LA STORIA DELL' IPERTENSIONE ARTERIOSA. L' IPERTENSIONE NELLA STORIA

Antonio Ferrero

Il cuore sin dall'antichità è stato uno degli organi che ha incuriosito e affascinato l'uomo, anche in virtù delle implicazioni filosofiche e affettive legate a questo organo.
Babilonesi, egizi, cinesi, indù e civiltà precolombiane si occuparono in vario modo del cuore sia come organo sede dell'anima sia come origine della forza vitale

Scarabei del cuore

Il cuore era considerato la sede della coscienza ed era pesato nel corso del Giudizio davanti al tribunale di Osiride. Sulla base degli scarabei, che erano posizionati tra le bende della mummia, all'altezza del cuore, era scritta una preghiera (cap. 30 del Libro dei Morti) affinché il cuore non accusasse il defunto nell'Aldilà, privandolo della sopravvivenza.

III dinastia 2700 a.C. Imhothep : osservazione , ragionamento e descrizione : il polso indicatore dell'attività del cuore e delle condizioni del paziente

XVIII dinastia
regno
di Amenhotep I

Papiro di Ebers: il cuore e vasi vengono riconosciuti e descritti nella loro struttura e funzione

Huangdi Neijng 黃帝內經, il *Canone Interno dell'Imperatore Giallo* (450-200 a.C.)

Costruito nella forma di un dialogo tra il mitico Imperatore Huangdi (2698 - 2596 a.C) ed il suo primo ministro Qi Bo

"La corrente sanguigna scorre in moto circolare non si ferma mai".

" Quando il polso del battito cardiaco batte vigorosamente e gli impulsi sono molto prolungati la corrispondente rende il paziente incapace di parlare o muoversi".

"Se troppo sale viene utilizzato negli alimenti,

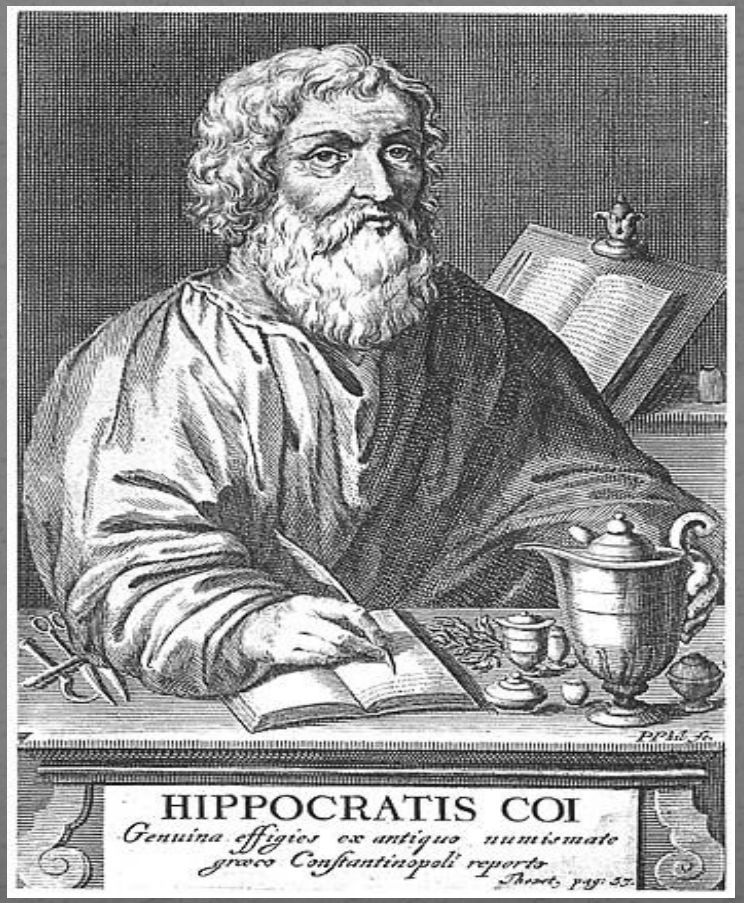
i vasi sanguigni divengono duri".

La medicina greca: apoplessia , emiplegia. Il concetto di Ipertensione pare essere ignoto

Ippocrate di Kos (460-377 a.C.) prima descrizione anatomica del cuore (Perì Kardies)

Esistono solo due cose: la scienza e l' opinione.

La prima genera conoscenza, la seconda ignoranza



Galeno: restauro e decadenza

Originario di Pergamo trascorse buona parte dell'esistenza a Roma, chiamato da Marco Aurelio che lo volle come medico di corte perché curasse lui e il figlio Commodo.

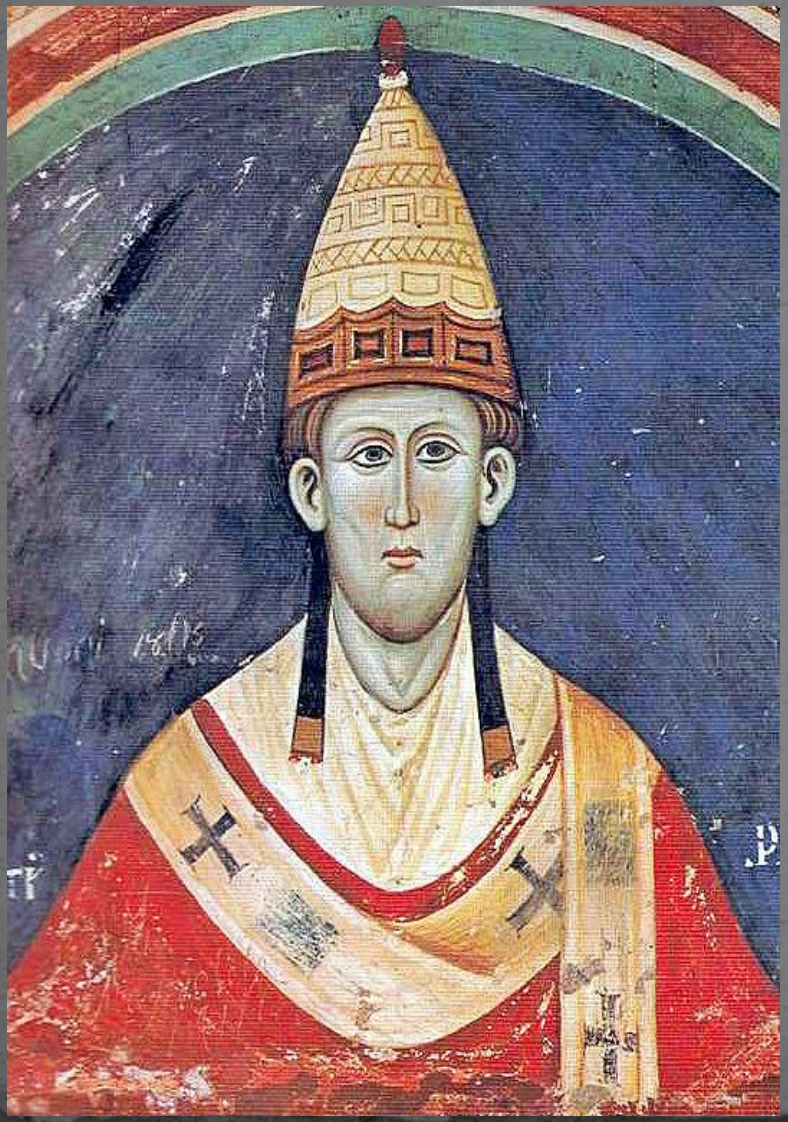
Collocazione intellettuale filosofico-scientifica :

rifiuto del Dogmatismo in favore di impostazione naturalistica e dimostrativa

Le opere di Galeno costituiscono l'ultima grande produzione nell'ambito della ricerca medica del mondo grecoromano

