Maude Elizabeth Seymour Abbott

"She was an institution"

Born on March 18, 1869 at St Andrews, a small village on the north shore of the Ottawa River.

Higher Education for Women ??

In the minds of many if not most men, women were considered incapable of the increased mental strain which higher education demanded.

MAUDE ABBOTT

A Memoir

H. E. MacDERMOT

1940

Her Early Steps

Class Valedictorian
Winner of the
Lord Stanley Gold Medal

But what about medicine??

Maude set her mind on McGill, and
petitioned the Registrar who replied,
“I am sorry to inform you that the Faculty of Medicine
can hold out no hope of being able to comply
with your request.”

Enlightened Opinions

Dr. F.J. Shepherd, “Introduction of women amongst medical students would be nothing short of a calamity.”

Dr. G. E. Fenwick, Professor of Surgery, “ I will resign if women are allowed to take the medical course.

Dr. F. W. Campbell argued that, “In the difficult work of surgery, they would not have the nerve. Can you think of a patient in a critical case, waiting while the medical lady fixes her bonnet or adjusts her bustle?”

Maude graduated from Bishop's in June 1894 with brilliant honors. Vienna was the medical Mecca, so she immediately planned her post graduate work in Europe. One of the greatest medical opportunities in Vienna was pathology with Kolisko and Albrecht, an experience that made possible Maude's later work.

And she traveled--London, Heidelberg, Zurich--exposing herself to the best minds in contemporary medicine. These years of study and travel were the happiest in her professional life.

But what Maude wanted above everything else was to be on the staff of the McGill Medical Faculty

Osler's Advice to Maude

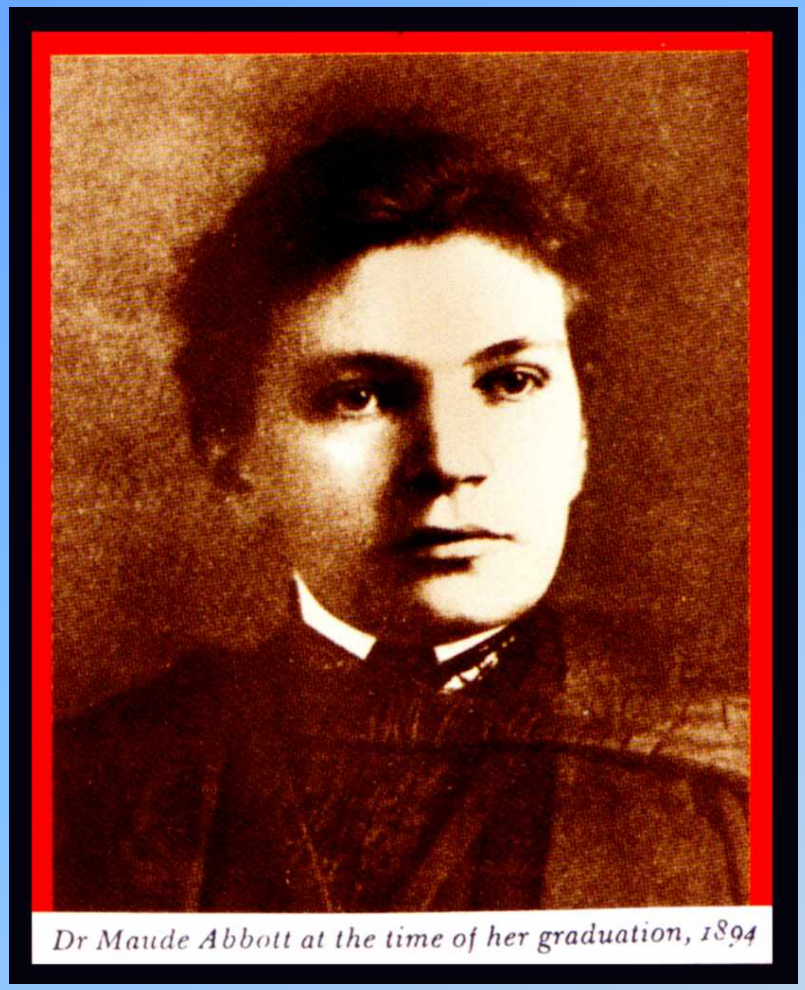
"I wonder if you realize what an opportunity you have? That McGill Museum is a great place."

And so he gently dropped a seed that dominated all her future work

Hopeless Futilities

Before World War II, congenital malformations of the heart were regarded as *hopeless futilities*, an occupation appropriate for the few women in medicine. *Maude Abbott* was advised by William Osler to occupy herself with the collection of anatomic specimens at McGill, and *Helen Taussig* was advised to occupy herself with the hopeless futilities in the Harriet Lane children's clinic at Hopkins. *Congenital heart disease in adults was an oxymoron.*

