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Reason for Consultation: 49 year old male exposed to polyvinyl chloride.

PRESENT CARDIAC ILLNESS:

, a 49 year old maintenance foreman with B.F. Goodrich for 9 years has had some possible exposure to polyvinyl chloride although he thinks it is minimal. By way of evaluation of the cardiovascular systems: The patient states that he has pericarditis, told it was viral in 1957, and spent 28 days at the Veteran's hospital. At the present time the patient describes a left precordial pain which is hard, dull, its crescendo lasting up to 6 hours. It may come on with rest, exertion, sleep and sometimes after meals but is not specifically related to exertional activity. It can radiate into the left shoulder and the left hand and does so usually with severe episodes or approximately 25% of the time. The patient gets short of breath, has dyaphorasis and palpitations and sometimes gets dizzy with blurred vision. Each time the patient has an episode he never gets to a physician in time for any acute EKG. He states he has had numerous EKG's in the past. He had been prescribed nitroglycerin but has never taken any. The patient states the episodes used to occur every two to three months but now occur on a weekly basis. The patient notes shortness of breath, marked with exertion and somewhat minimal with less exertion. He has occasional palpitations and occasional nocturnal dyspnea and orthopnea and occasional dependent edema. There is no history for diabetes, hypertension, cholesterol or abnormal x-ray.

Family history reveals a grandmother and grandfather dying of old age at age 84 and 82. No risk factors for diabetes, hypertension, or heart disease.

Personal history includes smoking of 1-2 pack of cigarettes/day since the age of 15. Alcohol consumption includes beer - six/week; occasional social whiskey. Weight is stable. Allergies are none. Medications include Ornex for sinus disorder. Operations include tonsil and adenoidectomy, appendectomy and sinus operations. Review of systems includes wearing of glasses and sinusitis for head, eyes, ears, nose and throat. Chest is unremarkable. GI, GU, and neuromuscular negative. Patient claims to have had malaria in 1950, 1952, 1953 and 1954. Apparently told all were stemming from the original infectious episode.

Cardiac physical examination: Blood pressure 102/80 standing; 130/80 sitting; 100/70 lying; pulse 72; respirations 15. Head, eyes, ears, nose and throat negative with no funduscopic abnormalities. Neck examination unremarkable. No venous distention, arterial bruits. Normal carotid upstrokes and no thyroid enlargement. Chest revealed prolonged expiration with diminished breath sounds bilaterally and occasional wheezes on expiration. No rales heard. Cardiac examination revealed the PMI to be at the left midclavicular line, fifth interspace. First and second heart sounds were normal. A fourth heart sound was auscultated. There was a grade I-II/VI soft systolic ejection type murmur heard at the left sternal border in the standing position only. No diastolic murmurs or other abnormal heart sounds appreciated. Abdominal examina-

tion unremarkable. No bruits. Extremities - no cyanosis, clubbing or edema. Pulses were 2+ and equal in all extremities.

Cardiac graphics include the following: Electrocardiogram was normal. Holter monitor - episodes of sinus tachycardia. Chest x-ray showed some rude notching of one of the right ribs otherwise normal. Phonocardiogram recorded an intermittent fourth heart sound. Graded exercise test was normal and submaximal. Echocardiogram was normal.

IMPRESSION:

Patient gives a history of pericarditis and malaria in the past and gives a current history of suspicious left precordial chest pain somewhat suggestive of angina although atypical in some features. Patient has been a heavy smoker and cardiac graphics revealed a fourth heart sound recorded intermittently. It is recommended that this chest pain be further evaluated.

FINAL DIAGNOSIS:

ETIOLOGIC: 1) Exposure to toxic agent, polyvinyl chloride.
2) Possible arterialsclerosis.

ANATOMIC: 1) Possible disease of the coronary arteries, arteriosclerosis.

PHYSIOLOGIC: Sinus mechanism with sinus tachycardia.

UNIVERSITY OF LOUISVILLE
Cardiac Function Laboratory
Treadmill Exercise Tolerance Test-Modified Bruce

Number	Name: (last, first, middle initial)	Date of Test		
	- . -	2	25	77

Age: 49 Sex: M Ht: 5'6½" Wt: 158 AHA Classification

Diagnosis: Routine

Medications: None

Protocol: Three minutes walking at each indicated level with blood pressure, heart rate and ventilation as recorded.

	Speed mph	Grade %	Heart Pressure	Heart Rate
CONTROL (Supine)			100/70	77
CONTROL (Standing)			102/80	97
I	1.0	5	140/80	101
II	1.7	10	140/82	120
III	2.5	10	130/75	130
IV	3.4	14	160/70	146
V	4.2	16	175/70	164
VI	5.0	18		
VII	5.5	20		
VIII	6.0	22		

Predicted 85%:
Maximal Heart Rate: 176
Submaximal Heart Rate: 153

Blood Pressure and Pulse Recovery (Supine)

Immediately after	2 minutes after	5 minutes after	8 minutes after
145/70	130/70 125	90/100 115	110/70 115

Patient Attained Cutoff Point of: ____ HR 180, ____ HR 200, ____ Syst. BP 240, ____ Diast. BP 140
____ Significant fall in Blood Pressure, ____ subjective distress, ____ other,
at the end of 1' 15" minutes of Stage VI .
Treadmill duration score (TDS) 16 minutes. 15 sec.

