

JUN 8 1951

Polio-myelitis

Effect of Cortisone on Infection Produced
by Strains of Low Virulence in Rhesus Monkeys.

Purpose - Since cortisone was found to increase the incidence of paralysis and case fatality rate in hamsters inoculated with 100 mouse LD₅₀ of Lansing virus, it became desirable to know whether it would also work in monkeys under various circumstances. The circumstance tested in this experiment is the infection produced by strains of recent human origin of low virulence in monkeys - i.e. low titer, long incubation periods, or high incidence of nonparalytic infection

Strains of Virus Used and Dosage

The Hopping, Petty, and Vaughan strains Gen II in rhesus monkeys were used and are described on separate page.

Rhesus Monkeys Used - Arrived from Okatie Farms June 4.

All in good condition. Weights ranged from 3 1/2 to 6 1/4 lbs but the mode was ~~for~~ 4 to 5 lbs.

See separate sheet with weights of individual monkeys. 5 monkeys ~~are~~ untreated and 5 monkeys with cortisone for each strain.

Cortisone Used: Saline suspension of "cortone acetate, Merck" 25 mg per cc; contains added suspending agents and 1.5% benzyl alcohol as preservative. Lot No. 1398 - Sent by Molitor & Shope.

Dosage - 1 cc (25 mg) intramuscularly on June 10. day before virus (and then as indicated) - 25 mg just before virus on June 11

(over)

Cortisone
6-8-51

VIRUS STRAIN AND DOSE	TREATMENT	Rhesus No.	WEIGHT		Result Par. Score
			Original		
[REDACTED] 1cc of 1:10	UNTREATED	2033	1.930		0
		2034	2.270		0-2 NP
		2035	1.930		10
		2036	1.818		NP (D17)
		2037	1.818		13
[REDACTED]	CORTISONE	2038	1.818		P ₁₀ (3.5) 10 D ₁₄
		2039	2.045		P ₁₇ (4) 17
		2040	1.703		0-2 NP
		2041	1.703		0
		2042	2.045		P ₁₁ (10) 11
[REDACTED] 0.5cc of 1:100	UNTREATED	2043	2.045		P ₁₉ D ₂₆ (10) 19, D ₂₆
		2044	2.270		0
		2045	1.703		P ₁₉ - sl. transit (0.5)
		2046	2.045		P ₁₇ 2 17
		2047	2.045		NP average 4
[REDACTED]	CORTISONE	2048	2.497		P ₁₄ (6) 14
		2049	1.589		P ₁₄ (3) 14
		2050	2.045		P ₁₀ (10) 10
		2051	1.818		P ₁₀ (6) 10
		2052	2.045		P ₁₃ (10) 13 average 7
[REDACTED] 0.5cc of 1:100	UNTREATED	2053	1.589		NP
		2054	2.838		0
		2055	2.384		0
		2056	1.818		NP
		2057	2.045		25 (4) 25
[REDACTED]	CORTISONE	2058	1.589		P ₁₃ (3) 13
		2059	1.930		0
		2060	1.703		P ₁₀ (4) 10
		2061	2.045		P ₁₁ (4) 11
		2062	2.157		0

All strains - Controls = 6/15 - av. incub. period = 17.2 days

Paralytic

Cortisone = 17/15 - " " = 11.6 "

Total
NP + Par

Controls = 10/15
Cortisone = 11/15

Strains of Virus to be Used in Experiment
with Cortisone

Cinci

Virus - Gen II (pool of 128 + 1687) of 3-11-48

This material given as 1cc of 20% susp
produced nothing in 14 days in each
of 2 monkeys and upon reinoculation
in same dose produced paralysis
24 days after 1st inoculation in
each of 2 monkeys.

Use 1cc of 10% susp.

Akron

virus - Gen II (141 + 159) of 3-9-48

On 4-25-48, 0.5cc of 10^{-2}
yielded P₁₁, + 2 nonpar.

0/3 on 10^{-3} + 0/3 on 10^{-4} and 10^{-5}

Use 0.5cc of 10^{-2}

Cinci

virus - Gen II (147 and 1754) of 3-9-48

On 5-14-48 (Amp. 3 used - 20%)

0.5cc of 10^{-2} - P₂₀, Nonpar (recent), 0/3
10⁻³ - 0/3
10⁻⁴ - 0/3
10⁻⁵ - 0/3

Use 0.5cc of 10^{-2}

2630

336

2294

RHESUS MONKEY WEIGHTS

JUN 7 1951

RH MONKEY NUMBER

WEIGHT IN POUNDS

WEIGHT IN KILOS

June 12

2033	4 1/4	-216	1.930	1714
2034	5	-116	2.270	2154
2035	4 1/4	-162	1.930	1824
2036	4	-238	1.818	1580
2037	4	-134	1.818	1684
2038	4	-144	1.818	1574
2039	4 1/2	-145	2.045	1900
2040	3 3/4	-178	1.703	1424
2041	3 3/4	-158	1.703	1545
2042	4 1/2	-145	2.045	1900
2043	4 1/2	+69	2.045	2114
2044	5	-10	2.270	2260
2045	3 3/4	-58	1.703	1564
2046	4 1/2	-75	2.045	1970
2047	4 1/2	-135	2.045	1910
2048	5 1/2	-217	2.497	2280
2049	3 1/2	+6	1.589	1595
2050	4 1/2	-54	2.045	2050
2051	4	-88	1.818	1730
2052	4 1/2	+25	2.045	2070
2053	3 1/2	-20	1.589	1569
2054	6 1/4	+76	2.838	2914
2055	5 1/4	+32	2.384	2364
2056	4	+56	1.818	1874
2057	4 1/2	+69	2.045	2114
2058	3 1/2	+65	1.589	1654
2059	4 1/4	+154	1.930	2084
2060	3 3/4	+1	1.703	1704
2061	4 1/2	-81	2.045	1964
2062	4 3/4	+137	2.157	2294

These monkeys arrived from Okatie Farms on June 4, 1951 and have been chained since June 5, 1951

6/12/51

Note

- The weights on June 7 were crude $\pm 1/4$ lbs and were not all checked. Furthermore they were weighed in the afternoon shortly after they had been fed.

On 6/12, they were weighed at noon before they had food or water - on an accurate balance ± 5 gm.

(over)

Weights of Monkeys on Cortisone Experiment

Weighed 11 AM - 12 noon - before food or water - on accurate balance

Rhes. No.	6-12-51	6-15-51	6-18-51	6-21-51	6-25-51
2033	1714	(-9) 1705	1740	1873 OK	1860
2034	2154	+116) 2270	2251	2153 NP	2060
2035	1824	+20) 1844	1931	2007 P6/11	1988
2036	1580	+70) 1650	1475	1428	1206 24/16
2037	1684	+22) 1706 +44	1694	1775 P6/24	1738
2038	1574	-124) 1450	-1296	1214	
2039	1900	+60) 1960	-1819	1875	1700
2040	1424	+91) 1515	+1541	1606	1651
2041	1545	+85) 1630	-1571	1692	1682
2042	1900	+137) 2037 +56	-2021	-2000	-1787
2043	2114	+36) 2150	1967	1947	2011
2044	2260	+127) 2387	2392	2458	2356
2045	1564	+105) 1669	1696	1673	1695
2046	1970	+97) 2067	2032	2041	2003
2047	1910	-30) 1880	1936	2002	2030
2048	2280	+83) 2363	2291	2400	2250
2049	1595	+39) 1634	1582	1803	1812
2050	2050	+100) 2150	2133	2143	1842
2051	1730	+37) 1767	1727	1715	1592
2052	2070	-53) 2017	1967	2018	1902
2053	1569	1696	1651	1723	1648
2054	2914	2980	2787	2805	2945
2055	2364	2420	2373	2550	2473
2056	1874	1977	1928	2122	2021
2057	2114	2189	2203	2230	2316
2058	1654	1720	1732	1741	1784
2059	2084	2140	2083	2128	2043
2060	1704	1742	1796	1730	1616
2061	1964	1986	1908	1997	2033
2062	2294	2375	2211	2268	2174

Rhes. No

7-9-51

20 33

20 34

20 35

20 37

20 39

20 40

20 41

20 42

20 44

20 45

20 46

20 47

20 48

20 49

20 50

20 51

20 52

20 53

20 54

20 55

20 56

20 57

20 58

20 59

20 60

20 61

20 62

2082

2335

2130

1821

1882

1792

1780

1547

2411

1780

1780

2230

2114

1794

1755

1541

1667

1930

3080

2615

2058

2405

1682

2180

1785

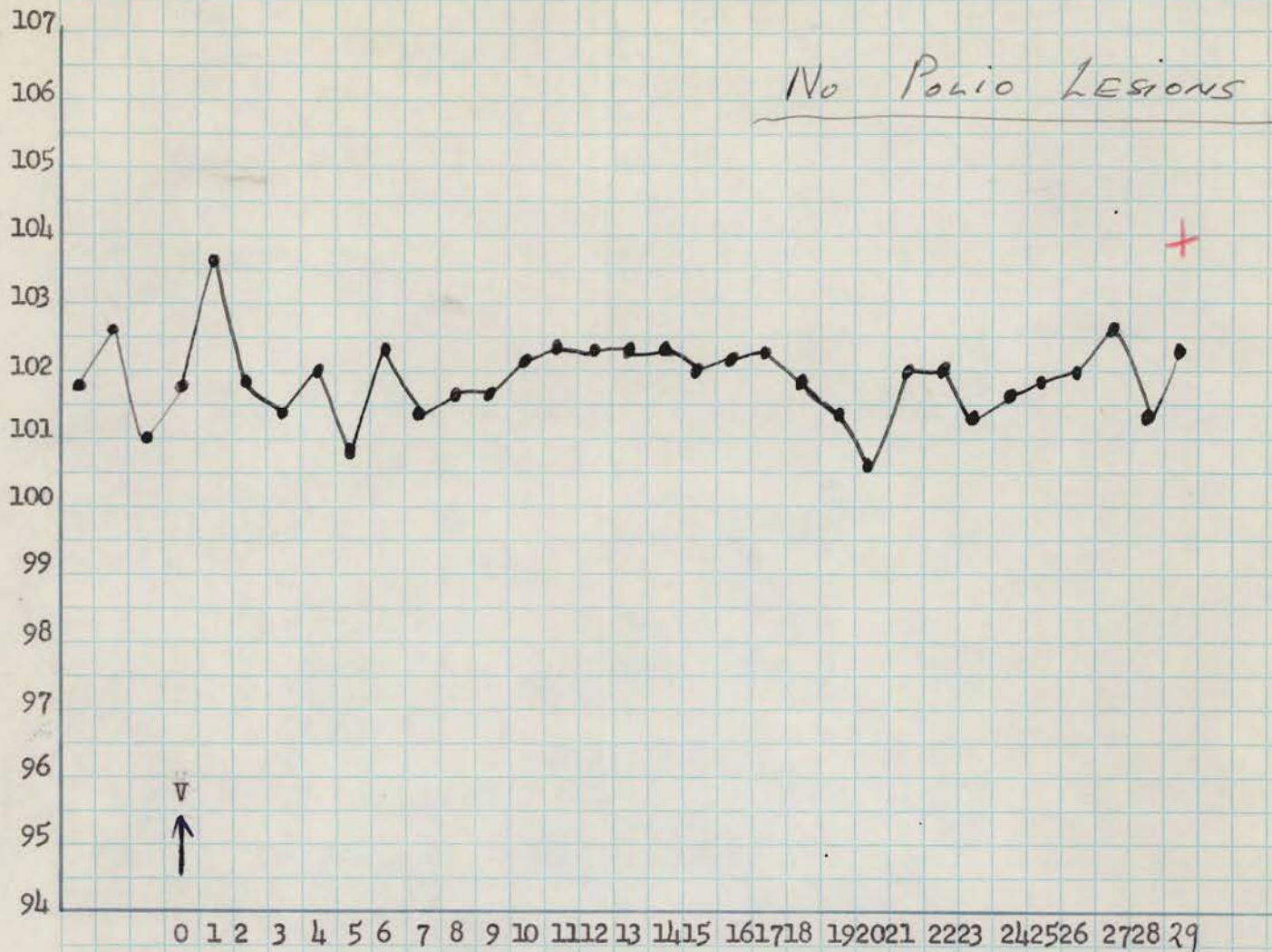
2030

2325

Rh 2033

Virus, loc of 1:10

Control



JUNE 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30/1 2 3 4 5 6 7 8 9 10

6-22 - 10:30 A.M. Blood taken for K determination (control
for 2038)