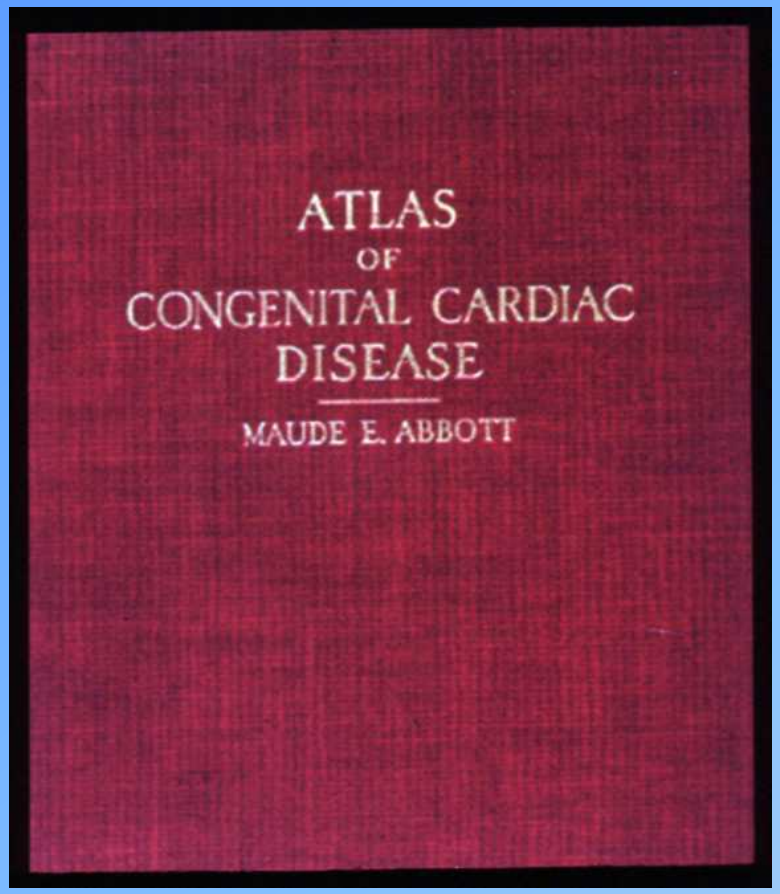
The Two Few Women in Medicine



Maude Abbott

Helen Taussig

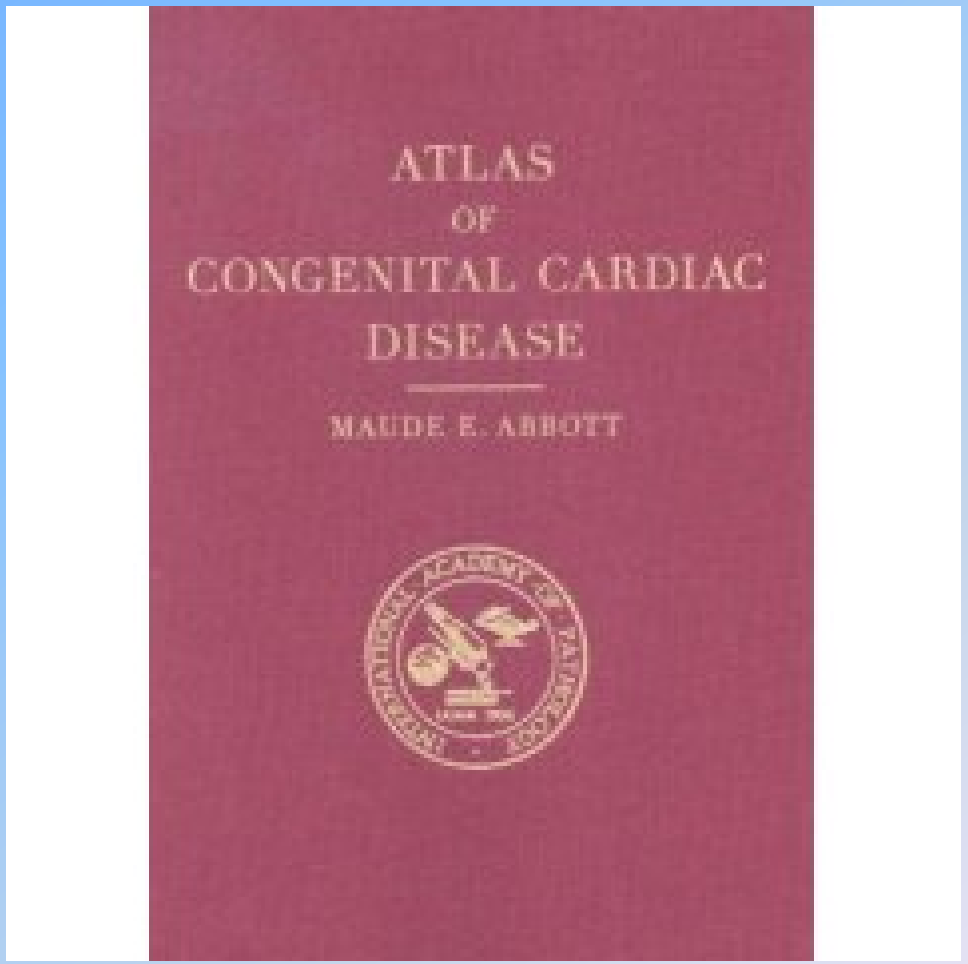
Maude and Helen



The Osler Library
McGill

1936
1000 Cases

2006 Re-publication on the occasion of the 100th Anniversary of the International Association of Medical Museums, now called the International Academy of Pathology



UNIVERSITY OF PENNSYLVANIA
PHILADELPHIA

THE SCHOOL OF MEDICINE
McMANES LABORATORY
OF PATHOLOGY

Aug 27th 1931

Dr Maude E. Abbott
McGill University
Montreal, Canada.

Dear Dr Abbott:-

As you requested, I am, sending you a reprint of my article "A Persistent Ostium atrioventriculare Commune with Septal Defects in a Mongolian Idiot." I am also sending the heart reported in this article. This is being done at the request of Dr Elliott C. Cutler, Professor of Surgery, Western Reserve University, Cleveland Ohio. The patient was his daughter and he wishes the heart to be added to the collection in your Museum.

I want to again thank you for your advice about this case.

Sincerely

George M. Robson M.D.