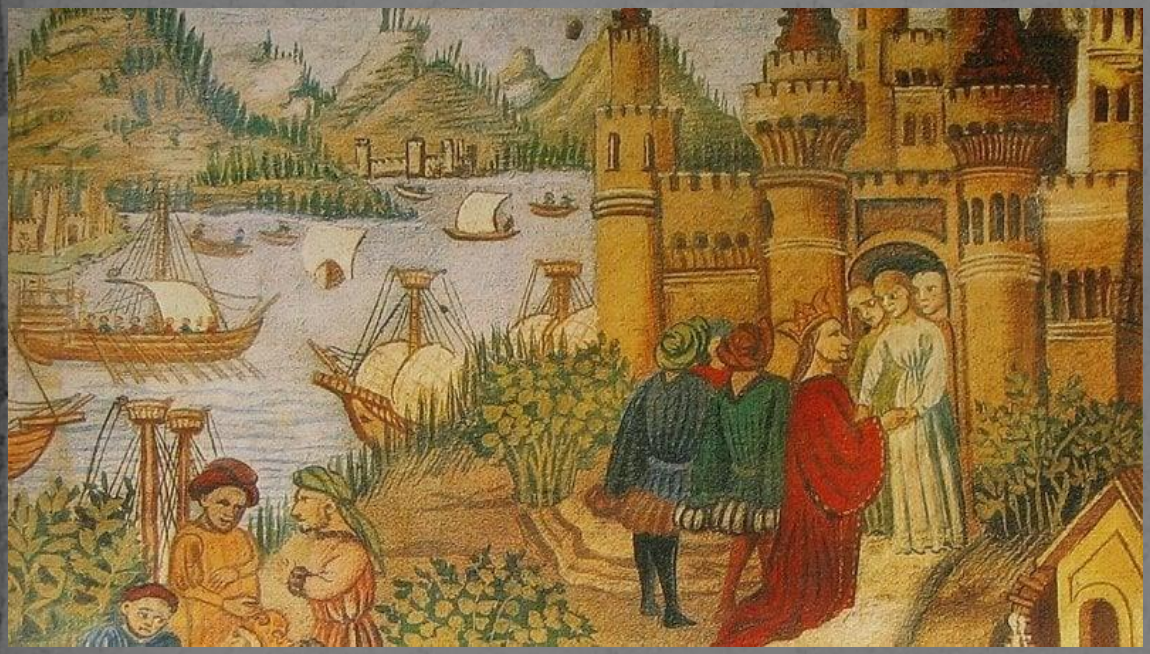
Medioevo: visione religiosa , la malattia è punizione , purificazione ed espiazione *la guarigione è misericordia*

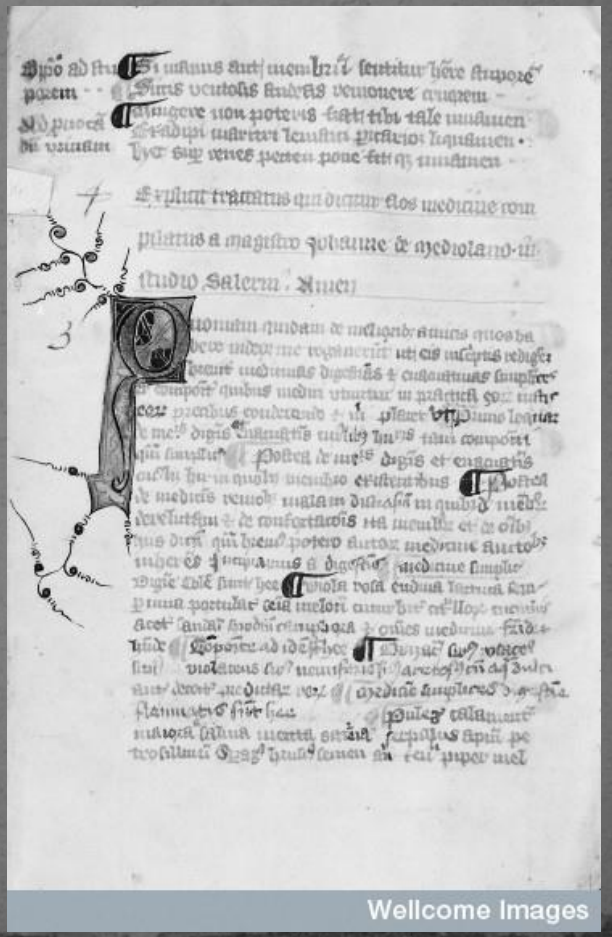
Innocenzo III (1161-1216)



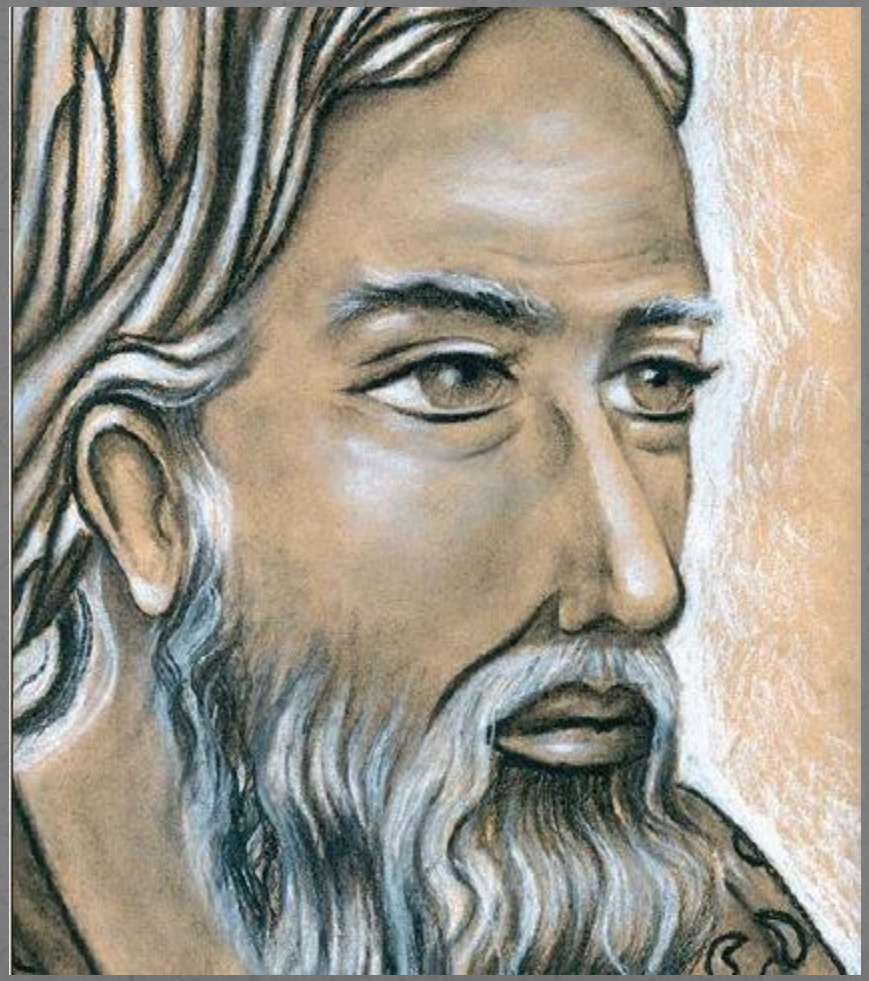
- Analecta Franciscana, Tomus X (1941). *Legendae S. Francisci Assisiensis saeculis XIII et XIV conscriptae … Fasciculus V: S. Bonaventura, Doctor Seraphicus, Legenda maior et Legenda minor S. Francisci* … Ad Clara Aquas (Quaracchi): Typographia Coll. *S. bonaventurae*.