7/9/51 -

OK

7/10/51 -

Sacrificed

CNS in 2 A

Rh 2034

Virus, tcc of 1:10

Control

107
106
105
104
103
102
101
100
99
98
97
96
95
94V
↑

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30/1 2 3 4 5 6 7 8 9 10

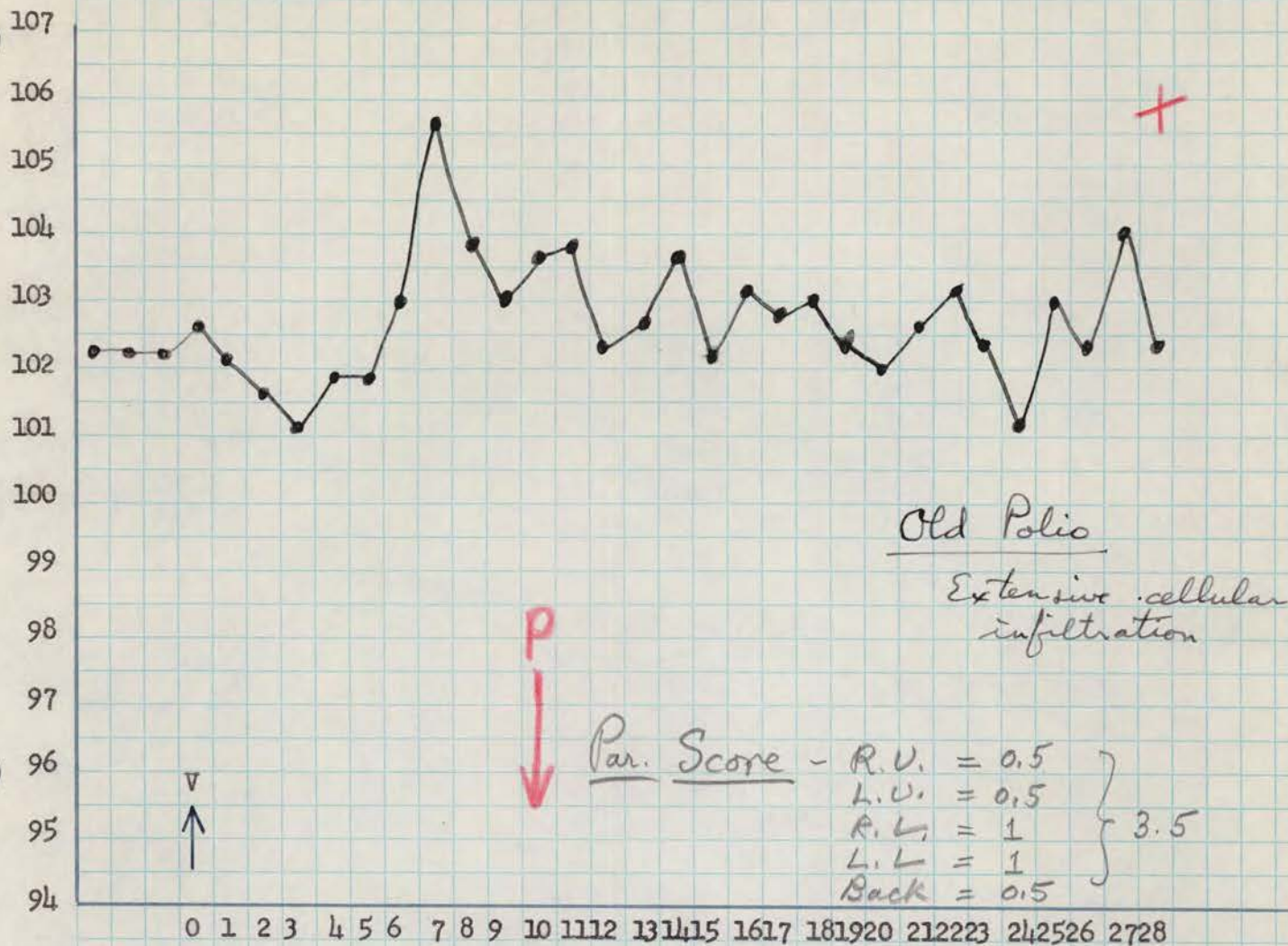
7/9/51 - OK
7/10/51 - Sacrificed

CNS in 2A

Questionable N.P.
Lesions limited to midbrain
and hypothalamus

+

No LESIONS IN
24 levels of spinal cord
3 of medulla
1 of mid brain
Focus of interstitial
infiltration in:
1 Midbrain - near ^{sup. collic}
~~hypothalamus~~



June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30/1 2 3 4 5 6 7 8 9

6/21/51 - AM - Partial Paralysis of lower; weak upper.
5 PM - Same. Sits up.

6/22/51 - AM - Marked Paralysis of lower; Partial Paralysis of upper. Sits up

6/23/51 - AM - Same

6/24/51 - AM - Partial Paralysis of upper & lower; sits with difficulty.

6/25/51 - AM - Same

PM - Partial Paralysis of lower only, use upper ^{fairly} well, sits up well

6/26/51 - AM - Same

6/27/51 - AM - Same

6/28/51 - AM - Same

7/2/51 - AM - Partial Paralysis of lower; sits up.

7/4/51 - AM - Same

7/9/51 - Partial Paralysis of lower; very active; stands up & hops around.
S acipied

CNS in 7A

Focal Neuronal Polio Lesions

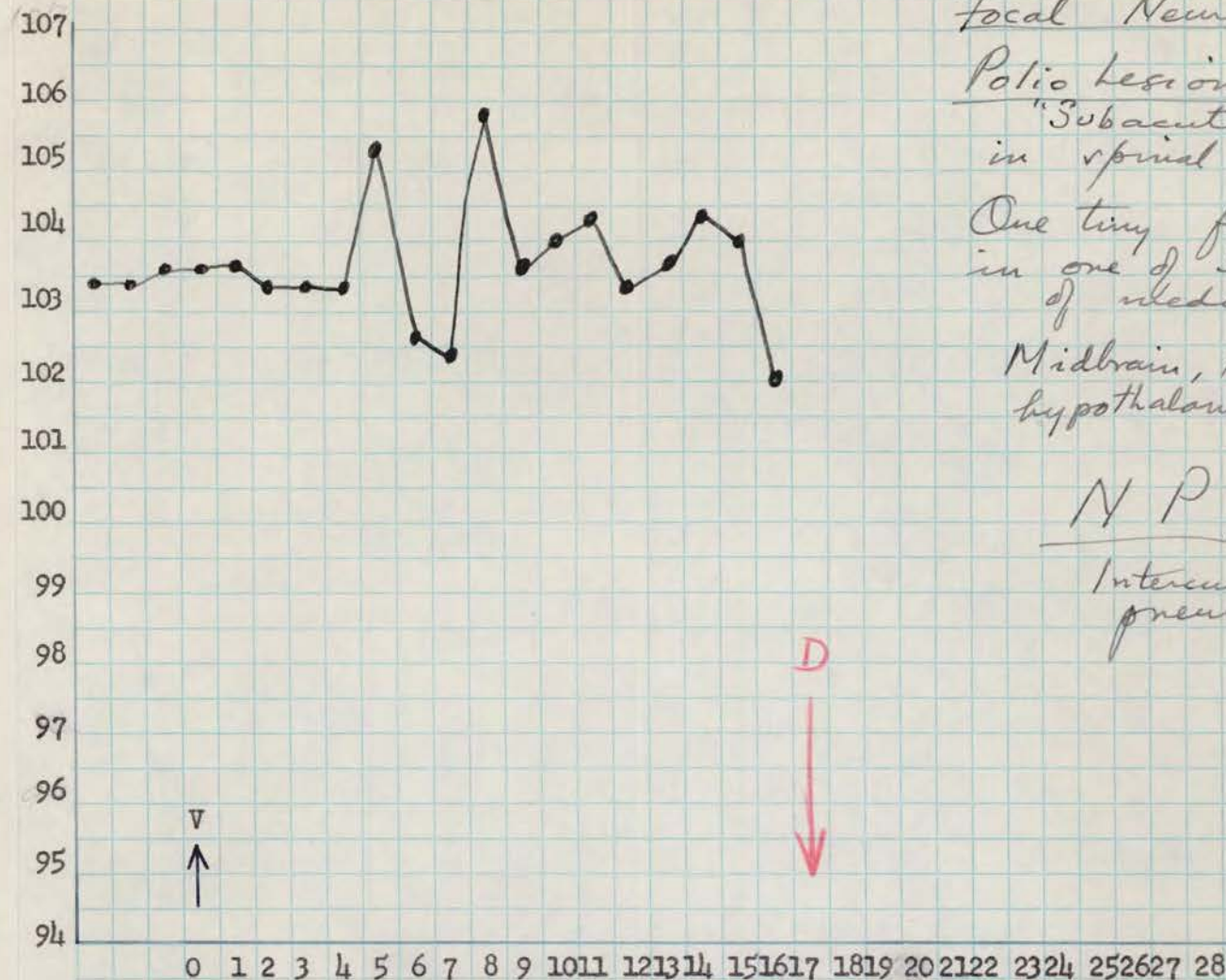
"Subacute"
in spinal cord

One tiny focus
in one of 3 levels
of medulla.

Midbrain, thalamus,
hypothalamus - neg.

N P

Intercurrent
pneumonia



June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 / 1 2 3 4 5 6 7 8 9

6/25/51 - Am - ? Slight partial paralysis of lower; weak upper;
Can not run or climb; holds on poorly.

Pm - Scrawny monkey; generally weak, but can not
make out definite paralysis

6/26/51 - Am - Lower especially weak; this easily.

6/27/51 - Am - Same

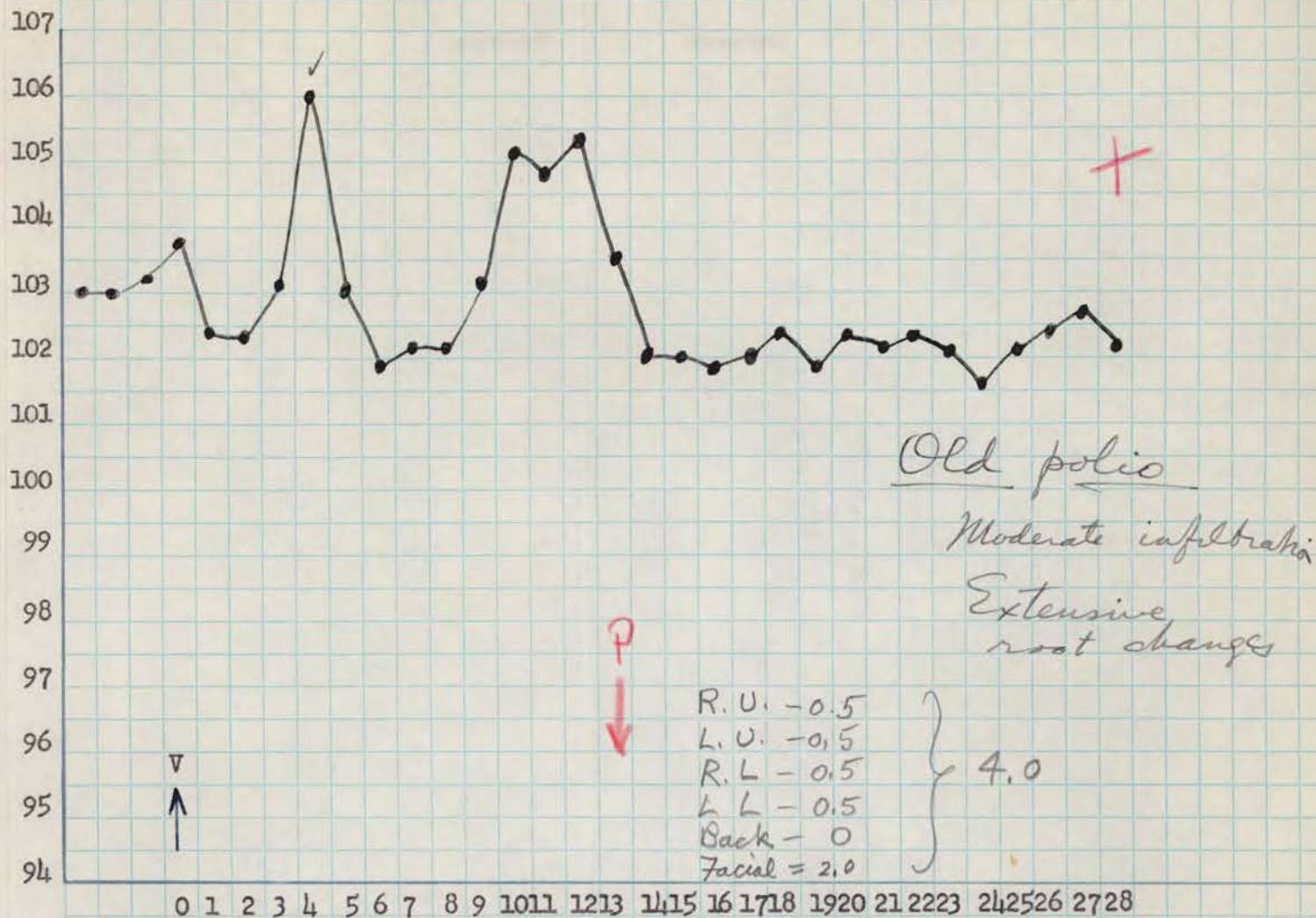
Pm - Generally weak; lies down, but can sit up.
Can not make out paralysis of any one extremity.
No drooping but appears very dejected.

6/28/51 - Am - Found dead, in rigor.

Autopsy - Pneumonia

Ashenals weighed 0.64 gms

CNS in 2A



June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30/1 2 3 4 5 6 7 8 9

6-24-51 Partial paralysis uppers - cannot climb
Complete right facial paralysis
6-25-51 AM - Partial paralysis of uppers; slight paralysis of lowers;
right facial paralysis.
PM - Same except for weak lowers.
6-26-51 - AM Partial paralysis of uppers + lowers, rt. facial; sits up
6-27-51 - AM - Same
6-28-51 - AM - Same
6-30-51 - PM - Same - Hops around
7-2-51 - AM - Partial paralysis of uppers + lowers; rt. facial; hops.
7-4-51 - AM - Same
7/9/51 - - Rt. facial paralysis remains; slight partial
paralysis of lowers; gets around + ~~and~~ Clinics
using upper of trunk stris.
Sacrificed

CNS in 2A

6/23/Am - Prostrate, diarrhea, head alert.

6/24/51 - Am. Prostrate; Can barely move extremities, appears to be paralyzed; head still alert.
Could not eat; drank water, however.