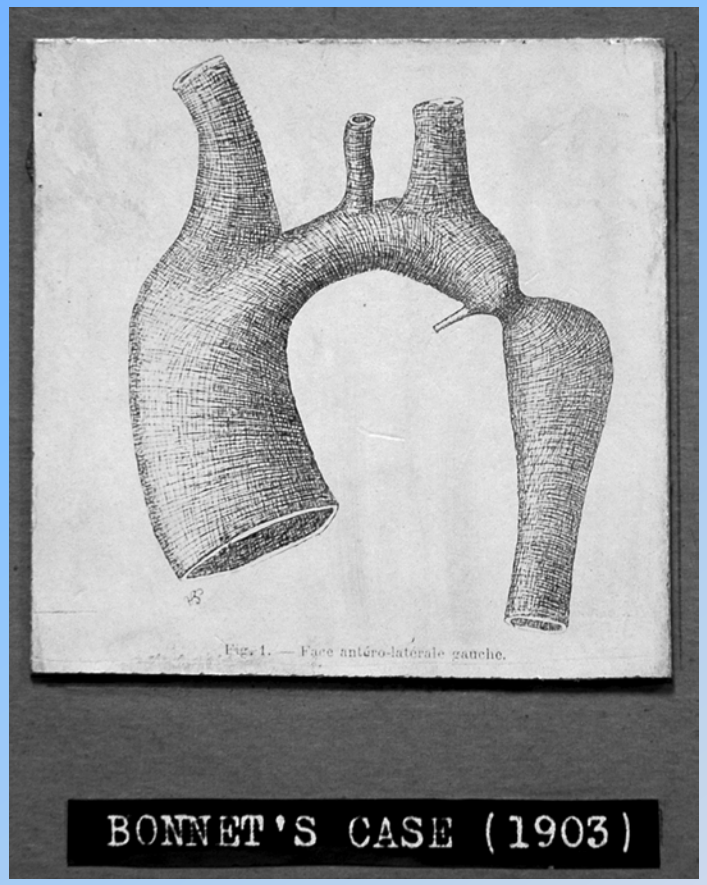
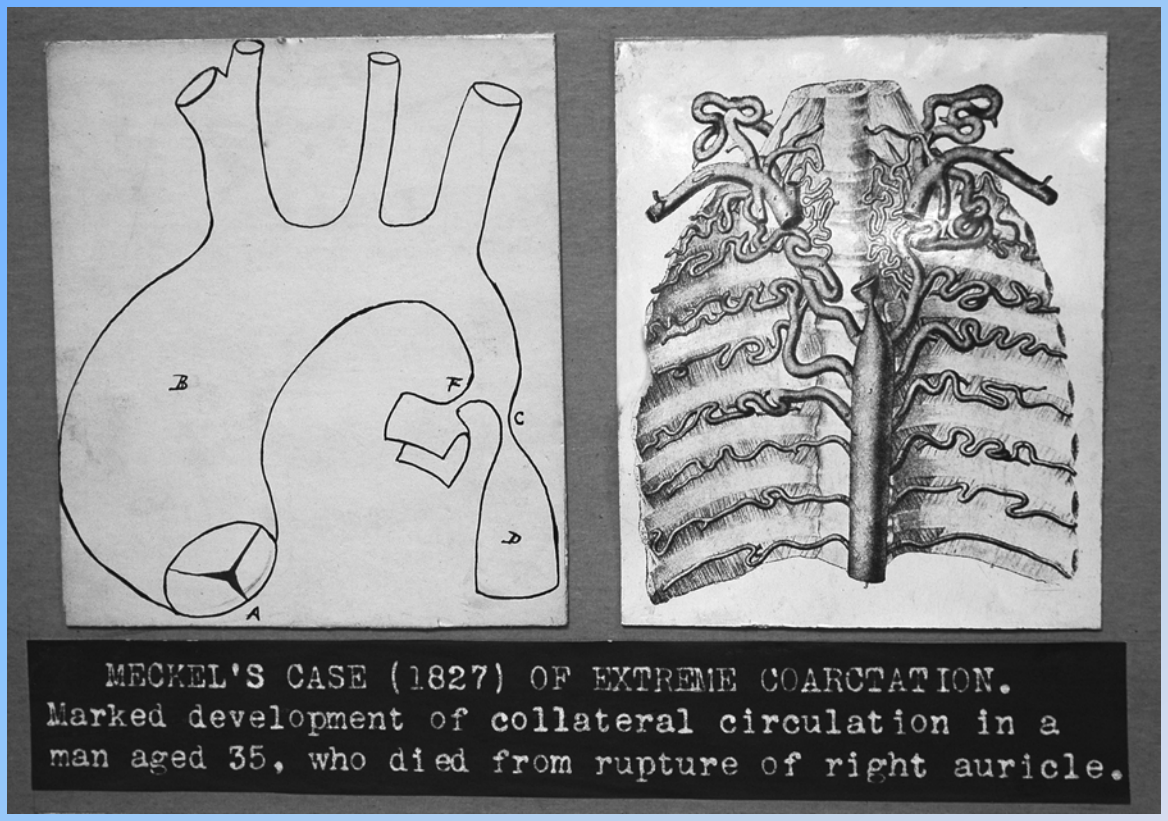
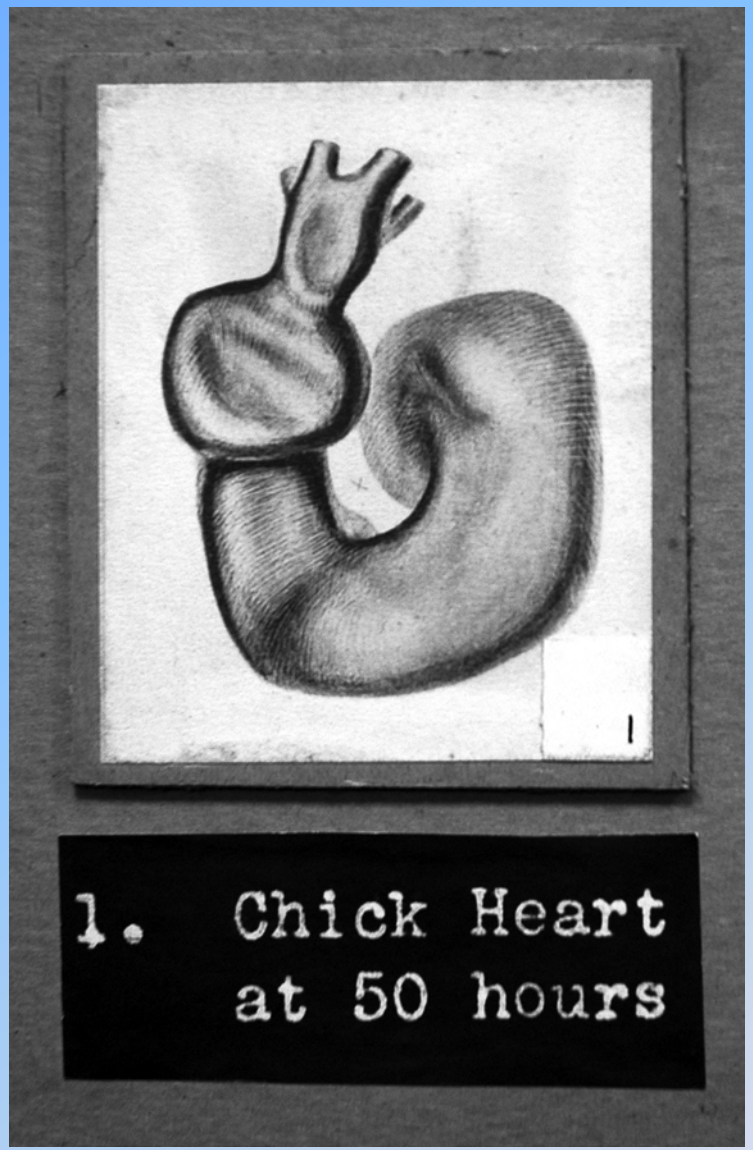