Tractatus de pulsibus Alfano Arcivescovo di Salerno (sec. XI)





AL-AKHAWAYNI (?-983 AD)
Hidāyat al-Muta'allimin fi al-Tibb



"*Fi al-Imtela*" ("Sulla Pienezza")

- «..tale malattia si manifesta con pulso aumentato e dispnea … quando si verificano gravi arrossamenti facciali, ingorgo dei vasi e protrusione degli occhi,… c'è preoccupazione che un vaso del cervello si rompa e si verifichi un sanguinamento incontrollabile, o si verifichi 'sakteh' [ictus] … e c'è la minaccia di morte ..«

- «..Evitare l'ira e il lavoro faticoso, i pasti abbondanti di carne e dolciumi, evitare l' aglio in chi ha avuto sanguinamenti e preferire aceto e spinaci
- « nei casi di aggravamento ricorrere alla flebotomia..»

XVIII secolo: l' Illuminismo

1628: William Harvey medico di corte (Re Giacomo I e Carlo I) descrive la circolazione sanguigna e riesce a misurare il volume di sangue mobilizzato dal cuore tramite l' esame del polso

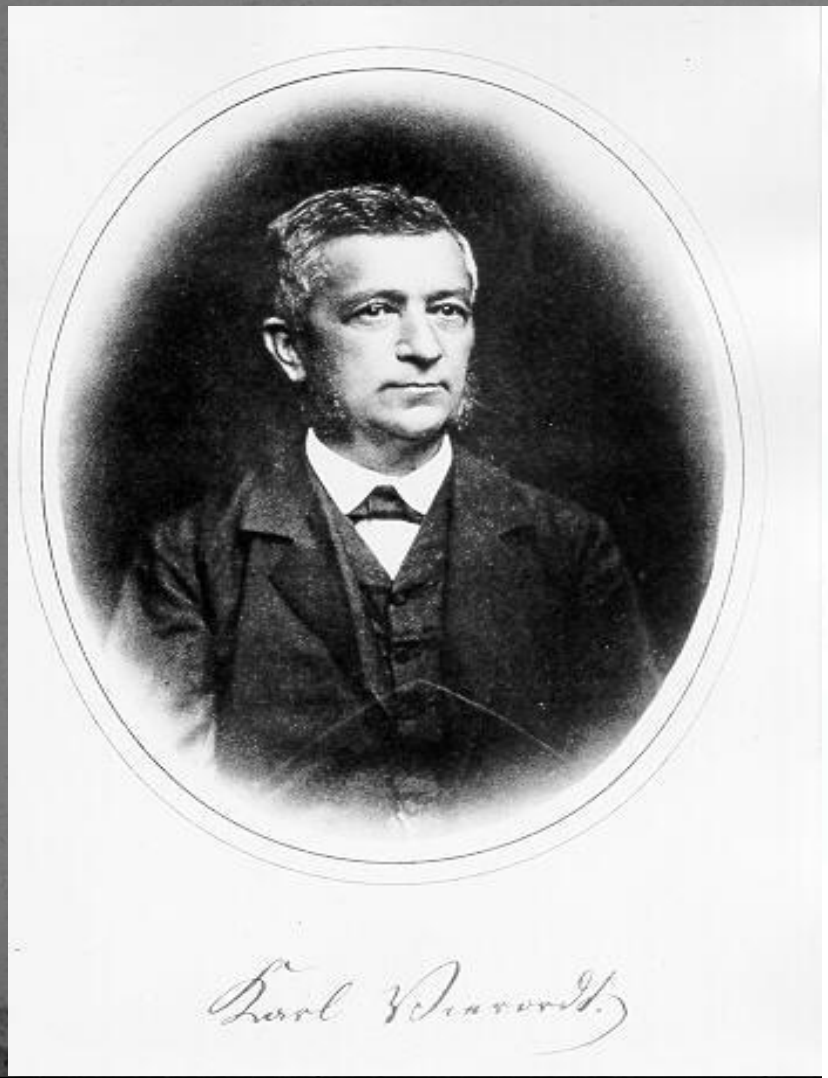

EXERCITATIO
ANATOMICA DE
MOTV CORDIS ET SAN-
GVINIS IN ANIMALI-
BVS,
GVILIELMI HARVEI ANGLI,
Medici Regii, & Professoris Anatomiæ in Col-
legio Medicorum Londinensi.

FRANCOFVRTI,
Sumptibus GVILIELMI FITZERI.
ANNO M. DC. XXVIII.

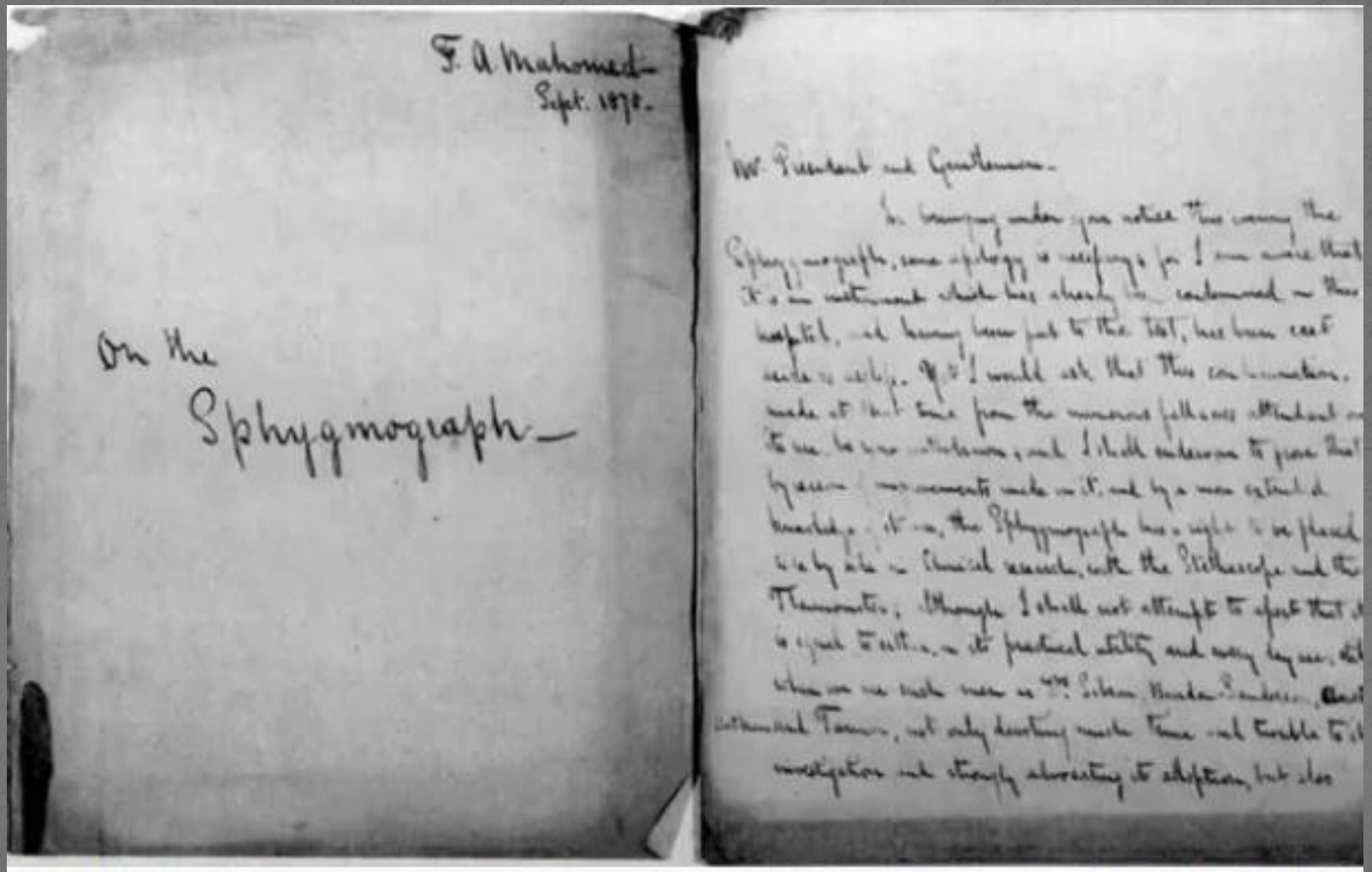
1733: Stephen Hales misura per la prima volta la pressione arteriosa

1827: RICHARD BRIGHT DESCRIVE UNA MALATTIA CARATTERIZZATA DA "POLSO DURO, IDROPISIA, RENI PICCOLI, CUORE IPERTROFICO" *Reports of Medical Cases* (1827) *Guy's Hospital Reports* of 1836.

