

PLAINTIFF'S
EXHIBIT
DUP-2181

CLINICAL RECORD

CONSULTATION SHEET

REQUEST

FROM: (Requesting word, lab, or agency)

DATE OF REQUEST

EXAMINER'S INSTRUCTIONS

EXAMINER'S COMMENTS (Include findings and readings)

EXERCISE PHYSIOLOGY

EQUIPMENT LIST:

... on an electromechanical cycle ergometer	Avionics valve
... and Metabolic Measurement Cart	Beckman valve
... dry gas meter	Modified Otis-McKerron valve
... mass spectrometer	Neoprene bags
... oximeter	E.C.G. by H-P
... digital pneumotach	Mine Safety monoxo,zer

Incremental work rates to maximum tolerance; increments were 100 Kilogram-meters per minute, work rate was incremental each minute.

Sub maximum work rate, 6 minutes each

100	400	600	800
300	500	700	900

PATIENT COOPERATION:

Good

SUBJECTIVE OBSERVATION:

☒ legs weak ☐ chest pain ☐ shortness of breath ☐ dizzy
☐ weak ☐ Other

COMMENTS: Initially submaximal constant workrate tests of 200 and 400 kilogram-meters per minute were performed. Observations made during the 5th and 6th minutes of these tests, with an established physiologic steady state, revealed excessive ventilation, excessive respiratory frequency and abnormally low respiratory exchange ratio. Cardiac frequency was normal. The low respiratory exchange ratio was consistent with excess ventilation and partial depletion of body CO₂ stores prior to initiation of exercise.

Just before incrementing the workrate to determine maximum O₂ consumption the patient was again asked to pedal 4 minutes at 200 kg-m/min followed by a 5th minute at 300 kg-m/min and a 6th minute at 400 kg-m/min. Of interest is that ventilation and breathing frequency fell significantly compared to that seen during the initial submaximal testing at 200 kg-m/min. This suggests psychogenic rather than physiologic mediation of the excessive ventilation.

Ventilation and respiratory frequency were increased relative to oxygen consumption and tidal volume was abnormally reduced. The heart rate was normally matched to oxygen consumption. Arterial blood oxygen saturation as estimated by ear oximetry was 96% resting and 96 to 97% throughout exercise. This was a normal response. He achieved an oxygen consumption of 2000 ml per minute (the predicted value is 2,568 with a normal range of 1,768 to 3,368 ml per minute). He expended only 53% of his breathing capacity (35 X 3.0 = 136.5 liters per minute) and 84% of cardiac chronotropic capacity. An arterial blood gas drawn within 2 seconds of cessation of maximal exercise revealed metabolic acidemia, PaO₂ 97, P_aCO₂ 4, pH 7.41, bicarbonate 21.

SIGNATURE AND TITLE

MEM

DATE

IDENTIFICATION NO.

ORGANIZATION

MARKENBERG, M.D.

6/24/81

PULMONARY FUNCTION LABORATORY

PATIENT IDENTIFICATION (For typed or written entries (give Name, sex, Age, include grade, date, hospital or medical facility))

REGISTER NO.

WARD NO.

CONSULTATION SHEET

Standard Form 513
513-100

DUP 0933930

DU 036485

The patient indicated that tiredness of his legs kept him from continuing the incremental exercise load. This is consistent with lack of specific training and conditioning for the task of pedaling a cycle against increasing resistance.

- Impressions:
- 1) Normal tolerance of heart and lungs to exercise i.e. normal aerobic capacity.
 - 2) While neurogenic stimuli from a diseased lung may cause excessive ventilation the tendency demonstrated here is more consistent with psychogenic hyperventilation.

McKendree E. McNabb
MCKENDREE E. MCNABB, M.D.
Medical Director

DU 0933931

DU 036486