Fig. 1. — Face antéro-latérale gauche.
BONNET'S CASE (1903)



MECKEL'S CASE (1827) OF EXTREME COARCTATION.
Marked development of collateral circulation in a man aged 35, who died from rupture of right auricle.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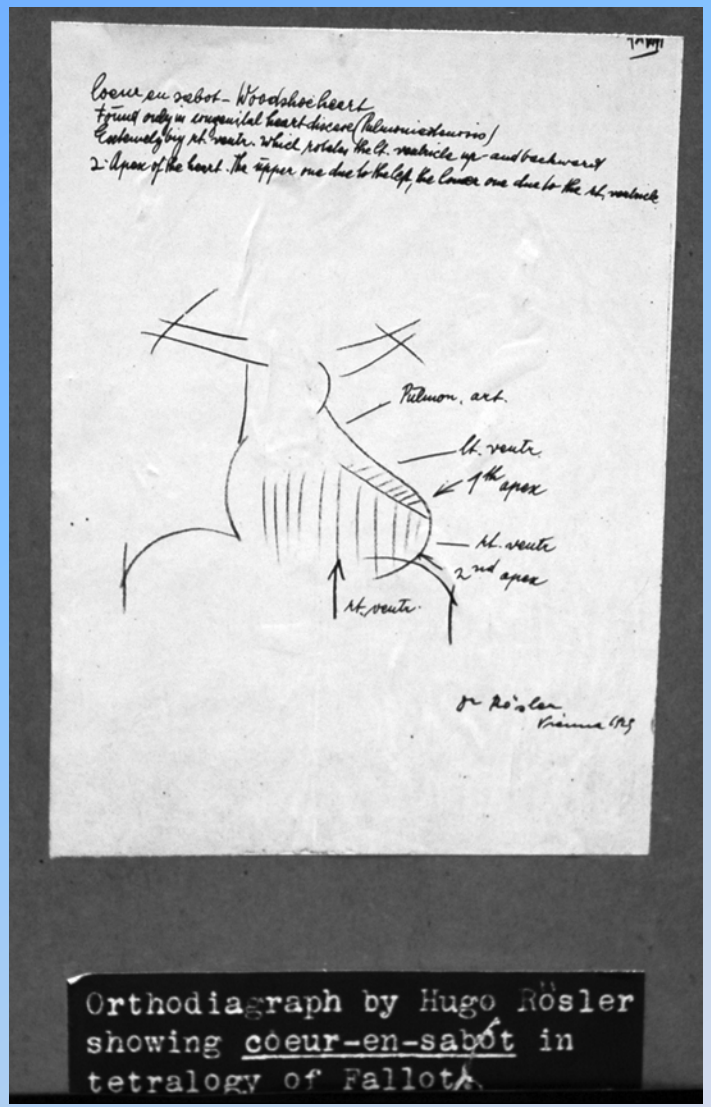
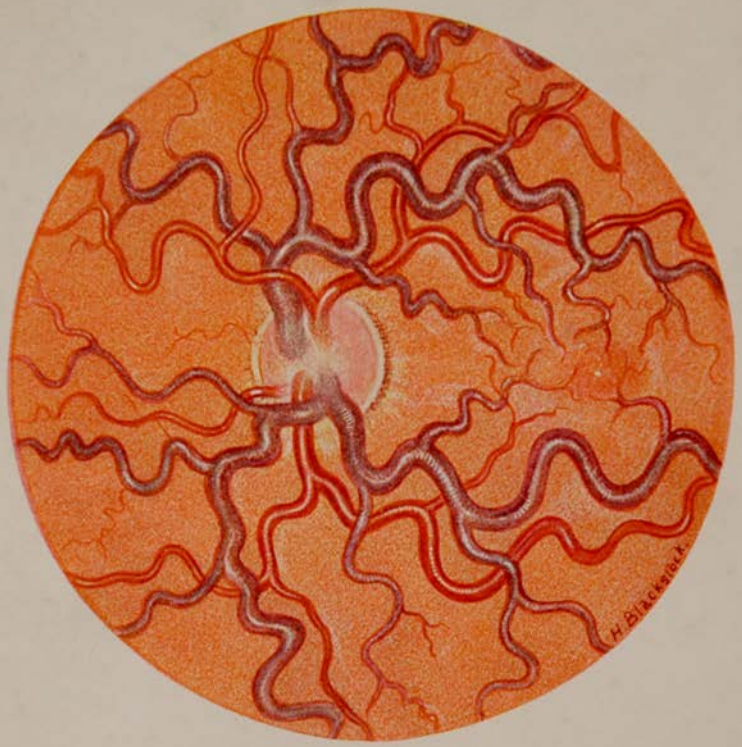
1. Chick Heart
at 50 hours



Orthodiagraph by Hugo Rösler showing coeur-en-sabot in tetralogy of Fallot.