1855: Karl Vierordt misura la pressione sanguigna rilevando la contropressione necessaria per far scomparire la pulsazione arteriosa



F.A. Mahomed St. Guy Hospital 1871



Akbar Mahomed's presentation to the Pupil's Physical Society at Guy's Hospital in September 1871, in his own hand.

Primi tentativi di misurare la pressione

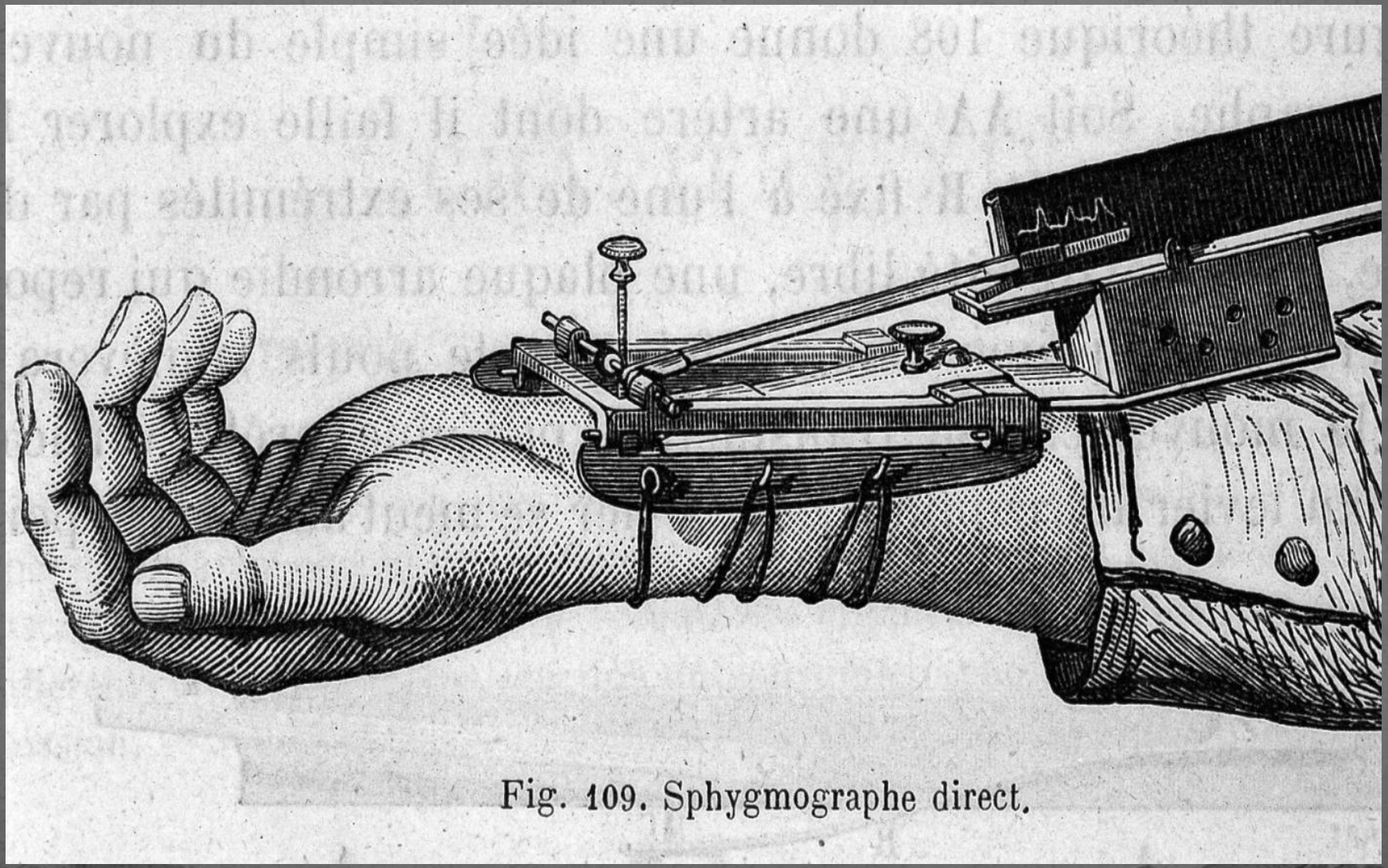
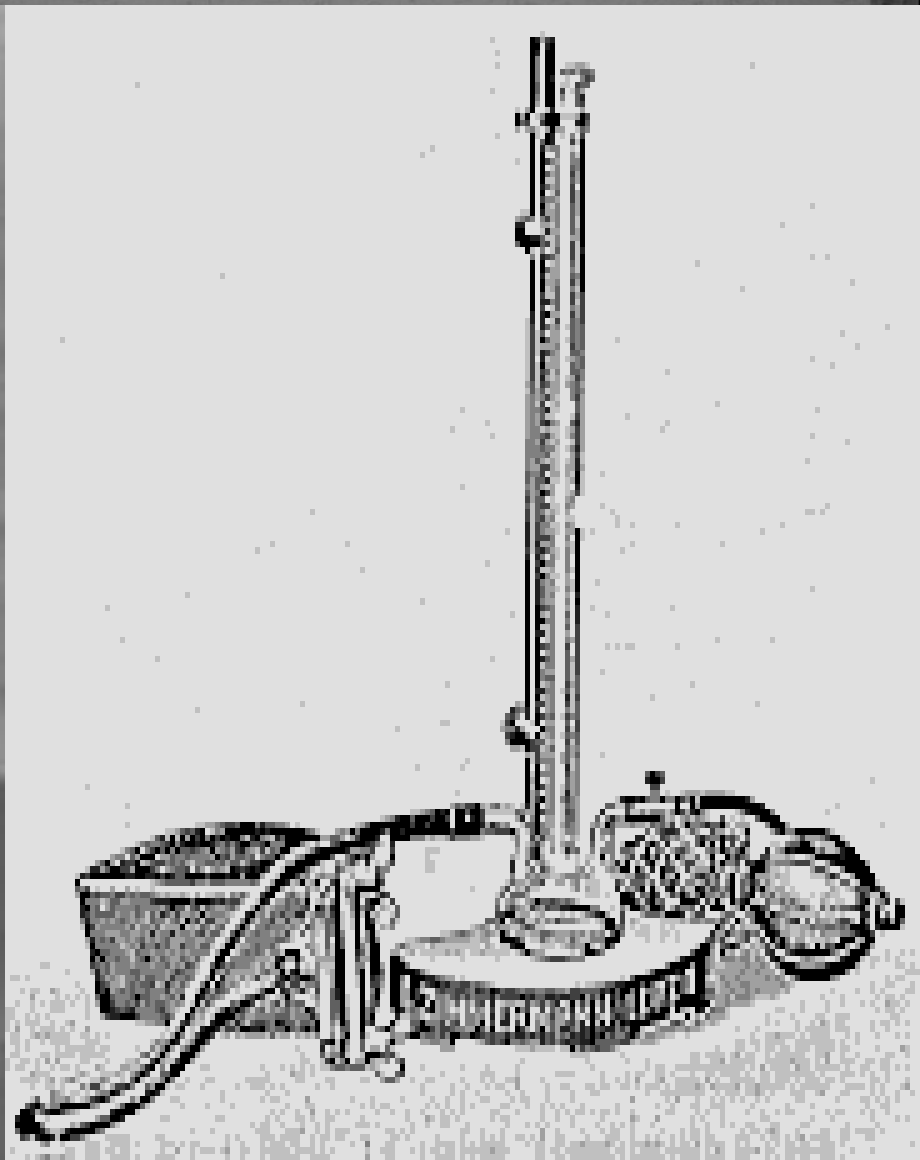


Fig. 109. Sphygmographe direct.