REMARKS:
Control WNL
Immed. No ST ↓
2,5,8 No ST ↓
Monitor No ST ↓

Impression: Submax stress test
Normal test

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BFG66460

[signature] MD

M. D.

UNIVERSITY OF LOUISVILLE SCHOOL OF MEDICINE
Graphics Laboratory

NAME _____ DATE 2-25-77 HOSP. LOC. _____

AGE: 49 MEDS. None CLINICAL DX. _____

HOSP. NO. _____ NYHA CLASS _____ REF. PHYS. _____

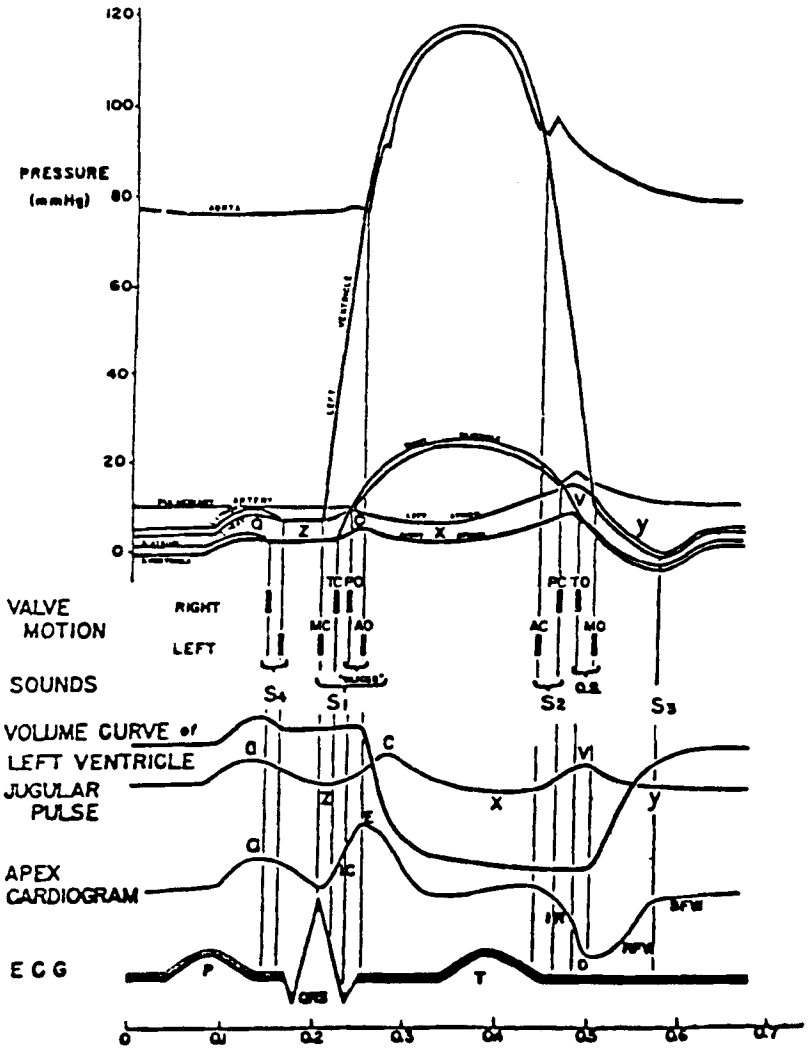
Interpretations: (ACG, PCG, JVP, CPT)

JVP - Normal
CPT - Normal
PCG - S4 [illegible] intermittantly at LLSB, LLD
ACG - not recorded

Impression:

[illegible] M.D.

M.D.



Intervals	Normal Range	Patient
Heart Rate	60–100/m.	110
PR	0.12–0.20 sec.	.16
A_2 P_2	0.01–0.04	.03
A_2 OS	<0.06 (severe) >0.09 (mild)	
Q-1	0.03–0.07	.05
A_2 -S_3	0.10–0.20	
Ejection Time	0.28–0.34	.25
U. Time	0.05–0.11	.08
t Time	0.02–0.04	.04

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BFG66461

Section of Cardiology, Department of Medicine
University of Louisville School of Medicine
Louisville General Hospital

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ECHOCARDIOGRAPHIC STUDY

Name _____ Age 49 Sex M Room # ____ Hosp. # _____

Diagnosis: _____ Ht. ___ Wt. ___ B.S.A. _____

Referred by Dr. _____ Date _____

	NORMAL RANGE	TEST RESULTS
RVD	0.7 - 2.4	3.3 (LLD)
RVD INDEX	0.3 - 1.1	-
LVID	3.7 - 5.4	4.8
LVID/M^2	2.27 - 3.03	-
Posterior wall thickness	0.8 - 1.1	0.8
Septal wall thickness	0.7 - 1.2	1.0
LAID	1.9 - 3.8	3.0
Aortic outflow	2.0 - 3.7	3.8
Aortic valve dimension	1.6 - 2.6	2.0
Pericardial effusion?		None
Mitral valve velocity D.C.R.	80 mm/sec. - 150 mm/sec.	72
Mitral valve excursion	over 20 mm or 2.0 cm	2.0

COMMENTS: Normal

INTERPRETATION:

[redacted] M.D.

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