Legs held in flexion - flaccid - moves tail
Moves arms, although they are very weak

Stays in frog position - head up alert

Dehydrated + diarrhea still present -
urinated "considerable" amount while under observation.

50cc of 1% KCl given subcutaneously
at 11:45 AM.

2:30 P.M. - Clysis completely absorbed

Paralysis same

Conclusion - paralysis not due
to loss of potassium

6/25/51 - Am. found dead

Lungs and heart - OK.

Liver - small - but gall bladder very markedly
enlarged and full of bile.

Intestines - not inflamed - few mesophagostomum

Spleen - small.

Adrenals - appear enlarged - both weighed
0.862 gms

Stomach - markedly distended with gas
small amount of fluid present

CNS + adrenals in Z.A.

Rh 2041

Virus, lee of 1:10

Cortisone



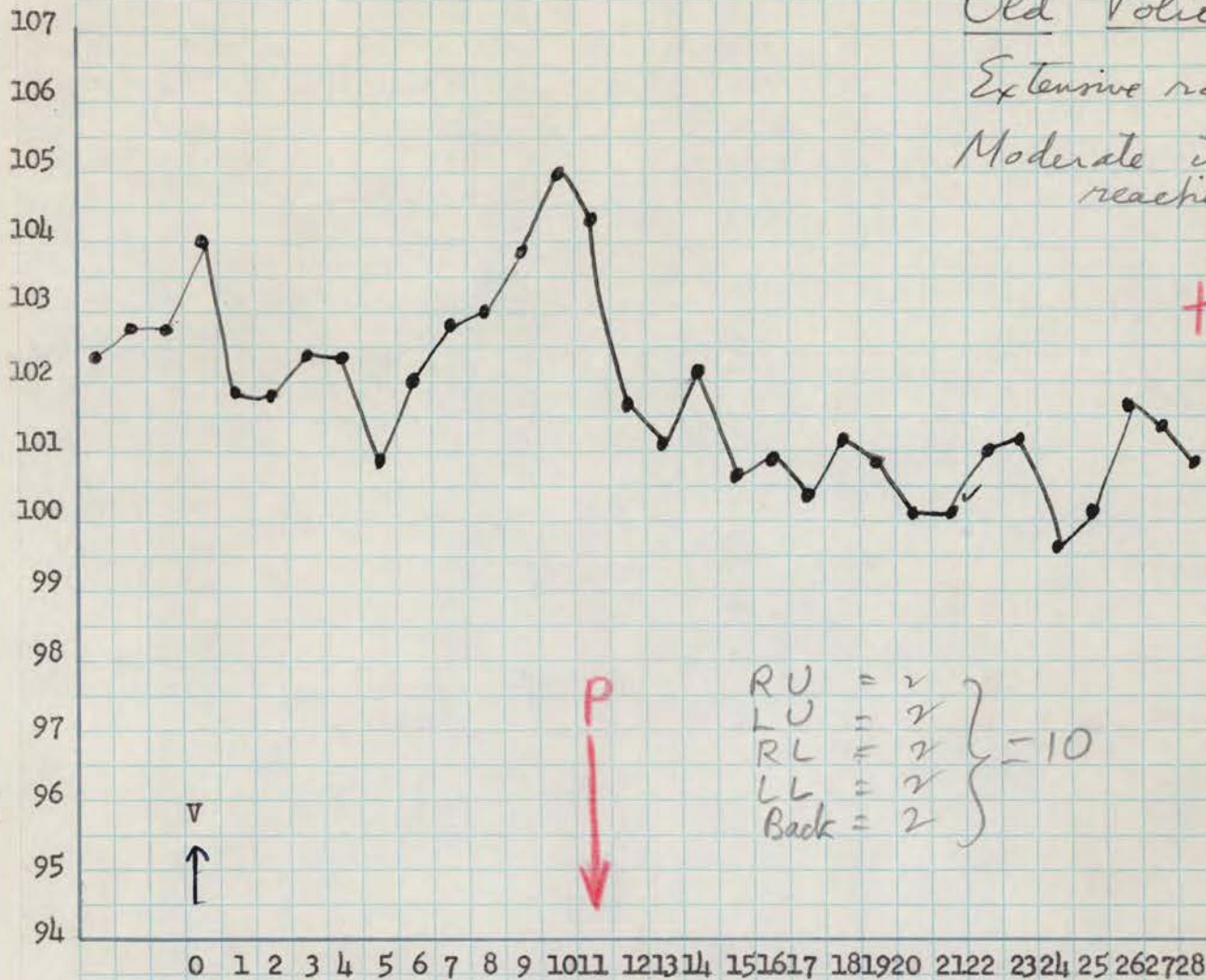
June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30/1 2 3 4 5 6 7 8 9 10

Cortisone

25 25 25 25 25 25 25 25 25 25 25 25 25

7/9/51 - OK
7/10/51 - Sacrificed

CNS in 2A



June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30/1 2 3 4 5 6 7 8 9

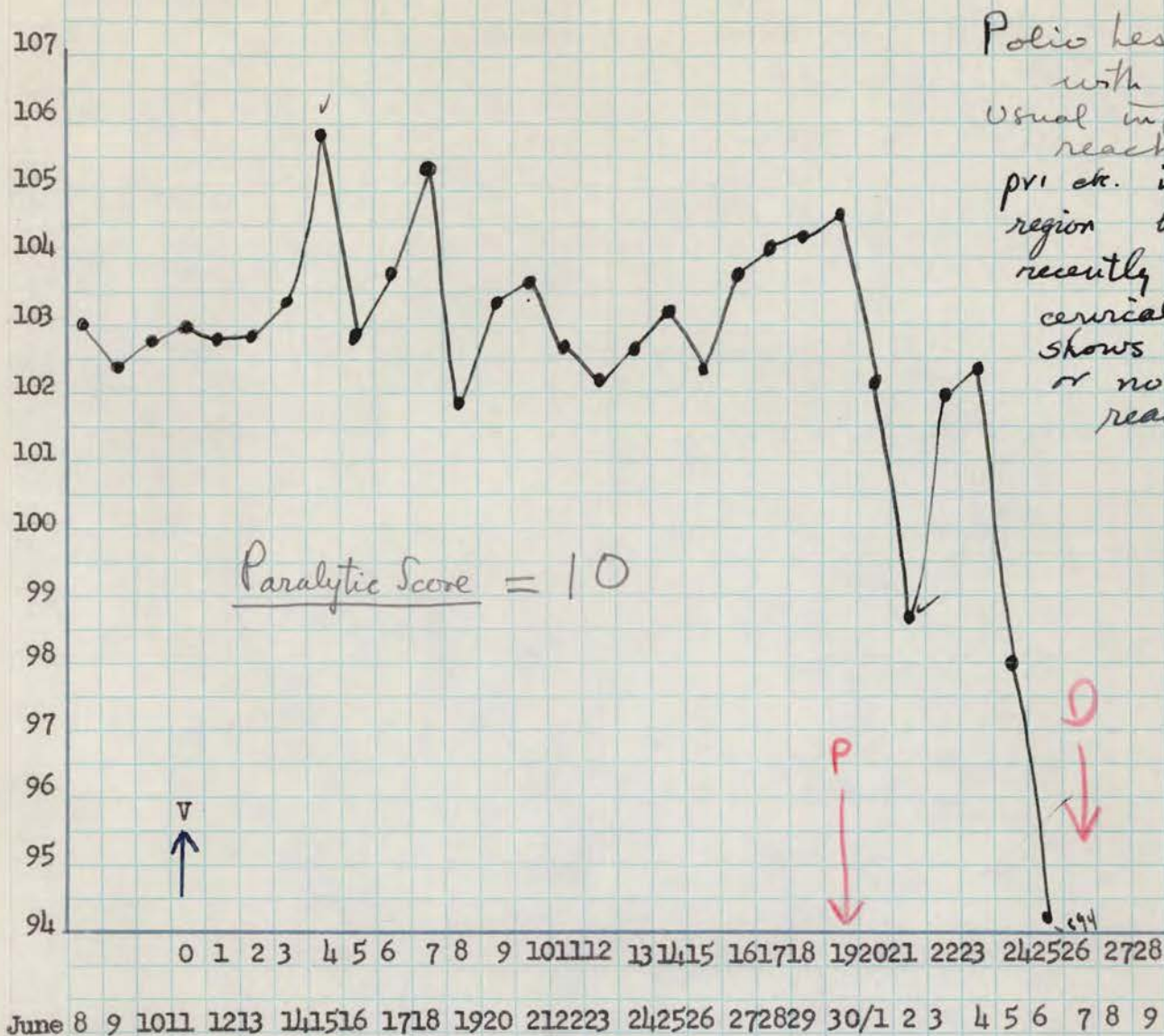
Cortisone

25 25 25 25 25 25 25 25 25 25 25 25 25 25

- 6-14 - Right eye did 3/4 closed - The right eye is ^{small, blind & retracted} ~~raising~~
- seemingly result of injury -
- 6-21-51 - 5:00 PM - Tremor, excited
- 6-22-51 - AM - Partial Paralysis of left upper; weak lower.
- 5 PM - Partial paralysis of both lowers (more marked on right), muscles of back + uppers - sits up with difficulty
- 6/23/51 - AM - Extensive paralysis of 1/2 trunk + back; Prostrate
- 6/24/51 - AM - Same
- 6/25/51 - AM - Prostrate, Paralysis of 1/2 trunk + back
- PM - " Completely paralysis of 1/2 trunk + back; moves head
- 6/26/51 - AM - Same
- 6/27/51 - AM - Extensive paralysis of 1/2 trunk + back, prostrate
- 6/28/51 - AM - Same
- 6/30/51 - PM - Prostrate
- 7/2/51 - Prostrate
- 7/9/51 - Prostrate - almost complete paralysis of lower + back; ^{uses upper} ~~the left~~ ^{to lift} ~~the left~~

7/9/51 - Samipint

CNS - ZA



Polio lesions
with
usual inflammatory
reaction - heavy
pri etc. in lumbar
region but more
recently affected
cervical area
shows negligible
or no inflammatory
reaction.

Paralytic Score = 10

V
↑

P
↓

D
↓

6-28 - Out for a run - no paralysis detected

6-30 - AM - slight partial Paralysis of lower, especially
of thigh muscles; does not climb.

PM - Marked partial Paralysis affecting muscles of thighs,
hops around - frog position, use uppers - climbing but
does so - differently.

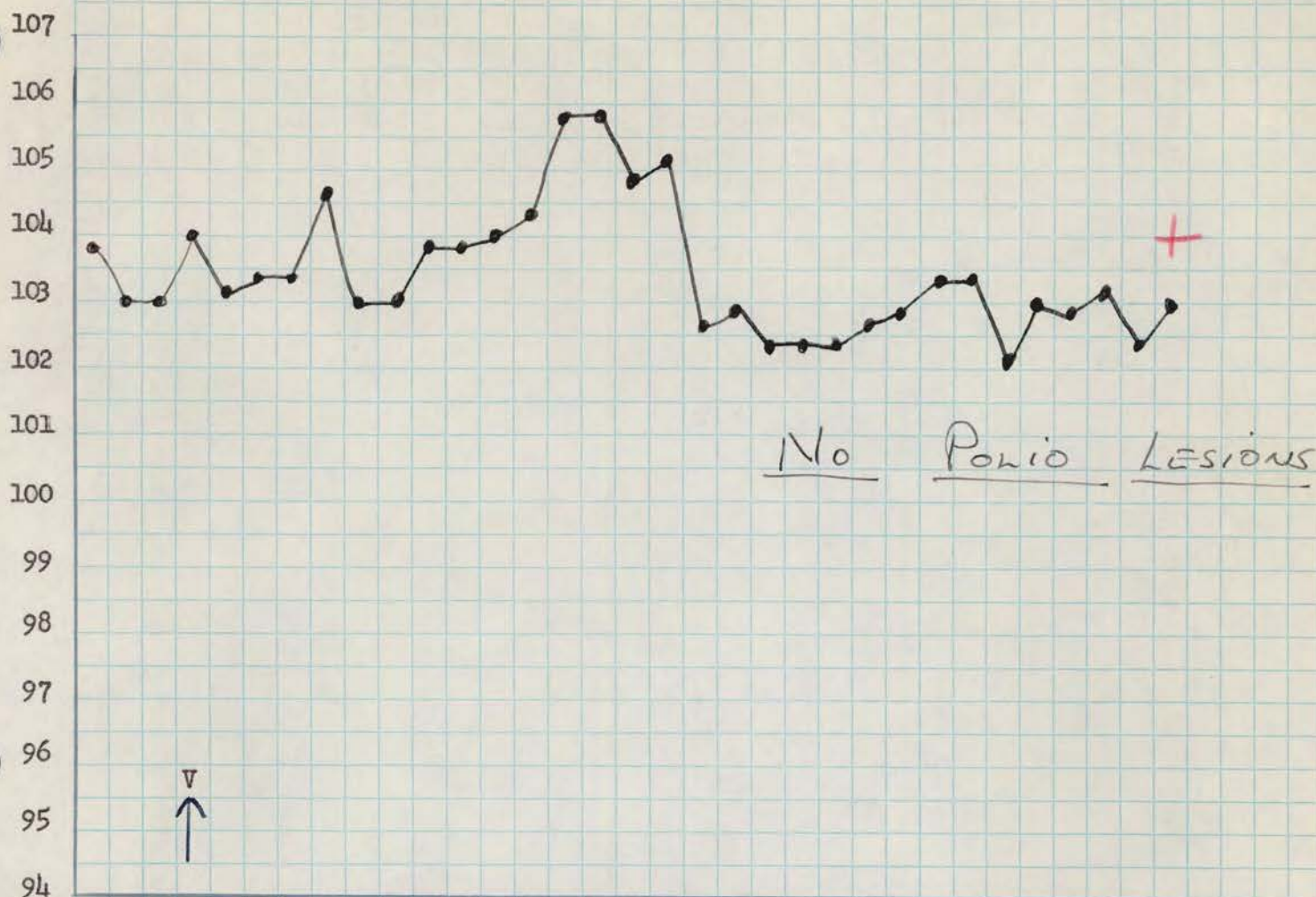
7-1-51 - AM - Extension Paralysis of lower; ~~weakness~~ weakness of
upper + back. Can sit up.