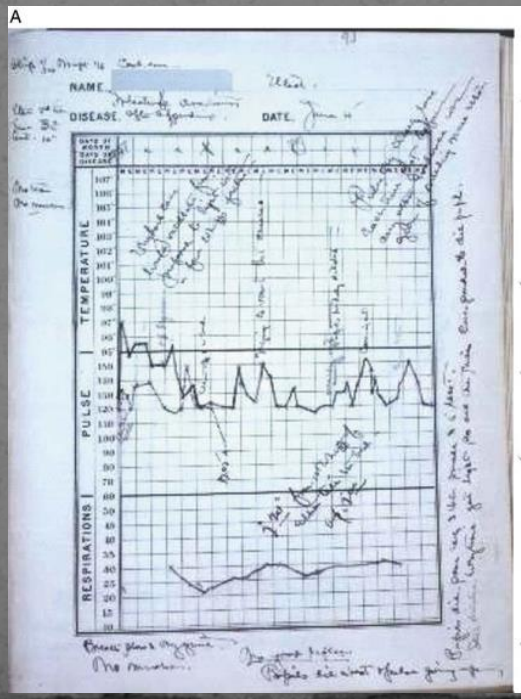
1875: ulteriori tentativi di misurare la pressione arteriosa nell' uomo: Marey e lo sfigmografo digitale; Mosso e l' angioparatlibometro

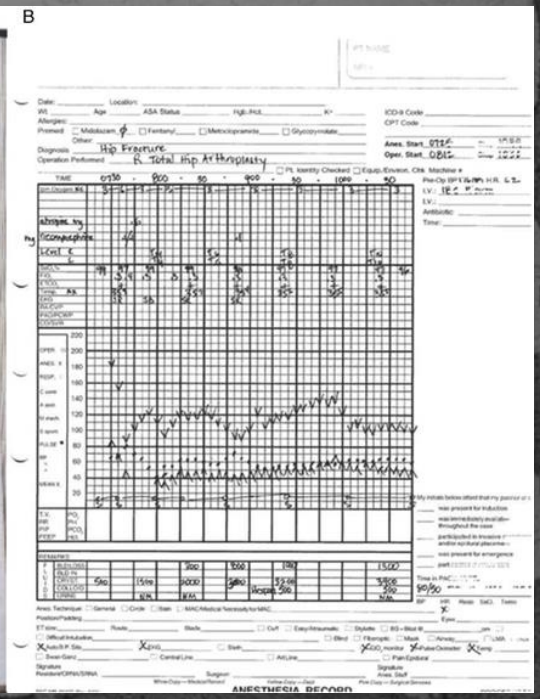
1896: Scipione Riva-Rocci mette a punto lo sfigmomanometro



Harvey William Cushing(1869-1939)

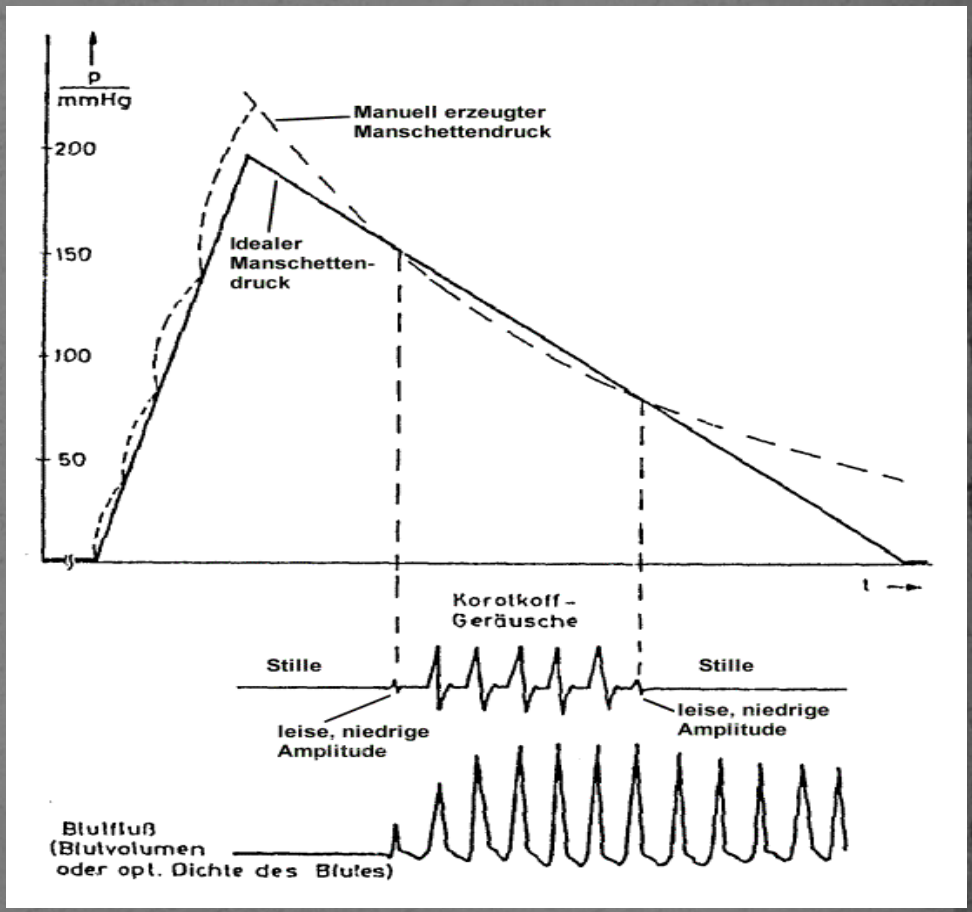
- Lo sfigmomanometro come mezzo di monitorizzazione operatoria (‘***Ether Chart***‘)