CYANOSIS RETINAE. Eyeground in a cyanotic child aged 3 1/2 yrs. Painting by Harriet Blackstock McGill University

Chart I.—Statistics of Congenital Cardiac Disease (1,000 Cases Analyzed)

Series numbers	Classification of Defects	Number of cases analyzed	Age: Maximum	Age: Minimum	Age: Mean	Sex: Male	Sex: Female	Relative Frequency: Number classified as primary lesion	Number complicating other defects	Total incidence
I	**Anomalies of pericardium:**									
	1. Pericardial defects.	30	75	Fetus	45	19	6	30	1	31
	2. Diverticulum.	6	52	Adult	45	2	3	6		6
II	**Displacements of the heart:**									
	1. Ectopia cordis.	7	15m	Fetus	1m	3	3	7	1	8
	2. "Isolated" Dextrocardia									
	(a) Without inversion chambers	8	49	Birth	11	3	4	8	5	13
	(b) With inversion chambers.	10	33	Birth	6	7	2	10	1	11
	3. Dextrocardia with situs inversus.	11	58	Fetus	8	3	4	11	4	15
	4. Incomplete heterotaxy.	5	6½	6w	1½	4	1	5	3	8
	5. Dextroposition cordis.	3	41	2½m	26	3		3	1	4
III	**Anomalies of the heart as a whole:**									
	1. Bifid apex.	4	40	8	24½		2	4	15	19
	2. Diverticulum.	3	1½m	Fetus	16d	1	2	3	1	4
	3. Primary congenital hypertrophy.	15	4	Birth	10m	6	4	15	2	17
	4. Congenital rhabdomyoma.	17	20	Birth	18½	11	3	17		17
	5. Congenital heart block.	3	20	18d	7	2	1	3	1	4
IV	**Anomalous septa or chordæ:**									
	1. Anomalous septa (a) in L. A.	10	48	Birth	20	4	6	10	3	13
	(b) in R. A.	4	33	16	17½	1	2	4	13	17
	(c) in ventricles.	3	39	10w	14	1	2	3	10	13
	2. Anomalous chordæ (a) in L. A.	7	84	35	52	2	2	7	4	11
	(b) in R. A.	5	69	24	46	4	1	5	13	18
	(c) in ventricles.	6	69	23	36	4	1	6	5	11
	(d) in aorta.	5	76	2w	39	3	2	5	1	6
V	**Defects of interauricular septum:**									
	1. Patent foramen ovale.	40	70	3m	29	15	24	40	250	290
	2. Defects auricular septum above.	10	64	6m	34	4	5	10	9	19
	3. Defects auricular septum below.	18	46	8m	19	8	8	18	18	36
	4. Multiple defects, auricular septum.	5	52	16	38	3	2	5	23	28
	5. Premature closure F. O.	3	32h	Fetus	18h	2		3	1	4
VI	**Defects of interventricular septum:**									
	1. At base (a) without dextroposition.	50	49	Fetus	14½	21	26	50	207	257
	2. Defects elsewhere or multiple.	5	79	4m	23	2	2	5	12	17
	3. Aneurysms of pars membranacea.	7	60	24	42	6	1	7	9	16
VII	**Complete defects of cardiac septa:**									
	1. Cor triloculare biventriculare.	5	31	17d	6	2	2	5	10	15
	2. Cor triloculare biatriatum.	13	35	Birth	7½	7	3	13	14	27
	3. Cor biloculare.	9	16	78h	3½	3	3	9	5	14
	4. Incomplete double heart.	10	4½	2m	1½	5	2	10	4	14
VIII	**Defects of aortic septum:**									
	1. Persistent truncus (complete defect).	21	25	Birth	4	11	7	21	13	34
	2. Communication between A. and P. A.	10	48	6d	14	6	3	10		10
	3. Congen. aneur. of right aortic sinus.	12	53	1½	28	11	1	12		12
IX	**Transposition of arterial trunks:**									
	1. Dextroposition of aorta.									
	(a) A. from L. V., V. S. entire	1	39	Birth			1	1	1	2
	(b) A. from both ventricles.	7	48	15m	25	3	3	7	63	70
	(c) A. from R. V.	3	13m	13w	10m	1		3	48	51
	(d) A. from R. V., double conus.	1					1	1	1	2
	2. Complete transposition:									
	(a) Closed V. S.	32	11	2d	6m	16	4	32	6	38
	(b) Defect V. S.	17	16	6d	2½	11	3	17	19	36
	3. Partial transposition.	16	20	12d	4½	8	5	16	15	31
	4. Corrected transposition.	4	24	9w	11½	3	1	4	2	6
X	**Pulmonary stenosis:**									
	1. With closed septa.	9	45	10½	22	5	4	9	2	11
	2. With patent F. O. closed V. S.	16	57	4	18	5	10	16	4	20
	3. With closed F. O. defect V. S.	51	60	11d	12	27	21	51	10	61
	4. With patent F. O. and defect V. S.	34	28	11w	12	21	12	34	25	59
XI	**Pulmonary atresia:**									
	1. With closed V. S.	10	20	6d	1½	2	4	10		10
	2. With closed F. O., defect V. S.	12	29	10w	6	6	3	12	6	18
	3. With patent F. O., defect V. S.	18	30	9d	4	9	3	18	13	31
XII	**Pulmonary insufficiency or dilatation:**									
	1. Valvular insufficiency.	2	64	22	43		2	2	10	12
	2. Congenital dilatation P. A.	6	59	2½m	14	2	3	6	3	9
XIII	**Aortic stenosis and atresia:**									
	1. Subaortic stenosis.	12	58	2	22½	8	3	12	6	18
	2. Aortic stenosis.	11	24	31h	3½	4	5	11		11
	3. Aortic atresia.	12	15w	2d	2m	8	3	12	2	14
XIV	**Anomalies of semilunar cusps:**									
	1. Supernumerary cusps (a) of P. V.	8	80	1½	35	6	1	8	4	12
	(b) of A. V.	2	41	31	36	2		2	2	4
	2. Reduced no. (a) Bicuspid P. V.	1	20				1	1	30	31
	(b) Bicuspid A. V.	32	68	Fetus	33	26	2	32	46	78
	3. Defect (a) of P. V.								14	14
	(b) of A. V.	1	5d				1	1	6	7
XV	**Tricuspid and mitral stenoses:**									
	1. Tricuspid stenosis.	3	28	7m	15	1	2	3	10	13
	2. Tricuspid atresia.	16	56	6w	5½	3	6	16	9	25
	3. Mitral stenosis.	6	27	51h	5½	3	3	6	17	23
	4. Mitral atresia.	5	3½	2d	10m	2	2	5	8	13
XVI	**Anomalies of a-v cusps:**									
	1. Double orifices (a) of T. O.	1	43			1		1		1
	(b) of M. O.	8	71	5	37	3	4	8	2	10
	2. Insuff. or defect (a) of T. V.	5	20	12	15	3	2	5	36	41
	(b) of M. V.	2	14	2d	7	1	1	2	22	24
XVII	**Patent ductus arteriosus:**									
	1. Simple patency.	92	66	2w	24	29	55	92	150	242
	2. So-called aneurysm.	13	40	4d	3½	7	6	13	7	20
	3. Absence of D. A.								15	15
XVIII	**Coarctation of the aorta:**									
	1. Adult type.	70	92	2½	33	53	15	70	35	105
	2. Infantile type.	9	9m	8h	1½m	4	2	9	28	37
	3. P. A. forms descending aorta.	6	5½	Fetus	1	3	2	6	30	36
XIX	**Hypoplasia of the aorta.**	2	21	17	19	2		2	75	77
XX	**Anomalies of aortic arch:**									
	1. Double aortic arch.	5	87	Fetus	38	2	3	5		5
	2. Right aortic arch.	14	61	Fetus	17	3	5	14	21	35
	3. Absence aortic arch.	3	6m	1d	3m	1	2	3	3	6
	4. Rt. subclavian from desc. A.	5	44	Adult	31	1	1	5	2	7
	5. Lt. subclavian from D. A. or P. A.	1	5			1		1	7	8
	6. Common brachioceph. trunk	2	38	26		1	1	2	16	18
XXI	**Anomalous coronaries:**									
	1. Origin from P. A.	8	61	3½m	36	3	3	8	2	10
	2. Rt. cor. into cor. sinus	1	54			1		1		1
	3. Aneurysm rt. coronary.	1		Adult				1		1
XXII	**Anomalous pulmonary arteries.**	5	65	Birth	14½	1	1	5	14	19
XXIII	**Anomalies of great veins:**									
	1. Of systemic V. (persist. L. S. V. C.).	9	61	3m	18	4	2	9	27	36
	2. Of pulmonary veins.	4	86	7m	35	4		4	54	58
XXIV	**Congenital arteriovenous aneurysm.**	6	35	16	21	3	3	6	2	8