7-2-51 - AM - Extension Paralysis of lower; partial paralysis of
upper + back; Prostrates, commands a bit.

7-4-51 - AM - Almost complete Paralysis of both sides + back; Prostrates;
moves head.

7-7-51 - 9:30 AM - Dead, not yet in rigor

CNS in 2A



June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30/1 2 3 4 5 6 7 8 9 10

6/24/51 - AM - Excited; piloerector.

6/25/51 - AM - Same

PM - Same

6/26/51 - AM - Piloerector

6:00 PM - Same, excited - no paralysis

6/27/51 - AM - Piloerector, excited

PM - Active, no paralysis, no piloerector in PM

6/28/51 - AM - OK

PM - Very active - no paralysis

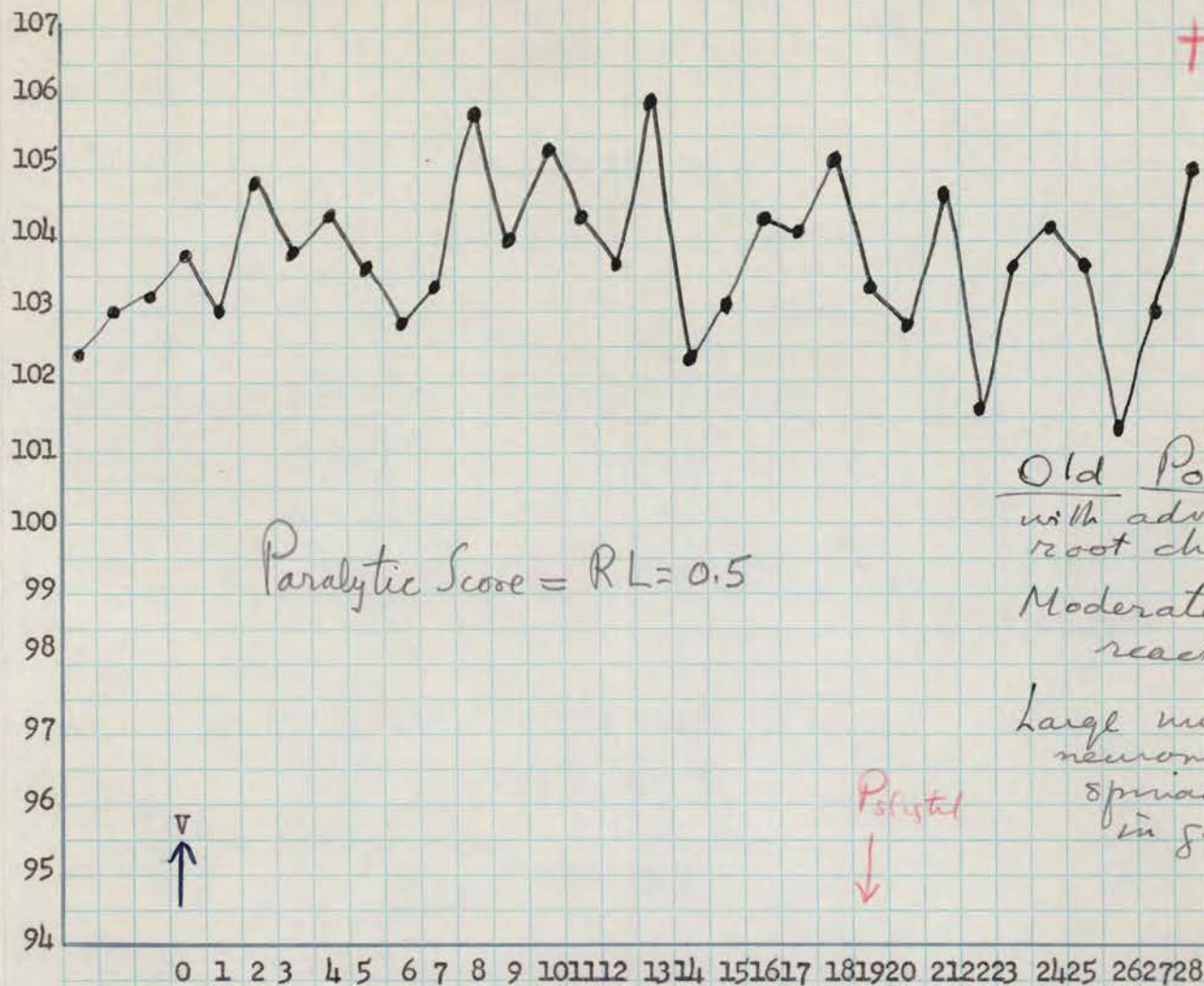
7/4/51 - AM - OK

7-5 - OK

7/9/51 - OK

7/10/51 - Sacrificed

CNS in 2A



Paralytic Score = RL = 0.5

Old Polio
with advanced
root changes

Moderate inflammatory
reaction

Large numbers of
neurons in
spinal cord
in good condition

June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30/1 2 3 4 5 6 7 8 9

6/25/51 - Am - Excited; weak lower?

Pm - Runs & Climbs, but questionable weakness of rt. lower;
no definite paralysis

6/26/51 - Am - Excited - slight partial paralysis of right lower

6/27/51 - Am - ? Slight paralysis of right lower; Climbs & runs
but does not use right limb properly.

Pm - Climbs & runs but has weakness of right foot.

6/28/51 - Am - does not use right foot properly; no progression.

6/30/51 - Pm - Definite partial paralysis of right lower (paralysis not only in foot).

7/1/51 - Am - Same

7/2/51 - Am - Same; no progression

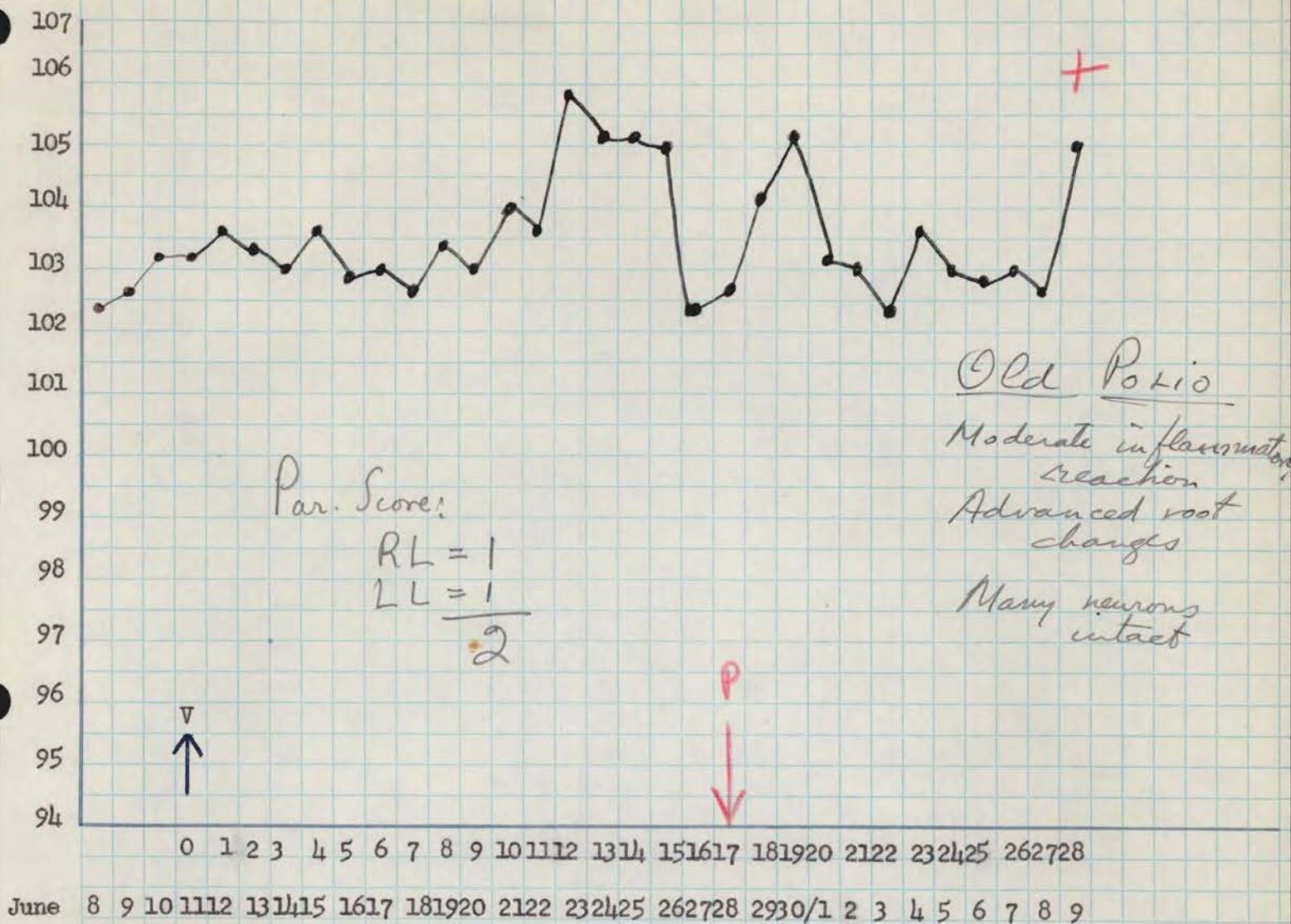
7/4/51 - Am - Same

7/5 - Very slight involvement

7/9/51 - Very active; Climbs; still amputated in right lower. Paralysis so slight as to be difficult to make out.

Sacrificed

CNS in 2A



6/25/51 - Am - Excited

P.M. - nothing definite

6/27/51 - pm - appears well & active despite temperature curve.