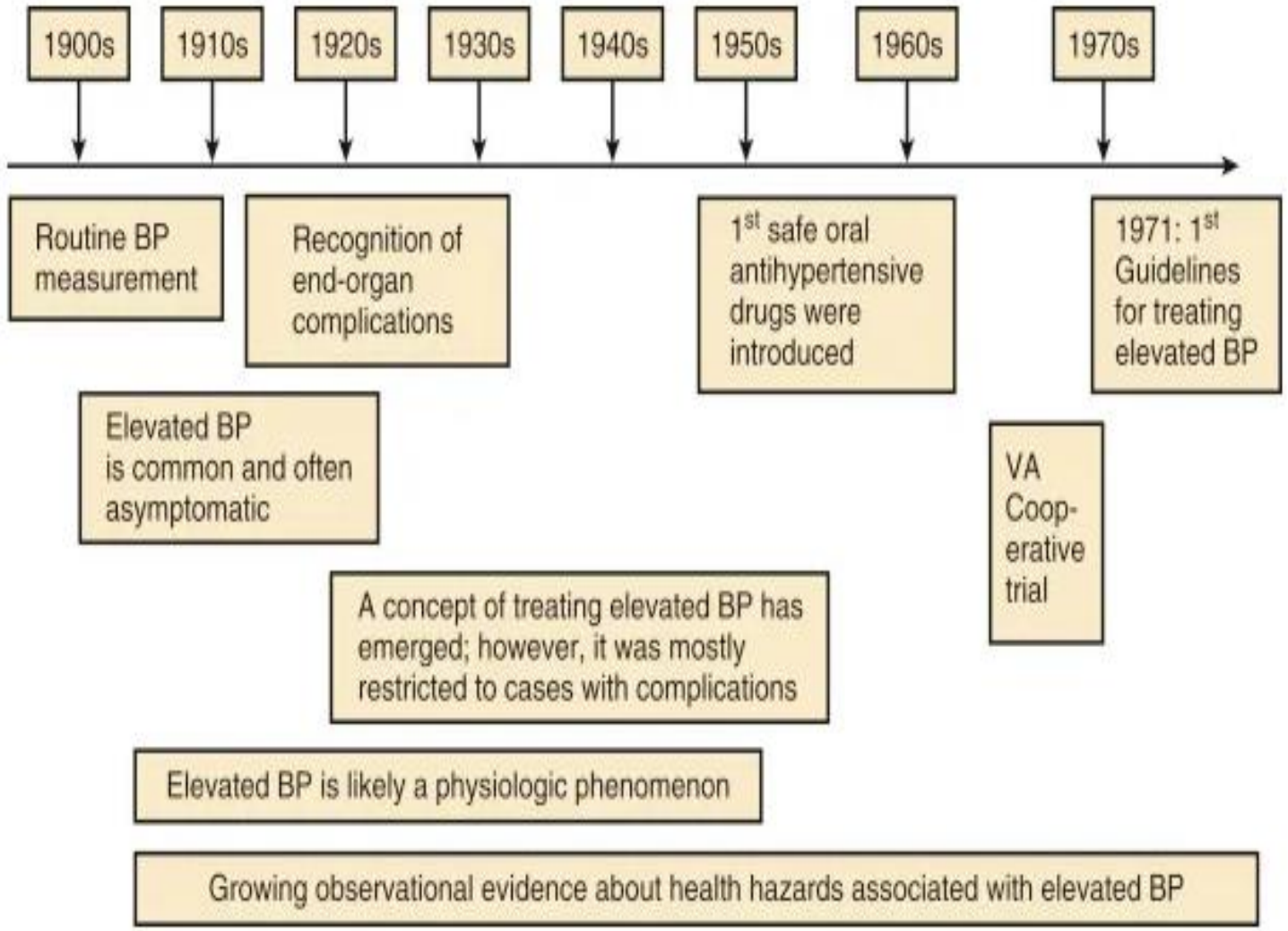




L' ipertensione entra nella storia: Felix Faure 16 febbraio 1899

1905: Nicolai Korotkoff propone di utilizzare lo stetoscopio per auscultare a livello della piega del gomito i toni generati dalla pulsazione arteriosa: viene così misurata oltre alla pressione sistolica anche la diastolica




1900s
1910s
1920s
1930s
1940s
1950s
1960s
1970s
Routine BP measurement
Recognition of end-organ complications
1st safe oral antihypertensive drugs were introduced
1971: 1st Guidelines for treating elevated BP
Elevated BP is common and often asymptomatic
VA Coop-erative trial
A concept of treating elevated BP has emerged; however, it was mostly restricted to cases with complications
Elevated BP is likely a physiologic phenomenon
Growing observational evidence about health hazards associated with elevated BP

SCIENCE

FRIDAY, MARCH 22, 1918.

CONTENTS

MSS. intended for publication and books, etc., intended for review should be sent to The Editor of Science, Garrison-on-Hudson, N. Y.

THEODORE CALDWELL JANEWAY

THEODORE CALDWELL JANEWAY, physician, educator, and medical investigator, was born in New York on November 2, 1872, and died in Baltimore, at the age of forty-five, on December 27, 1917. He was the son of the late Dr. Edward Gamaliel Janeway and his wife Frances Strong Rogers Janeway.

Dr. Edward Gamaliel Janeway, a distinguished consulting internist in New York City, was a man of large experience in medical practise and in medical teaching. Though he published but little, his opinion was highly valued and commanded the respect and attention of the best medical workers in his city and in the country at large. An accurate clinical observer, he laid great stress upon the control of clinical studies in fatal cases by post-mortem examinations. Direct and simple in his methods he attained to unusual proficiency in clinical diagnosis, especially from the standpoint of pathological anatomy. He was rather taciturn, and was scrupulously honest with himself and with others. Like many men who are diffident by nature, he may have seemed outwardly austere when inwardly he was full of human sympathy and affection. Strongly objective in tendency and with relatively little interest in, or patience with, mere theory, he was unwilling to go beyond ascertainable facts, and preferred to confess ignorance rather than to assume a knowledge that he did not possess. His reputation grew with the years, and patients, especially those suffering from rare and puzzling diseases, from all parts of the United States were by their home physicians referred to him for ex-

JANEWAY ON HYPERTENSION

THEODORE CALDWELL JANEWAY (1872-1917)

NATHAN FLAXMAN, M.D.

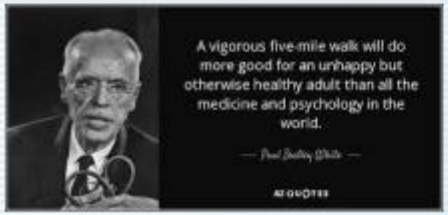
Clinical Associate in Medicine, Loyola University Medical School. Chicago, Ill.

Some men seem to come before their time, do their work before others are capable of understanding the problem, and are taken away too soon and too young. Finally, when the season arrives and the field is ripe for the advance of the work of such an individual, he is no longer among the living. Except for a few, his close students and friends, the importance of his work may have been relegated to the forgotten past. Credit may even be given to others, also hard workers, who reaped the harvest of the seed this man had so carefully sown on a field that was uninviting and non-fertile when he first commenced to plant his ideas. No doubt he sweated profusely in attempts to cultivate and propagate what he had so tenderly laid before his element. Those are the cold facts that every innovator must face squarely, and of all these no one realizes better than himself that time is the most important of all such factors. Time to carry on his work, time to spread his ideas, and time enough to have the work and ideas accepted by his fellow men—these are the invincibles that such a man has to consider calmly every day of his short life.

Theodore Caldwell Janeway, the son of Edward Gamaliel Janeway (1841-1911) and Francis Strong Rogers, was born in New York city on November 2, 1872. His father was considered America's leading clinician, consultant, and teacher of medicine at the turn of the century.

Formal education for young Theodore began at the Cutler School. Then, in 1892, he graduated from the Sheffield Scientific School, Yale. There was no question on the choice of a profession, for he chose to follow in the footsteps of his father. Developing in a home with a highly charged medical atmosphere, young Janeway graduated in 1895 from the College of Physicians and Surgeons of New York city.

- In 1931 Dr. **Paul Dudley White** wrote “Hypertension may be an important compensatory mechanism which should not be tampered with, even were it certain that we could control it”.
- Hay stated “The greatest danger to a man with high blood pressure lies in it’s discovery because then some fool is certain to try and reduce it”. Brit Med J 1931:2;43-47.



- In the **1946 edition of Tice’s Practice of Medicine**, a leading textbook of Medicine in that time Scott advised:

“May not the **elevation of systemic blood pressure be a natural response to guarantee a more normal** circulation to the heart, brain and kidneys, “essential” hypertension…”.

“Overzealous **attempts to lower blood pressure may do no good and often do harm**”

or

“Many cases of essential hypertension not only do not need any treatment but are much better off without it”.