Abbreviations: A = Aorta; P. A. = Pulmonary artery; a-v = auriculo-ventricular; V. S. = Interventricular septum; h = hours; A. S. = Interauricular septum; d = days; w = weeks; D. A. = Ductus arteriosus; m = months; F. O. = Foramen ovale

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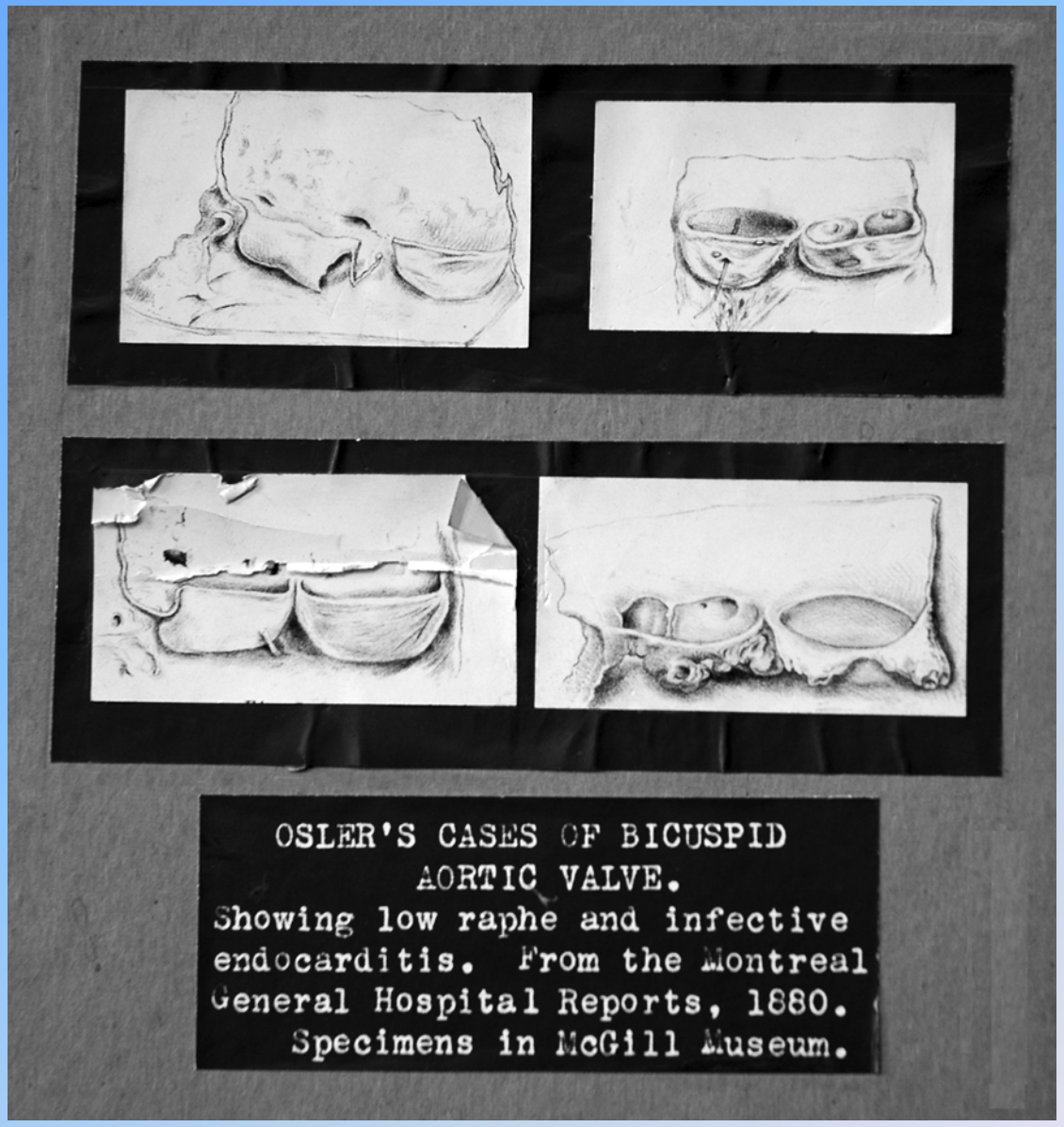