6/28/51 - Am - Partial Paralysis of lower

PM - Partial involvement of thigh muscles

6/29/51 - Am - Climbs well - drags left lower

Same

6/30/51 - Same, sits up, active, no progression or extension of Paralysis

7/1/51 - Same

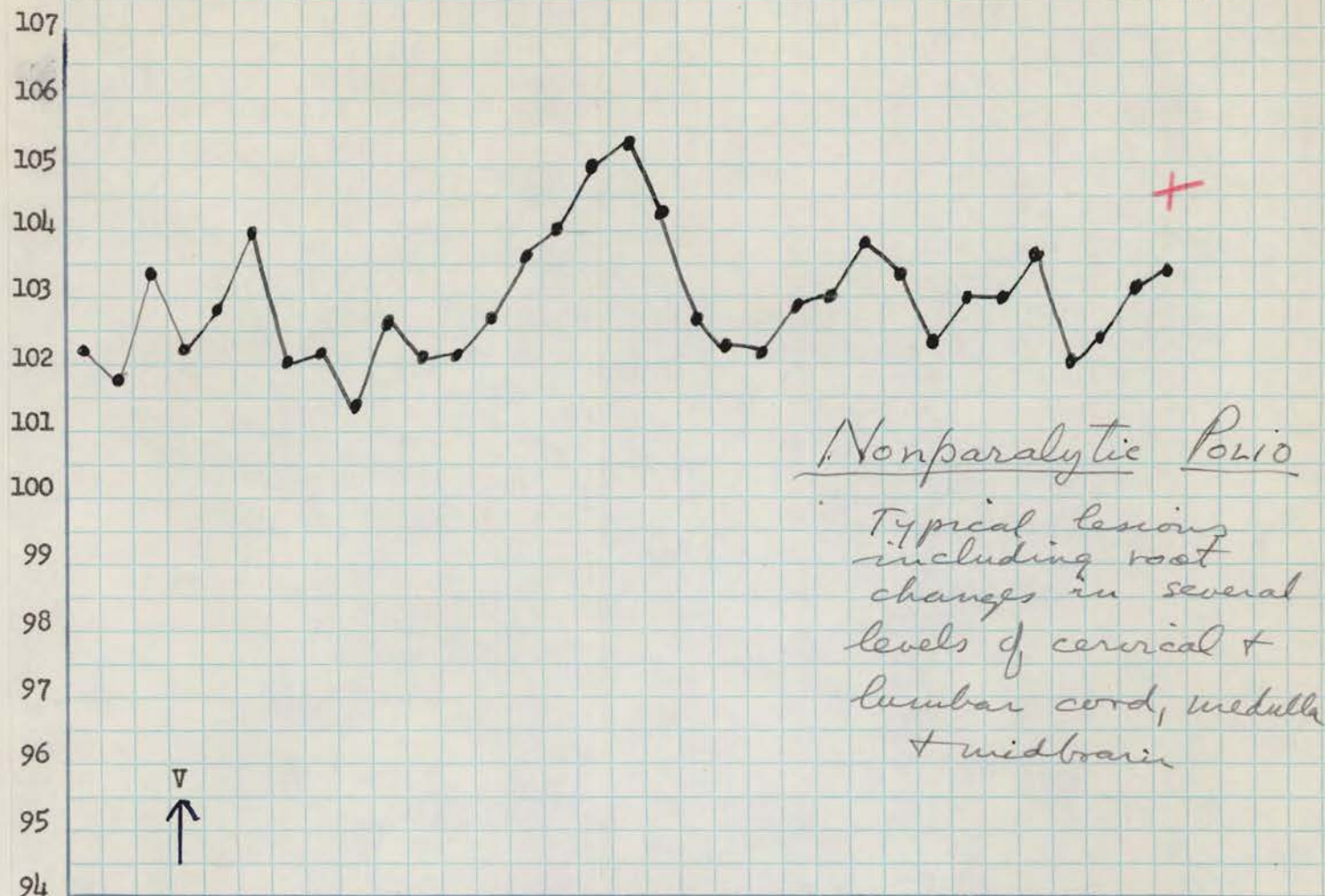
7/2/51 - Same

7/4/51 - Partial Paralysis of lower, sits up

7/9/51 - Slight Partial of lower; sits up, hops, very active

Sacrificed

CNS in 2A



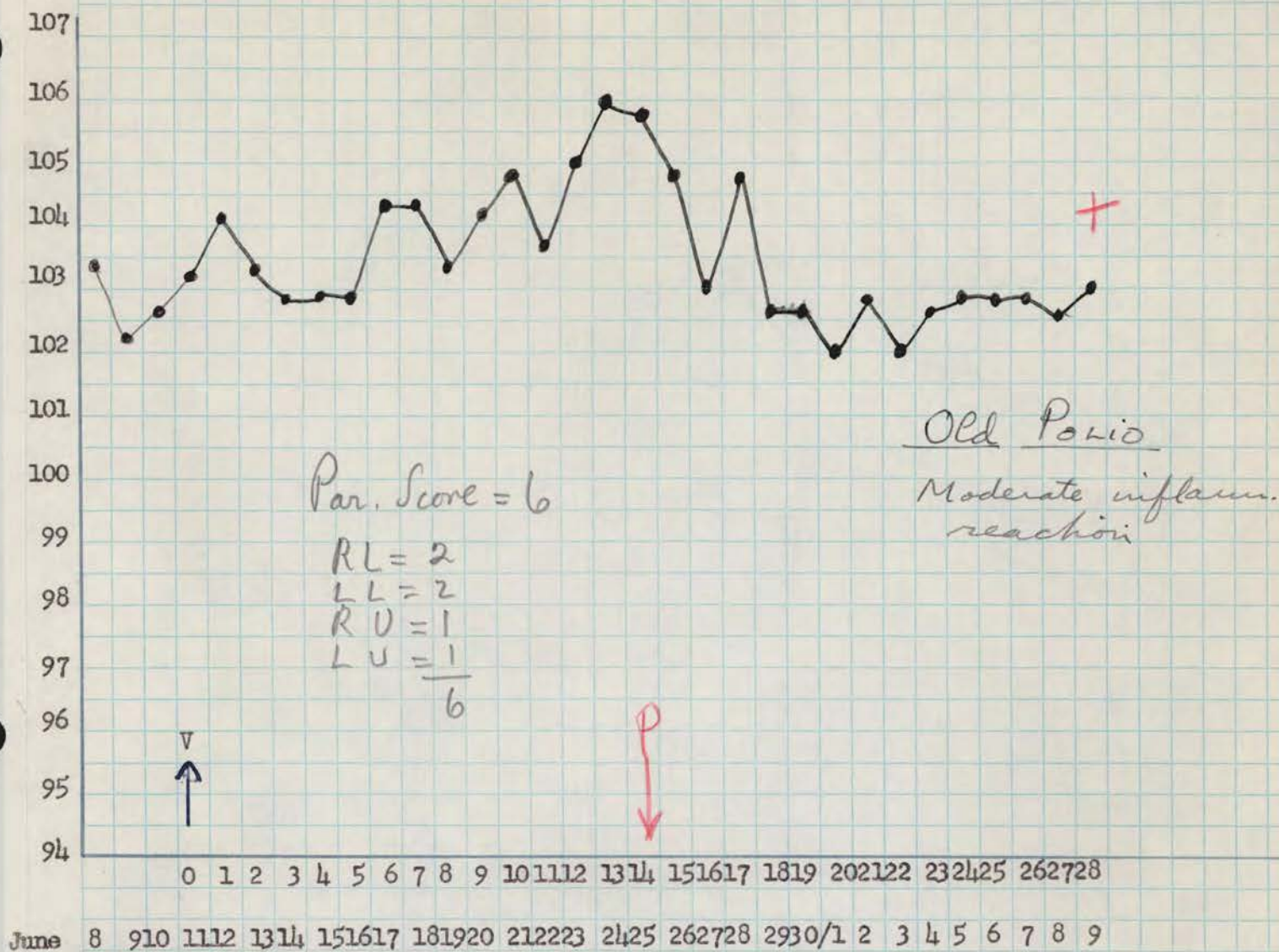
Nonparalytic Polio

Typical lesions
including root
changes in several
levels of cervical &
lumbar cord, medulla
& midbrain

June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

6/26/51 - Am - Excited PM. - nothing definite
6/27/51 - PM - Appears well + active despite temp.
6/30/51 - PM - Excitable, but very active + strong
7/9/51 - OK
7/10/51 - Sacrificed

CNS in 2A



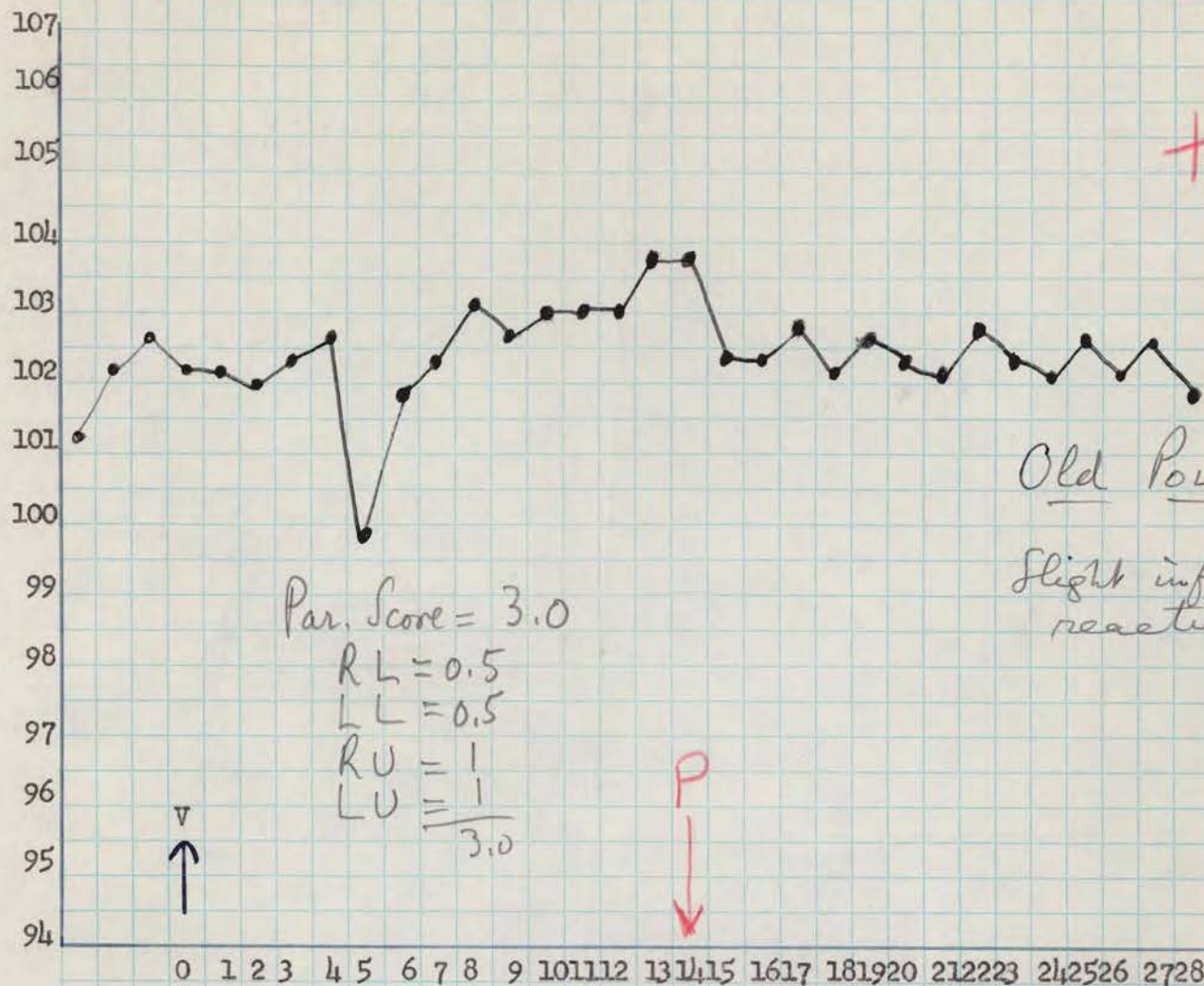
Cortisone

25 25 25 25 25 25 25 25 25 25 25 25

- 6-24-51 - Marked excitement and tremor - face red.
- 6-25-51 - AM - Excited, piloerector, tremor.
PM - Excited, tremor, clonus, ataxic, weakness
upper & lower; questionable paralysis of deltoids.
- 6/26/51 - AM - Excited clonus, possible slight paralysis of
lower & deltoids.
5:00 PM - Definitely partial paralysis of upper & lower, sits up.
- 6/27/51 - AM - Same
PM - Excited, partial paralysis of lower; uses
upper fairly well; sits up.
- 6/28/51 - AM - Same & left arm weak upper
PM - Partial paralysis of lower & upper
- 6/30/51 - AM - Same, sits up
- 7/1/51 - AM - Same, sits up
- 7/4/51 - Same
2 lenses paralysis of lower; partial of left upper &
deltoid on rt. sits up
- (OVER)

7/9/51 - Saniford

CNS in 2 A

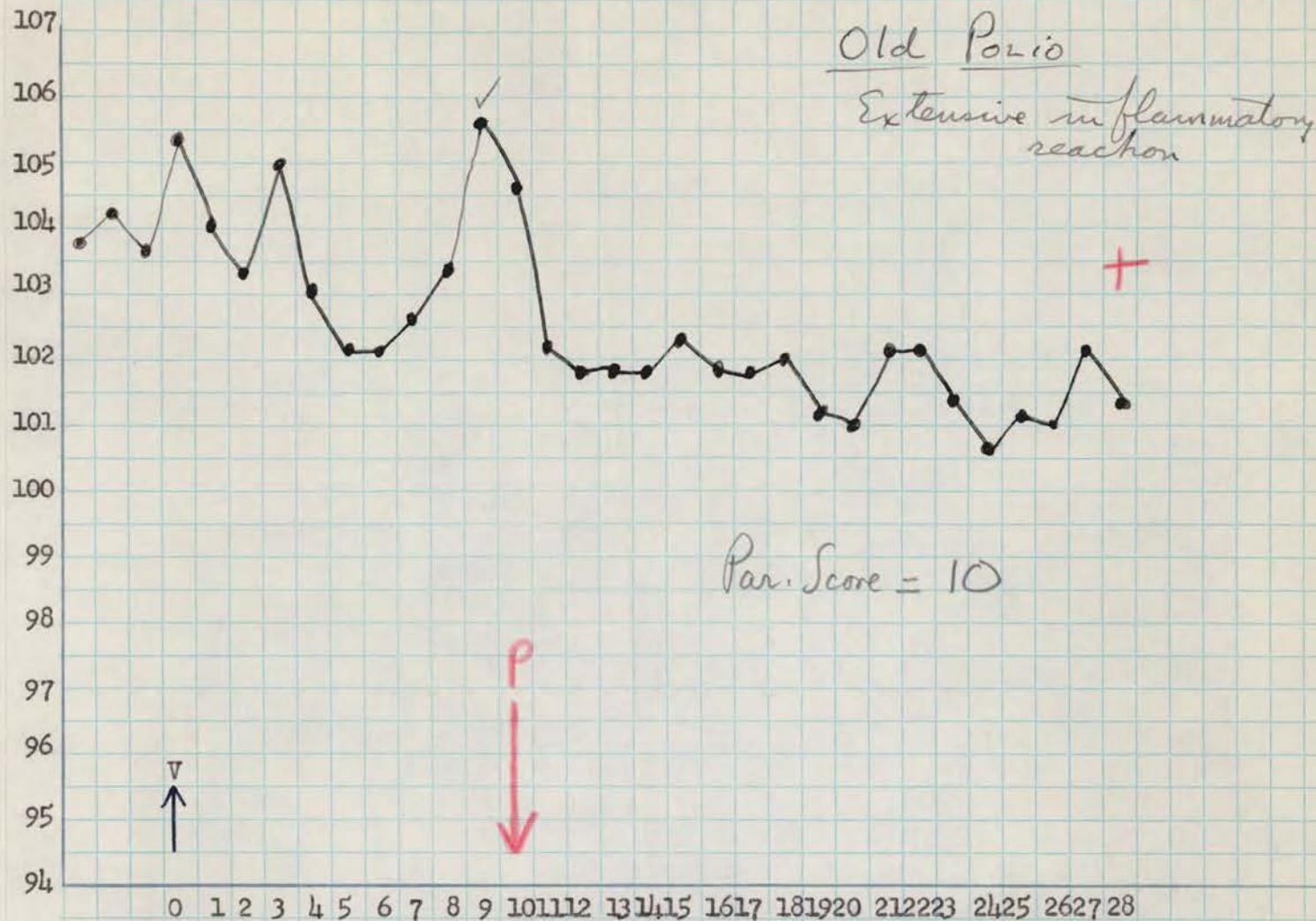


June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6 7 8 9

Cortisone

25 25 25 25 25 25 25 25 25 25 25 25

- 6/25/51 - Extremities weak; especially lower; Can not climb; Can not make out definite paralysis. Pilonator.
 PM - Partial paralysis of lower, especially ~~hips~~ of hip muscles.
- 6/26/51 - AM - Partial paralysis of lower more marked, weak upper.
- 6/27/51 - AM - Same
 PM - Extensive paralysis of thigh muscles, hops like frog; uses upper well.
- 6/28/51 - AM - Same
 PM - Weak at upper & paralysis of lower.
- 6/30/51 - AM - Paralysis of lower & weakness of upper (Paralysis beginning distal paralysis)
 PM - Partial of lower & upper, weak back, sits up
- 7/2/51 - AM - Same
- 7/4/51 - Partial paralysis of upper & lower; sits up; hops about
- 7/9/51 - Paralysis of both distal limbs
 Sacrificed - CR5 in 2A



June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30/1 2 3 4 5 6 7 8 9

Cortisone

25 25 25 25 25 25 25 25 25 25 25 25

6-20 - Temp 105.6° in AM - Checked exactly the same 2 hours later
Definite tremor present

6/21/51 - AM: Partial Paralysis of lower + deltoids; sit up.