THE BLOOD PRESSURE OF HEALTHY MEN AND WOMEN

BRANDRETH SYMONDS, M.A., M.D.
Chief Medical Director, Mutual Life Insurance Company
NEW YORK

This study is based on the record of risks accepted at standard rates by the Mutual Life Insurance Company of New York for the years 1907 to 1919, inclusive. More than 95 per cent. of the readings were taken by our New York City examiners and our medical referees and their immediate assistants. In the earlier years, no readings were taken except by these examiners, but in the later years a few reports were made by our other examiners in the field. These reports amounted to less than 6 per cent in the year 1919. In the earlier years, most of the readings were obtained by palpation, but since 1915 nearly all of them have been taken by auscultation. The readings were taken while the applicant was seated, and the apparatus was at about the level of his heart. A wide cuff was employed, and in most cases the Tycos manometer.

It is well known that the systolic pressure increases with age and with weight, and also that weight

Pressures below 100 mm. are rare in life insurance. They will usually be found in the very young and thin, and life insurance has shown that the applicant presenting the combination of youth, thinness and a pressure below 100 is prone to tuberculosis. To some extent this holds true also for those having a pressure below 110. Among those who are not young, these low pressures do not seem to be associated with increased mortality. In fact, the mortality ratios indicate that low pressure after age 45 is desirable. This is of great interest, for the average systolic pressure begins to increase decidedly at that age. It would seem that the average pressure runs counter to the best interests of health. In that respect, it resembles weight; for the average weight increases with age, while the lowest mortality after age 45 is found among those who are 15 per cent. lighter than the average weight.

TABLE 2.—SYSTOLIC PRESSURE FOR MEN

Ages	Build Groups 9	8	7	6	0	1	2	3	4	5	All Builds
From 15-19	114	116	120	122	123	125	126	128	130	131	123.5
20-24	117	119	121	122	123	125	126	128	130	131	124.2
25-29	117	120	121	123	124	125	126	128	130	131	124.5
30-34	118	120	121	123	124	126	127	129	131	132	125.1
35-39	118	121	122	123	124	126	127	129	131	132	125.3
40-44	119	121	123	124	126	127	129	130	132	133	126.4
45-49	121	122	125	126	127	129	131	132	134	135	128.2
50-54	123	124	126	128	130	131	133	134	136	137	130.2
55-59	126	128	129	131	133	134	137	138	139	140	133.5
60 and over	128	129	132	133	135	136	138	139	140	142	135.2
All ages....	120.1	122.0	124.0	125.5	126.9	128.4	130.0	131.5	133.3	134.4	127.6

BLOOD PRESSURE IN SIX THOUSAND PRISONERS AND FOUR HUNDRED PRISON GUARDS

A STATISTICAL ANALYSIS *

WALTER C. ALVAREZ, M.D.
ROCHESTER, MINN.
AND
L. L. STANLEY, M.D.
SAN QUENTIN, CALIF.

SUMMARY

Primary hypertension is defined as (*a*) a persistent systolic pressure of 150 mm. of mercury or higher of unknown origin, or (*b*) cardiac hypertrophy of left ventricular type (450 Gm. or more, female; 500 Gm. or more, male) not associated with any disease known to cause hypertrophy. Definite sclerosis of the afferent glomerular arterioles is almost conclusive evidence of hypertension.

On the basis of the clinical course and the manner of death, the 420 cases are arranged in five groups: myocardial insufficiency, 187; coronary sclerosis, 67; encephalic group (hemorrhage and thrombosis), 81; renal insufficiency, 36; miscellaneous (accident and intercurrent disease), 49.

Tabella 1. Studi di follow-up a lungo termine sulla storia naturale dell'ipertensione arteriosa prima dell'impatto della terapia antipertensiva.

		N. of Patients	Years of Observation	Dead %
Top	1919	167	2-5	83
Benni	1926	148	4-5	77
Haman	1928	778	10	78
Blackford	1930	222	6-11	50
Rosling	1934	450	8	30
Freni	1950	418	8-9	32
Mathisen	1954	290	10	33
Beckgaard	1956	1038	16-22	57

NONOSTANTE LE CONOSCENZE E LE SCOPERTE "NON ESISTONO CURE RAZIONALI PER L' IPERTENSIONE"(L.Antognetti 1930)... INFATTI MOLTI PERSONAGGI ILLUSTRI SOCCOMBONO

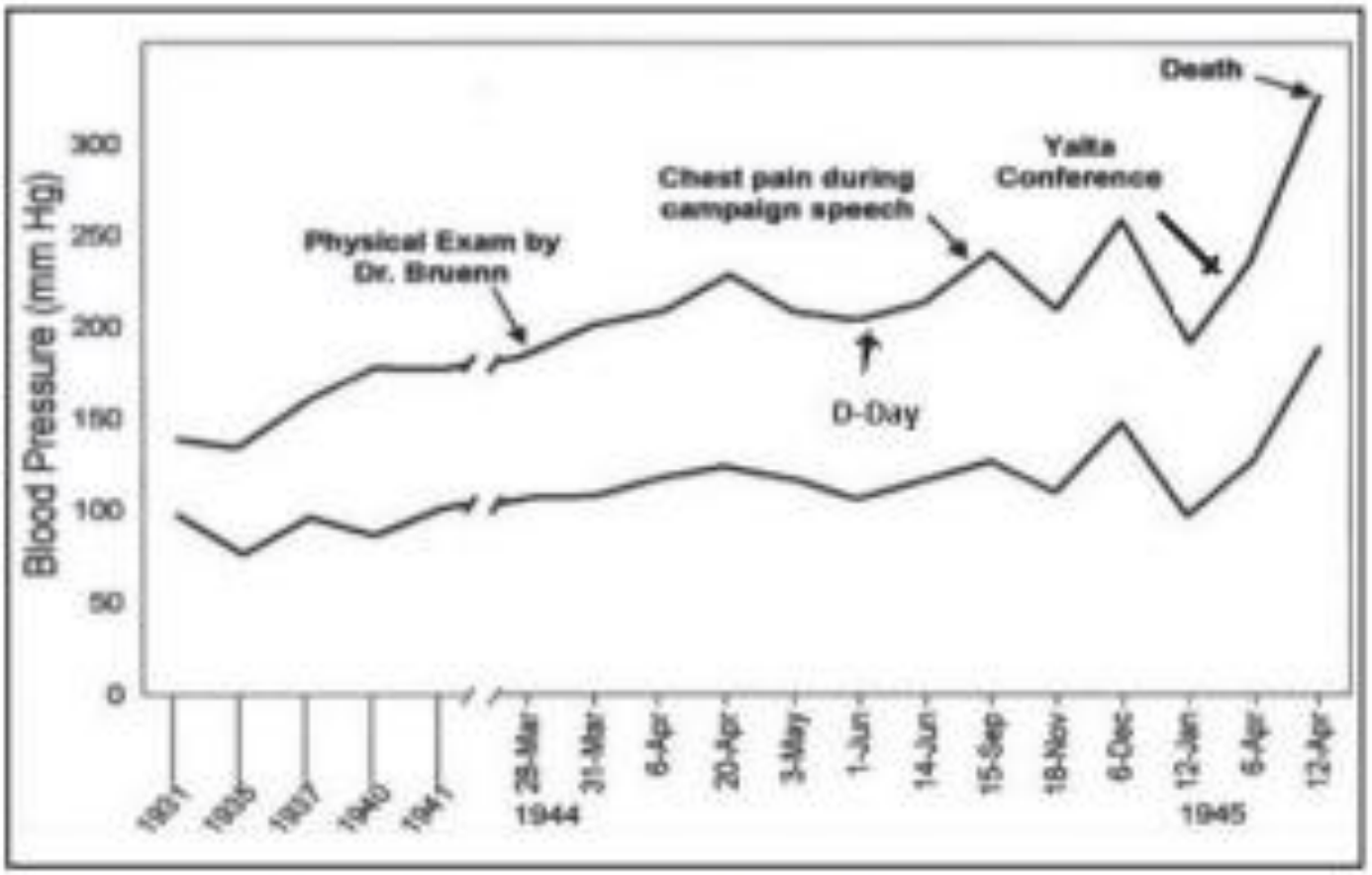


Figura 1. Storia naturale dell'ipertensione in un paziente eccellente: il Presidente Roosevelt.

