these young men, of bronzed faces and erect figures, still wore clothing that indicated their recent military life.

In the senior class one fifth of the members held the degree of A.B. Probably other students could have passed the entrance examinations of that day at either the Colleges of Physicians or Surgeons or Apothecaries' Hall in London, but the standard of preliminary education of most of the students was then doubtless much lower than at present.

The college building was comparatively new, having been built in 1846 on land given by Dr. George Parkman. An old prospectus says: "It is 134 feet long by 60 broad and contains spacious lecture rooms," and "in a quarter of the city highly convenient for the lodging of students."

After the introductory lecture the students secured their tickets—one from each of the eight professors—for which they paid a total sum of \$85 and \$3 for matriculating and, if they chose, \$5 for the demonstrator's ticket. Of all

the professors and instructors who were then connected with the school but two survive, the former professors of surgery and dermatology. The instruction at that time was mainly by lectures.

Visits were made by students at the Massachusetts General, City and United States Marine hospitals, the Massachusetts Eye and Ear Infirmary and the Boston Dispensary on four mornings in the week. Lectures were given on two mornings of the week at eight o'clock by Dr. E. H. Clarke on *Materia Medica*. Even at that early hour the medical lecture room was well filled, owing to the interest with which Dr. Clarke invested a confessedly dry subject. He had a reputation as an aurist, which was enhanced later by his monograph on "Polypus of the Ear." He and Dr. D. H. Storer alone lectured in dress coats, after the custom of the professors of *l'école de médecine* in Paris.

Dr. Storer prefaced his lecture by a quiz, in which the senior students on the front seats took part.

A buckskin-covered manikin was used in illustrating the stages of parturition. Doubtless some students graduated without having had a case of labor (as was true of the reader).

Dr. J. B. S. Jackson gave two lectures weekly, one of which was in the Warren Museum.

The pathological specimens were his treasures, and the fond tenderness with which he handled them and the keen interest which they evoked, as shown in his classical features, is readily recalled.

One morning while he was lecturing, a student snapped a wad of paper which struck Dr. Jackson. He rose from his chair, his face pale, and started for the door, but he turned back and quietly said, "Gentlemen, I hope that will never occur again," when he resumed his lecture.

Dr. Henry J. Bigelow lectured on various surgical subjects, from aneurism to strabismus, on three mornings of the week. In the lecture of Monday he very likely would refer to the cases operated upon the preceding Saturday, reading from the case-books brought by the house officers (all of whom later became professors in the medical school). He always had a large audience. One morning he abruptly asked if we had heard the latest news from over the water, saying, "Why is cold like an attorney?" "Because it draws up the marriage articles." He will long be remembered for his discovery of erectile tissue in the nose, for his operation of litholapaxy, and for his treatise on "The Hip," with its fine woodcuts.

Dr. John Bacon lectured twice weekly in the clinical lecture room, in which a tragedy had been enacted not many years before. He was a gentleman of suave and deprecatory manner, whom the students frequently annoyed by throwing missiles against the furnace pipes and by applauding his experiments most vociferously.

During that winter, for the first time, lectures on clinical chemistry were given, in a dark and contracted room in the Massachusetts General

¹¹ Camac: *Loc. cit.*

* Read at Lynn, Oct. 10, 1905, before the Essex South District Medical Society.