OSLER'S CASES OF BICUSPID AORTIC VALVE.
Showing low raphe and infective endocarditis. From the Montreal General Hospital Reports, 1880.
Specimens in McGill Museum.

F.W. - SUMMARY OF CASE

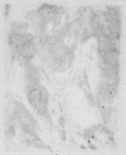
HISTORY:

WHITE MALE, AGE 45. CHIEF COMPLAINT, WEAKNESS AND DYSPNEA. PAST HISTORY - KNOWN TO HAVE HAD HEART DISEASE FOR 18 YEARS. SIX MONTHS AGO WAS ILL WITH SYMPTOMS OF GRIPPE FROM WHICH HE NEVER RECOVERED. RECENTLY NOTICED PURPURIC SPOTS OVER LEGS.

PHYSICAL EXAMINATION:

THERE WAS FEVER, TACHYCARDIA, ENLARGED SPLEEN, PURPURA OVER LEGS, HYDROTHORAX.
HEART: SYSTOLIC AND DIASTOLIC MURMURS AND SYSTOLIC THRILL OVER AORTIC AREA.

A



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PATHOLOGICAL FINDINGS:

HEART: WEIGHT 480 GRAMS.

A TWO AORTIC CUSPS; TWO NORMAL COMMISSURES AND ONE FUSED COMMISSURE. CIRCUMFERENCE OF RING 6 CM. LENGTH OF COMBINED CUSP 3.2 CM. (RIGHT AND LEFT ANTERIOR), POSTERIOR CUSP 2.8 CM. BOTH CORONARIES ARISE FROM SINUS OF COMBINED CUSP. **ANTERIOR CUSP IS DIVIDED BY A HIGH, SHORT RAPHE. FREE MARGIN OF CUSP HAS UNINTERRUPTED SWING.** POSTERIOR CUSP AND AORTIC LEAFLET OF MITRAL VALVE ARE THE SEAT OF ULCERATIVE ENDOCARDITIS. SPLEEN SHOWED ON CULTURE STREPTOCOCCUS VIRIDANS. THERE WAS AN EMBOLIC GLOMERULO-NEPHRITIS.

CAUSE OF DEATH:

SUBACUTE BACTERIAL ENDOCARDITIS.

MICROSCOPICAL EXAMINATION:

PARALLEL SERIAL SECTIONS THROUGH RAPHE. WEIGERT'S ELASTICA STAIN.

1 SERIAL SECTION #10. THE RAPHE IS SEEN AS AN ELEVATION UPON THE SINUS SURFACE OF THE VALVE JUST DISTAL TO ITS ATTACHMENT. THE ANNULUS FIBROSUS ARISES DEEP TO THE AORTIC ELASTIC MEDIA. THE SUPERFICIAL ENDING OF THE ELASTICA PROCEEDS FURTHER TOWARD THE VALVE THAN THE DEEP ENDING AT THE WEDGE SHAPED JUNCTION.

2 SERIAL SECTION #29 - APPROXIMATELY .6 MM. ADVANCED. THE CONNECTIVE TISSUE OF THE ANNULUS NOW LIES SUPERFICIAL TO THE ELASTIC FIBERS. **THERE HAS BEEN A REVERSAL OF THE RELATIONSHIP AT THE ANNULUS-MEDIA JUNCTION. NORMAL COMMISSURAL RELATIONSHIPS.**

3 SERIAL SECTION #34 - APPROXIMATELY .15 MM. ADVANCED. NORMAL COMMISSURAL RELATIONSHIP OF THE ANNULUS-MEDIA JUNCTION STILL MAINTAINED. THE DEEP ENDING OF THE AORTIC ELASTIC FIBERS DOES NOT HOWEVER PROCEED AS FAR BEHIND THE VALVE AS AT A NORMAL COMMISSURE. NO EVIDENCE OF INFLAMMATORY REACTION.

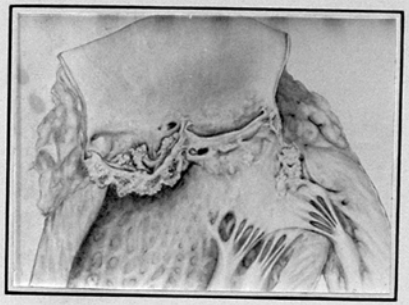
DIAGNOSIS:

PROBABLE CONGENITAL BICUSPID VALVE. THE CRITERIA FOR MICROSCOPIC IDENTIFICATION MAY BE INCORRECT FOR THIS CASE.