5:00 PM - Partial Paralysis of lower + upper, more marked in deltoids

6/22/51 - AM - Extensive Paralysis of extremities + back; Prostrate.

6/23/51 - AM - Same

6/24/51 - AM - Same

6/25/51 - AM - Extensive Paralysis of extremities + back; Prostrate.
PM - Same

6/26/51 - AM - Same

6/27/51 - AM - Same

6/28/51 - AM - Same

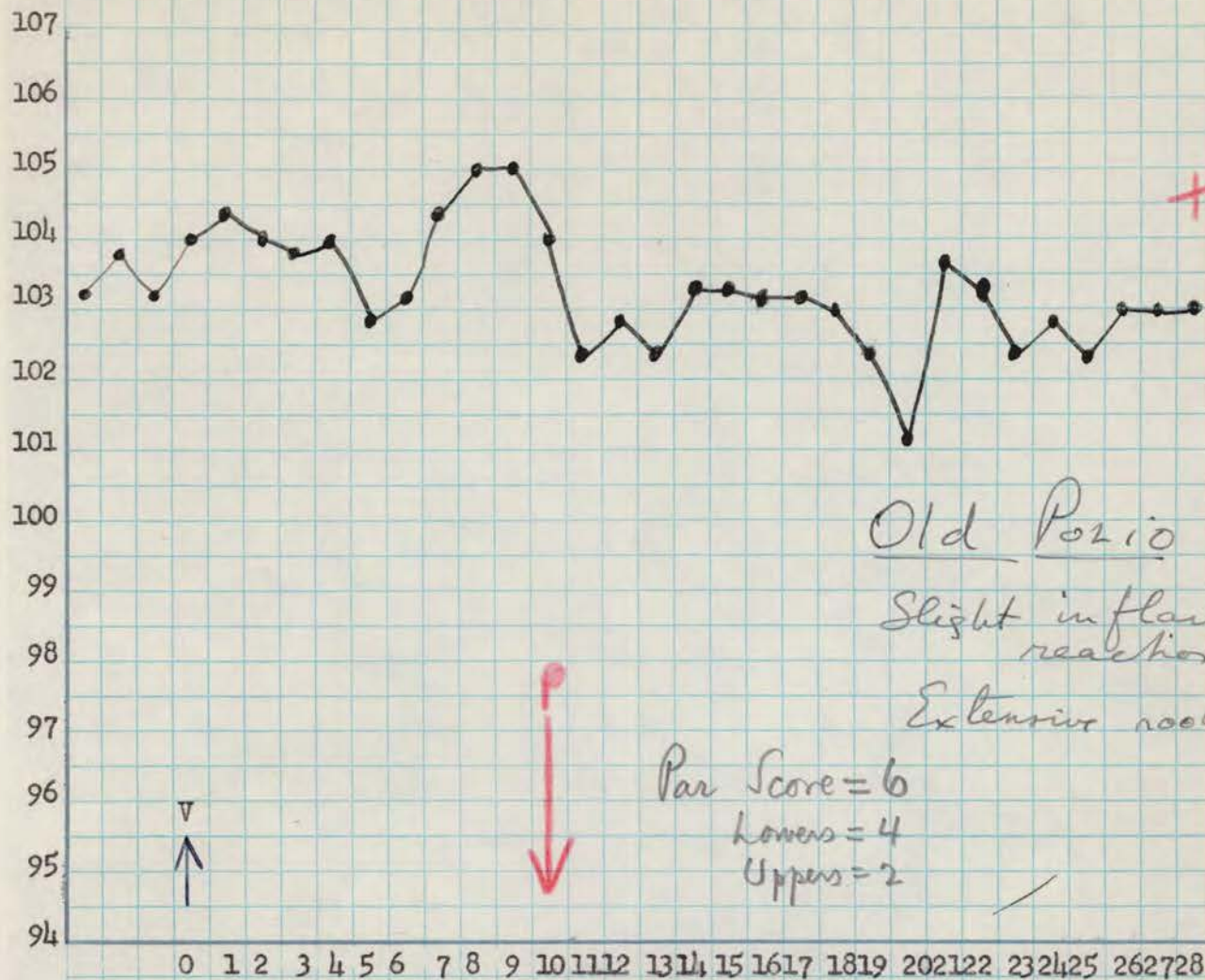
6/30/51 - PM - Prostrate

7/2/51 - AM - Same

7/9/51 - Extensive Paralysis of extremities + back; Prostrate in frog position

7/9/51 - Sacrificial

CMS in 2A



Old Pozio

Slight inflammatory reaction

Extensive root changes

Par Score = 6

Lowers = 4

Uppers = 2

June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30/1 2 3 4 5 6 7 8 9

Cortisone

25 25 25 25 25 25 25 25 25 25 25

6/21/51 - AM - Partial Paralysis of lowers

5:00 PM - Marked Partial Paralysis of lowers, especially of the right. sits up.

6/22/51 - AM - Marked Paralysis of lowers; sits up

6/23/51 - AM - Extensive Paralysis of lowers; sits - difficulty

6/24/51 - AM - Paralysis of lowers & back; protrudes; trials.

6/25/51 - AM - Paralysis of lowers & slight Paralysis of back;

PM - Lies down; extensive Paralysis of lowers, partial of ~~lowers~~ & back.

6/26/51 - AM - Same

6/27/51 - AM - Same

PM - Same, sits up

6/28/51 - AM - Same

6/29/51 - Same, sits up well, sits up.

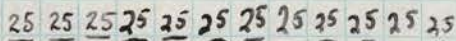
7/2/51 - AM Paralysis of lowers, no upper

(OVER)

7/9/51 - Extensors, but in complete paralysis of lower;
sits up; slight paralysis of upper.

Sacripin

CNS in 2A

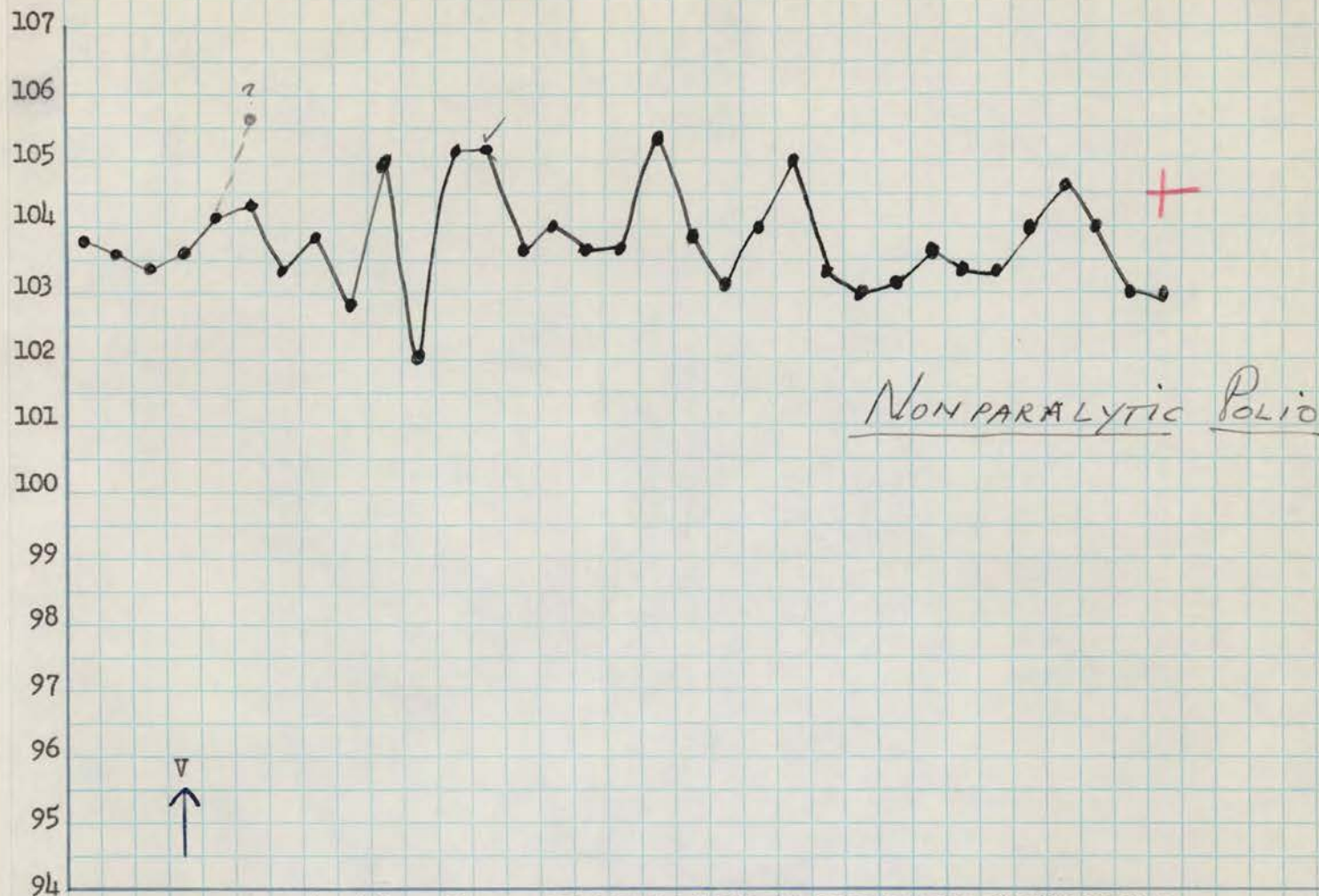


6/30/51 ✓ Am fractious; Can not sit up.

7/9/51 - Extensive paralysis of upper limbs & back;
Prostrates in frog position; very alert.