Name (life dates)	Country	In office	First symptoms	Suspected diagnosis
William H. Taft (1857–1930)	USA	1909–1913	1909	Reversible MCI, sleep apnea, obesity (Table 1)
Woodrow Wilson (1856–1924)	USA	1913–1921	1919	Strokes, mixed dementia
Lenin (W.I. Uljanow) (1870–1924)	Russia	1917–1924	1918	Trauma, strokes, neurosyphilis
Paul Deschanel (1855–1922)	France	1920–1920	1920	Frontotemporal degeneration
Paul Hindenburg (1847–1934)	Germany	1920–1934	1933	MCI
Antonio Salazar (1889–1970)	Portugal	1932–1968	1968	Traumatic hemorrhage
Franklin D. Roosevelt (1882–1945)	USA	1933–1945	1945	Multimorbidity, vascular MCI
Francisco Franco (1892–1975)	Spain	1938–1975	1974	Multimorbidity, Parkinson's disease, MCI, coma
Philippe Petain (1856–1951)	France	1940–1944	1931	MCI, dementia
Winston Churchill (1874–1965)	UK	1940–1945 1951–1955	1953	Depression, strokes
Mao Tse Tung (1893–1976)	China	1949–1976	1971	Amyotrophic lateral sclerosis
Urho Kekkonen (1900–1986)	Finland	1956–1981	1981	MCI, early vascular dementia
Fidel Castro (1926/27–2016)	Cuba	1956–2008	2012	Multimorbidity, AD
Habib Bourguiba (1903–2000)	Tunisia	1957–1987	1980	AD

TABLE 1. LIST OF AVAILABLE ANTIHYPERTENSIVE DRUGS FROM THE 1930s TO THE PRESENT

1930s	Veratrum alkaloids
1940s	Thiocyanates
	Ganglion blocking agents
	Catecholamine depletors (*Rauwolfia* derivatives)
1950s	Vasodilators (Hydralazine)
	Peripheral sympathetic inhibitors (guanethidine)
	Monoamine oxidase inhibitors
	Diuretics
1960s	Central α_2-agonists (sympathetic nervous system inhibitors)
	β-Adrenergic inhibitors
1970	α-Adrenergic inhibitors
	α-β-Blockers
	Converting enzyme inhibitors
1980s	Calcium channel blockers
1990s	Angiotensin II (AT_1) receptor antagonists

January 11, 1958

TREATMENT OF ESSENTIAL HYPERTENSION WITH CHLOROTHIAZIDE (DIURIL)

ITS USE ALONE AND COMBINED WITH OTHER ANTIHYPERTENSIVE AGENTS

Edward D. Freis, M.D.; Annemarie Wanko, M.D.; Ilse M. Wilson, M.D.; et al

» Author Affiliations

JAMA. 1958;166(2):137-140. doi:10.1001/jama.1958.02990020025004

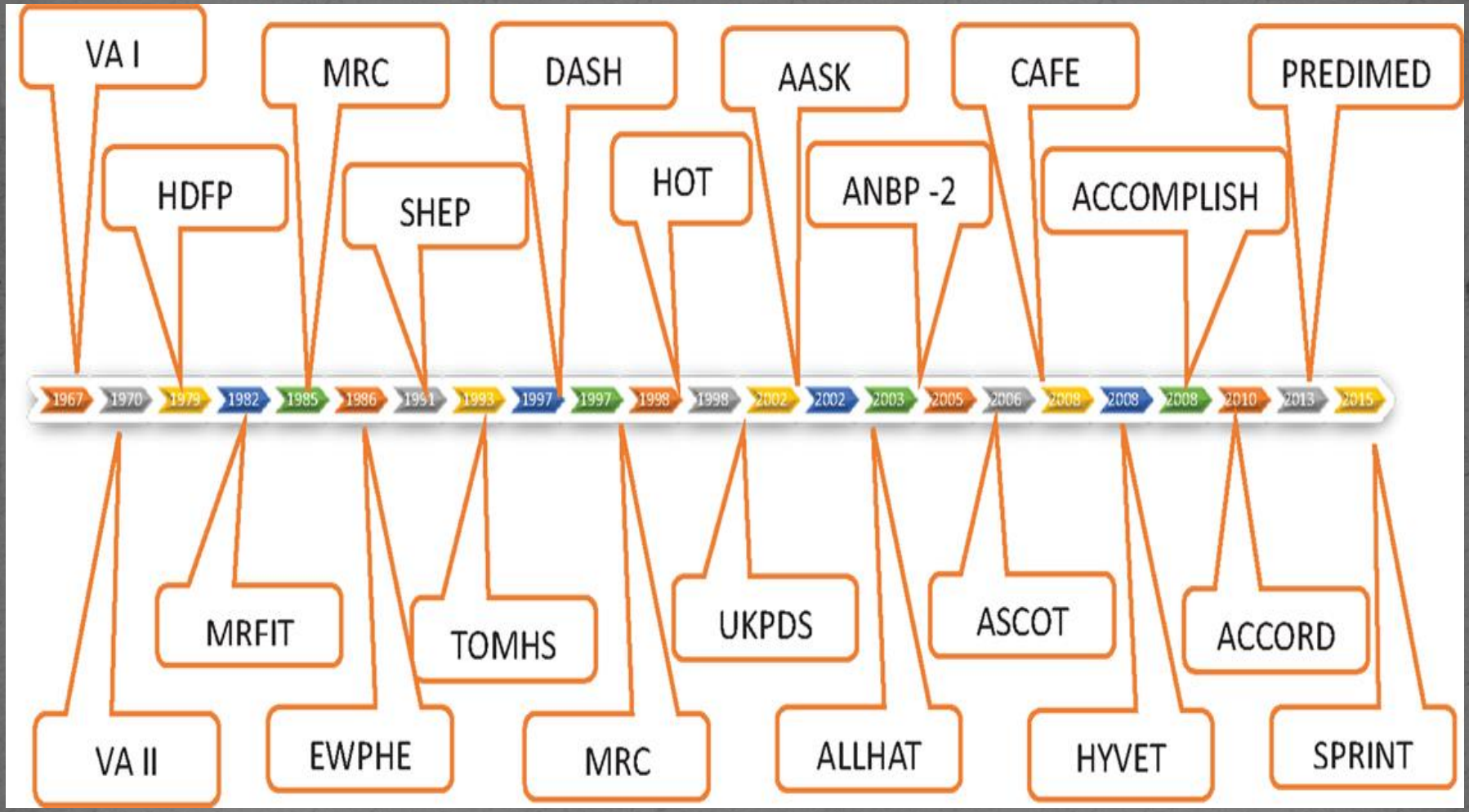
Article

December 11, 1967

Effects of Treatment on Morbidity in Hypertension

Results in Patients With Diastolic Blood Pressures Averaging 115 Through 129 mm Hg

JAMA. 1967;202(11):1028-1034. doi:10.1001/jama.1967.03130240070013


VA I
MRC
DASH
AASK
CAFE
PREDIMED
HDFP
SHEP
HOT
ANBP -2
ACCOMPLISH
1967
1970
1979
1982
1985
1986
1991
1993
1997
1997
1998
1998
2002
2002
2003
2005
2006
2008
2008
2008
2010
2013
2015
MRFIT
TOMHS
UKPDS
ASCOT
ACCORD
VA II
EWPHE
MRC
ALLHAT
HYVET
SPRINT

The sands of time were eroded by the river of constant change (Genesis "Firth of fifth")