J.F. - MEDICAL EXAMINER'S CASE - SUMMARY

HISTORY:

WHITE MALE, AGE 52. PATIENT BROUGHT TO HOSPITAL AND DIED A FEW MINUTES AFTER ARRIVAL.



PATHOLOGICAL FINDINGS:

HEART: 770 GRAMS.

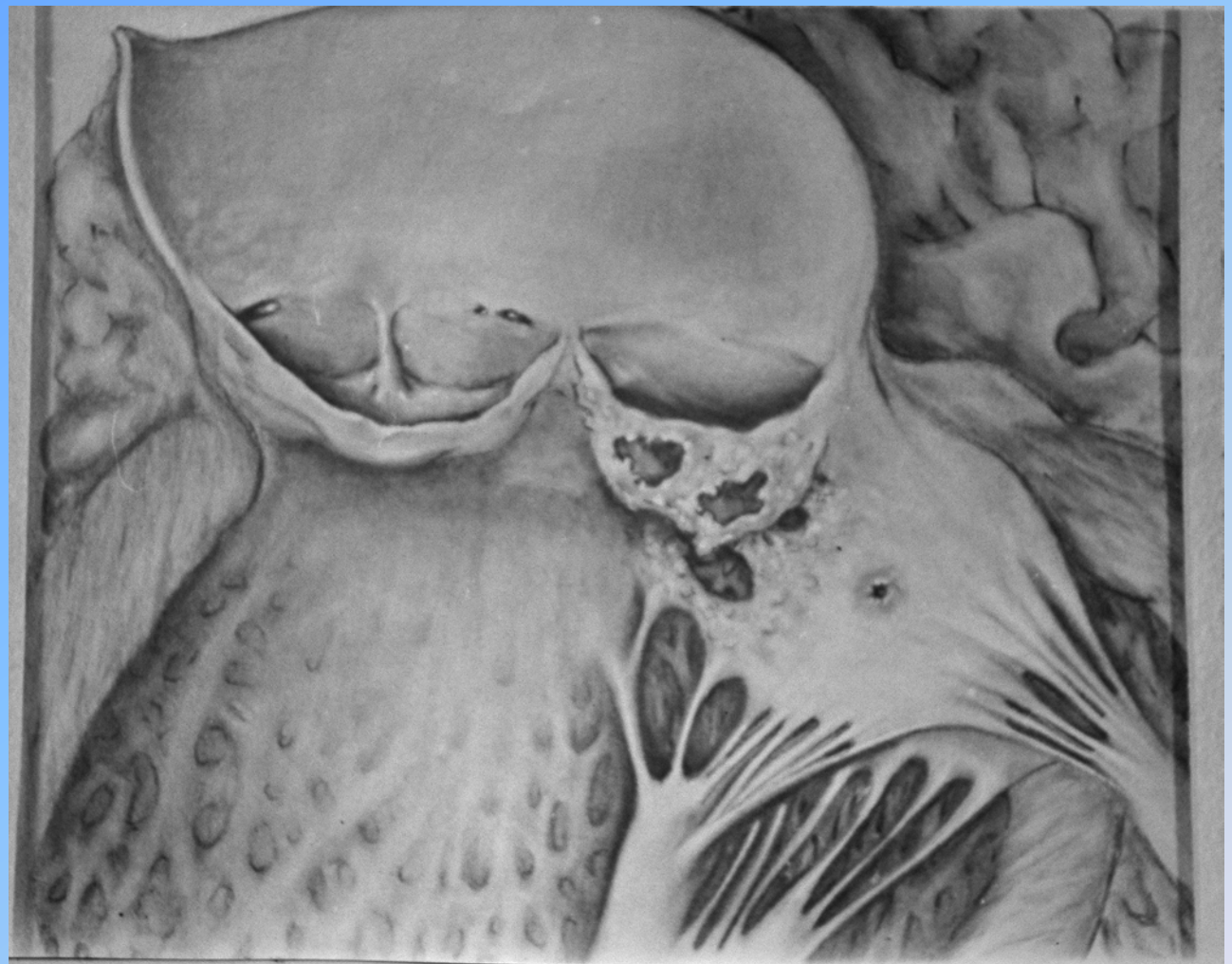
TWO AORTIC CUSPS; TWO NORMAL COMMISSURES. CIRCUMFERENCE OF RING 7.5 CM. (LEFT ANTERIOR AND RIGHT ANTERIOR), POSTERIOR CUSP 3.5 CM. BOTH CORONARIES ARISE FROM SINUS OF THE COMBINED CUSP. SMALL ACCESSORY RIGHT CORONARY. COMBINED CUSP, PARTICULARLY AT ITS FREE MARGIN, SHOWS EXTENSIVE CALCIUM DEPOSITION. **NO RAPHE WITHIN CUSPS. UNINTERRUPTED SWING OF FREE EDGE OF VALVES.** POSTERIOR CUSP SHOWS AREA OF PERFORATION CLOSE TO COMMISSURE. MODERATE AMOUNT OF CALCIUM AT ROOT OF POSTERIOR CUSP AND UPON AORTIC LEAFLET OF MITRAL VALVE. AORTA IMMEDIATELY ABOVE SMOOTH. ABDOMINAL AORTA ARTERIO-SCLEROTIC. KIDNEYS SHOW NO EMBOLIC GLOMERULAR LESIONS. NO OTHER CONGENITAL ANOMALIES.

CAUSE OF DEATH:

CONGESTIVE HEART FAILURE.

DIAGNOSIS:

CONGENITAL BICUSPID AORTIC VALVE. AORTIC STENOSIS. THE GROSS CRITERIA ARE SUFFICIENTLY CHARACTERISTIC. NO MICROSCOPIC STUDY IN THIS CASE.



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