Sacrificed

CNS in 2A



June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

6-20 Temp. checked - 105.2 in A.M. - Same on repeat

6/23/51 - AM - Excited, Poliovirus

6/26/51 - AM - Excited, Poliovirus, Chumney - hours, no definite Paralysis

6:00 PM - Excited, Poliovirus, tremor

6/27/51 - AM - Poliovirus

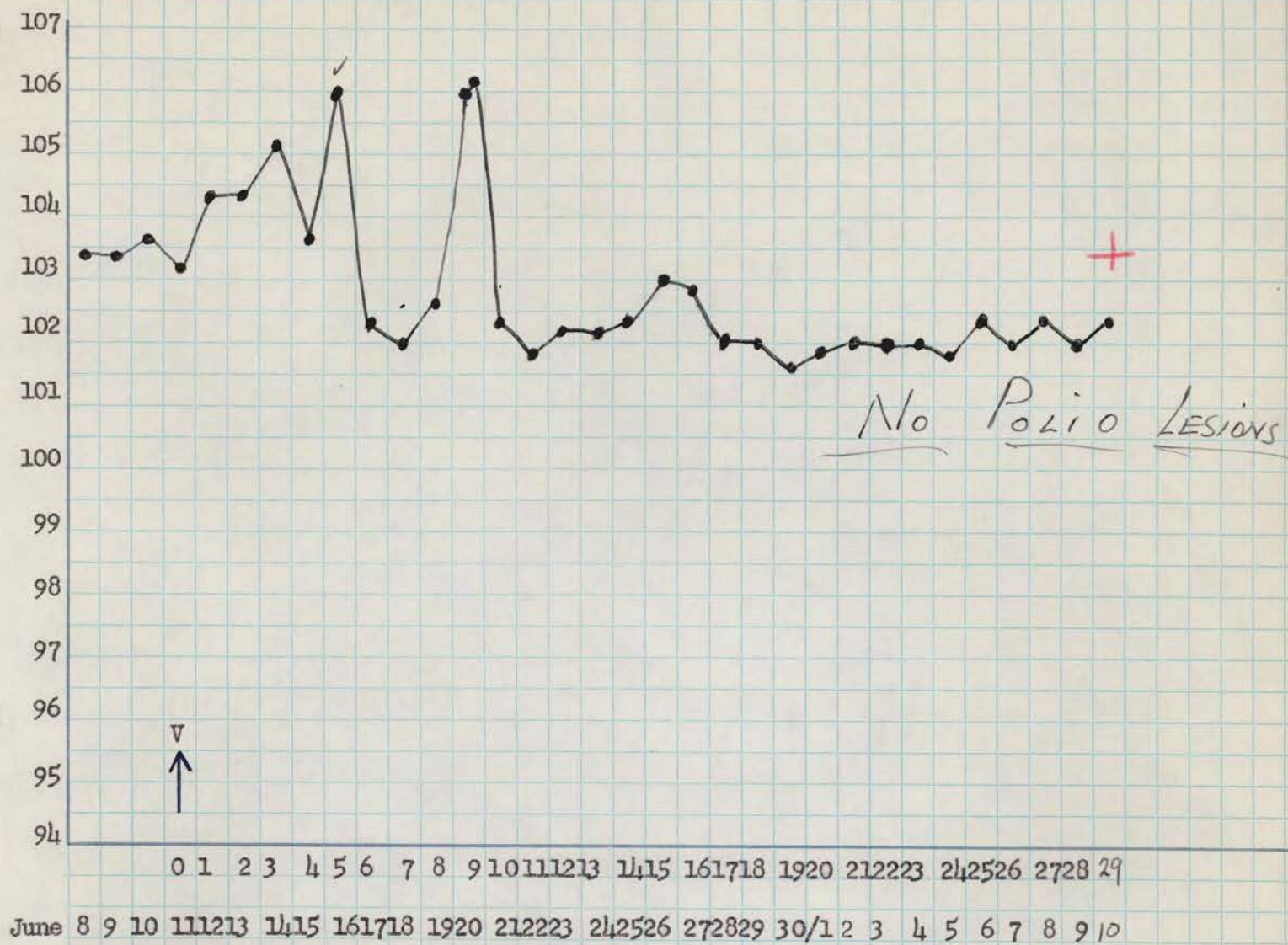
7/9/51 -

OR

7/10/51 -

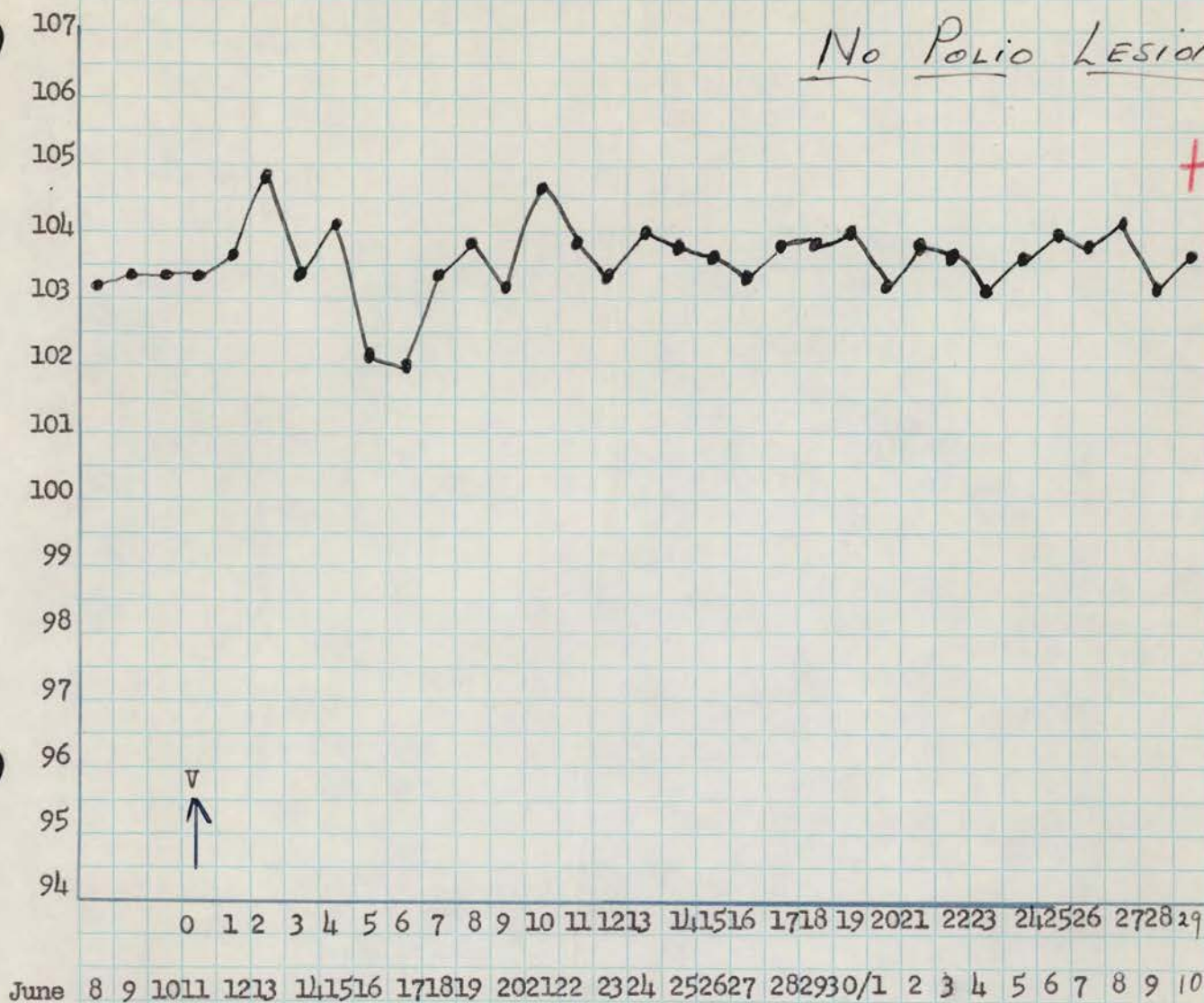
Sacrificed

CNS in 2A



6-20 - Temp. checked - 106° at first & then 106.2
 7/9/51 - ok
 7/10/51 - Sacrificed

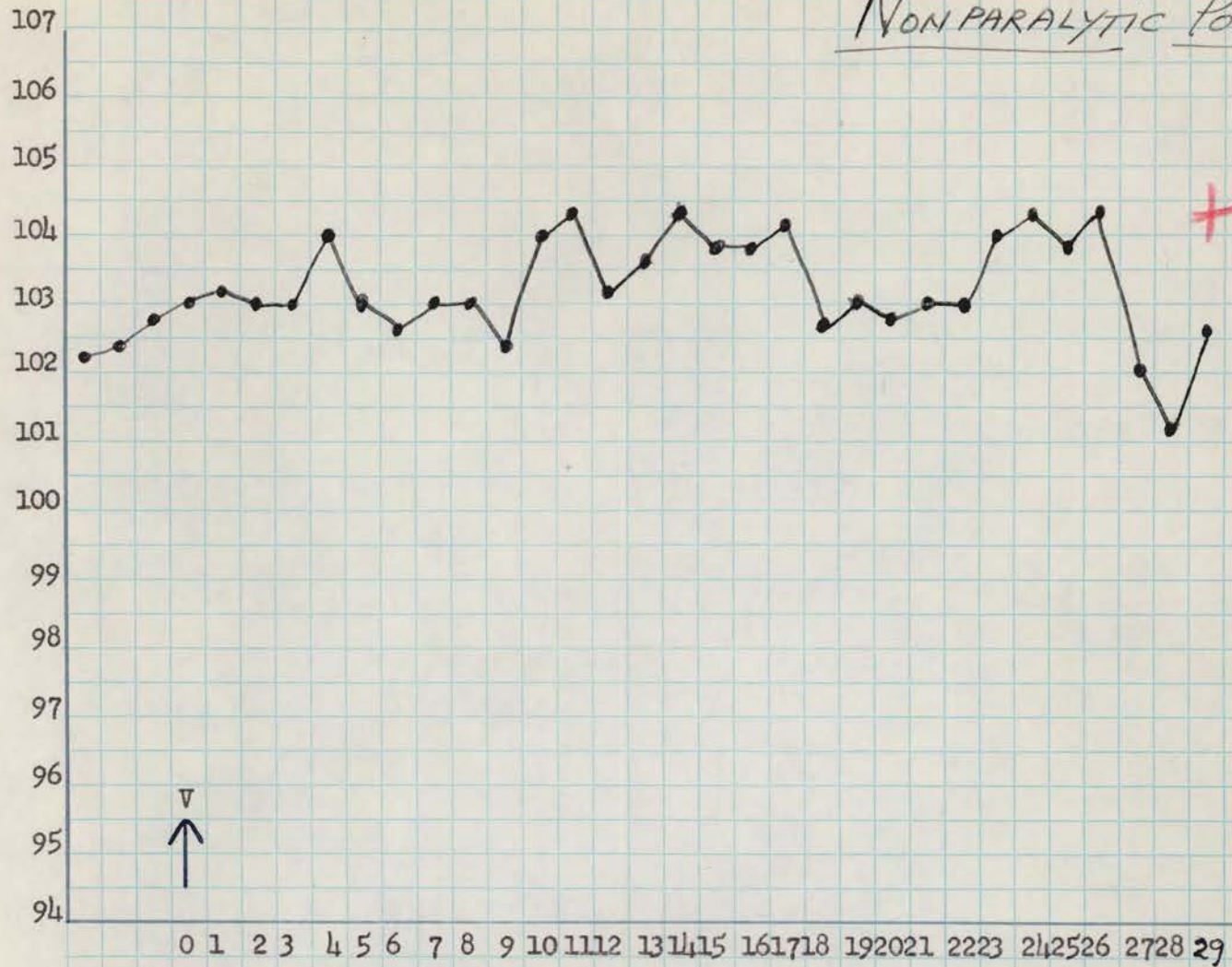
CNS in 2A

No Polio LESIONS

June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30/1 2 3 4 5 6 7 8 9 10

7/9/51 - ok
7/10/51 - sacrificed

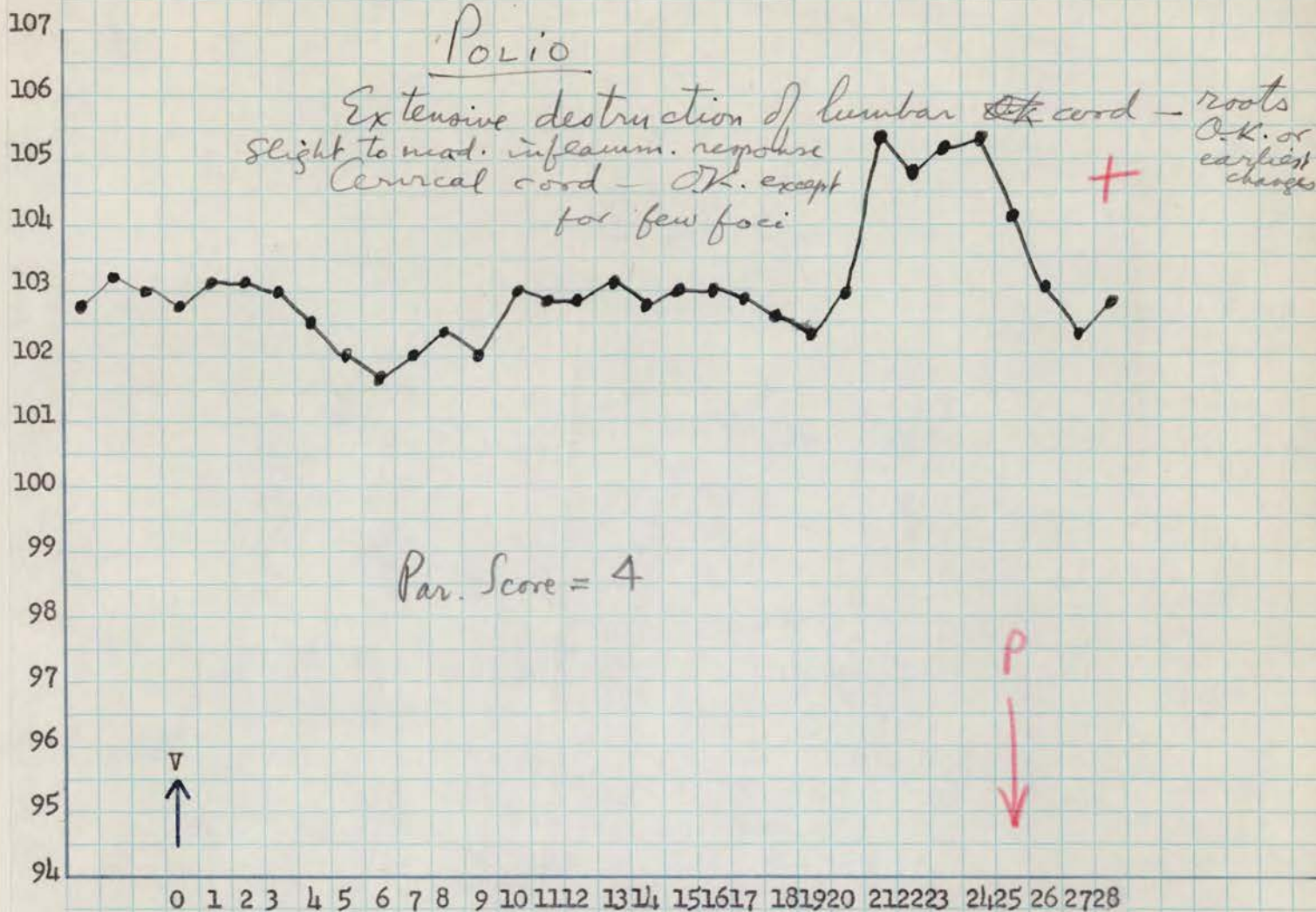
CNS in 2A

NON PARALYTIC POLIO

June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30/1 2 3 4 5 6 7 8 9 10

7/9/51 - OK
7/10/51 - Sacrificed

CNS in 2A



June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30/1 2 3 4 5 6 7 8 9

7/4/51 - Dies early, not so strong as his size would indicate;
no definite paralysis, climb + run.

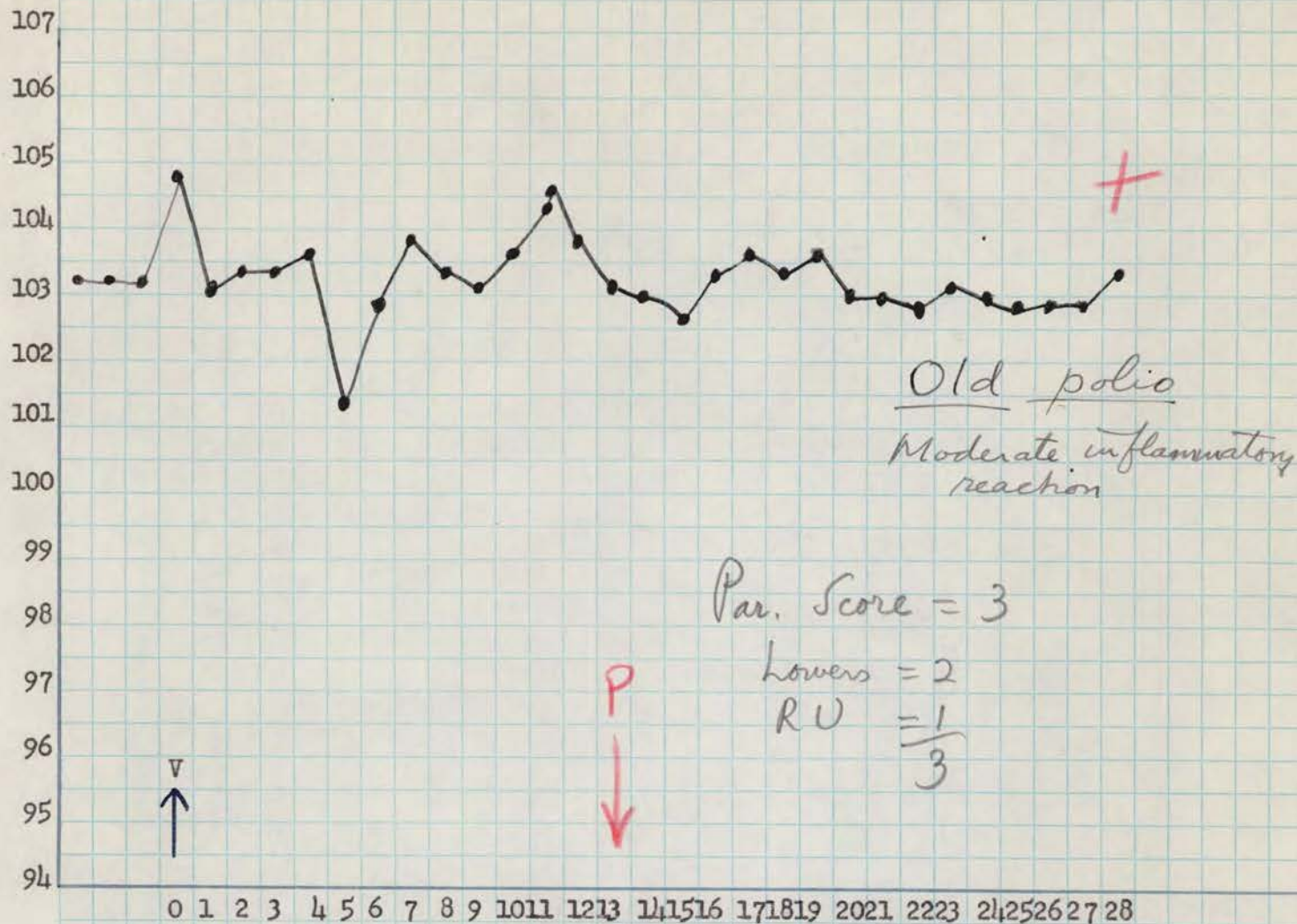
7/5 - Very active - no paralysis

7/6 - Partial Paralysis of lower

7/7 - Extensive Paralysis of lower; sits up.

7/9 - Extensive but incomplete paralysis of lower,
sits up.
5 sacrificed

CNS in 2A



June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 / 1 2 3 4 5 6 7 8 9

Cortisone

25 25 25 25 25 25 25 25 25 25 25 25 25

6/22 5 PM - excited, hides in corner, disinclined to climb - felt very hot - temp 104.6

6/24/51 - AM Clumsy lowers, no definite paralysis

12 noon - Cannot climb or hang on. Partial paralysis of lowers and weakness of uppers.

6/25/51 - AM - Same
PM - Partial upper & lowers, sit up

6/26/51 - AM - Same

6/27/51 - AM - Same

PM - Uses uppers fairly well, partial paralysis of lowers & at upper (on this one).

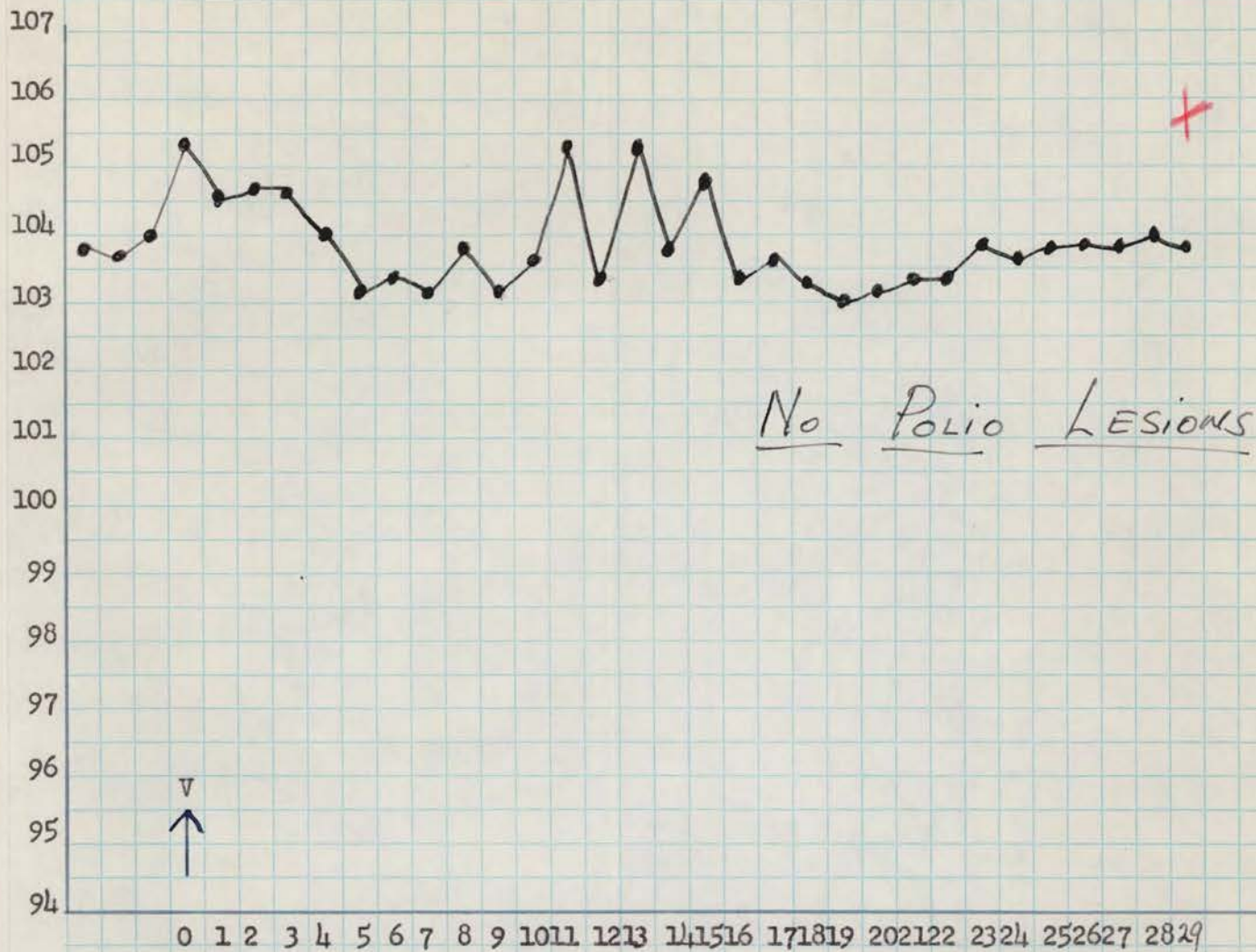
6/28/51 - AM - Same

6/30/51 - PM - 11

over

7/9/51 - Partial paralysis of lower; hops,
uses upper fairly well; except for right
deltoid which appears atrophied.
Sacrificed

CNS — 2A



June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30/1 2 3 4 5 6 7 8 9 10

Cortisone

25 25 25 25 25 25 25 25 25 25 25

7/9/51 -

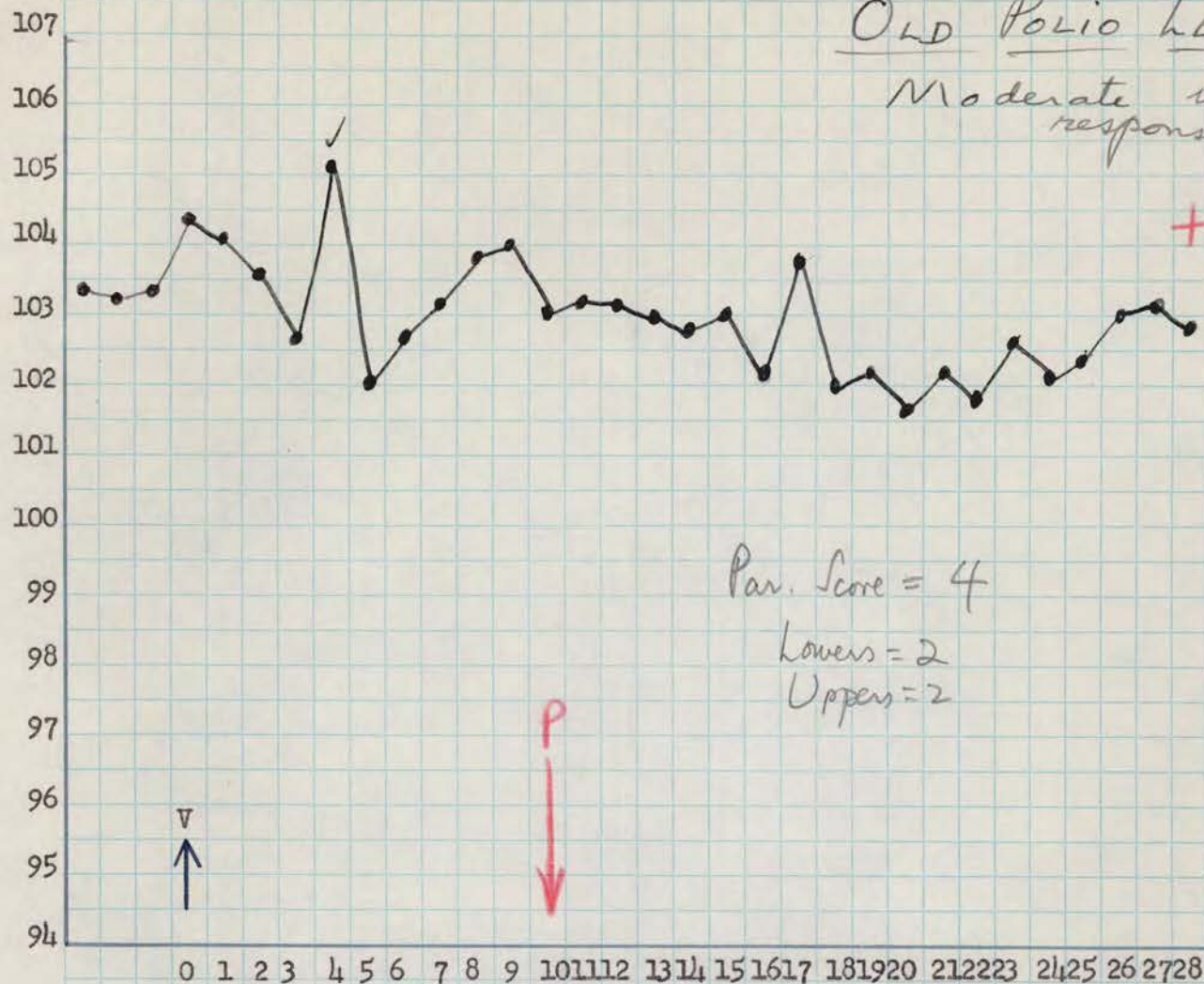
Oh

7/10/51 -

Sacrificed

CNS - 2A

Old Polio Lesions
Moderate inflammatory response



June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30/1 2 3 4 5 6 7 8 9

Cortisone

25 25 25 25 25 25 25 25 25 25 25 25

6/21/51 - AM - Partial Paralysis of lowers + left upper.

5:00 PM - marked partial paralysis of lowers + left upper. sits up.

6/22/51 - AM - Partial Paralysis of lowers + left upper; sits up.

6/23/51 - AM - Same

6/24/51 - AM - Same

6/25/51 - AM - Partial Paralysis of lowers + left upper; sits up.

PM - Extensive Paralysis of lowers; Partial of upper + back; sits up.

6/26/51 - AM - Same

6/27/51 - AM - Same

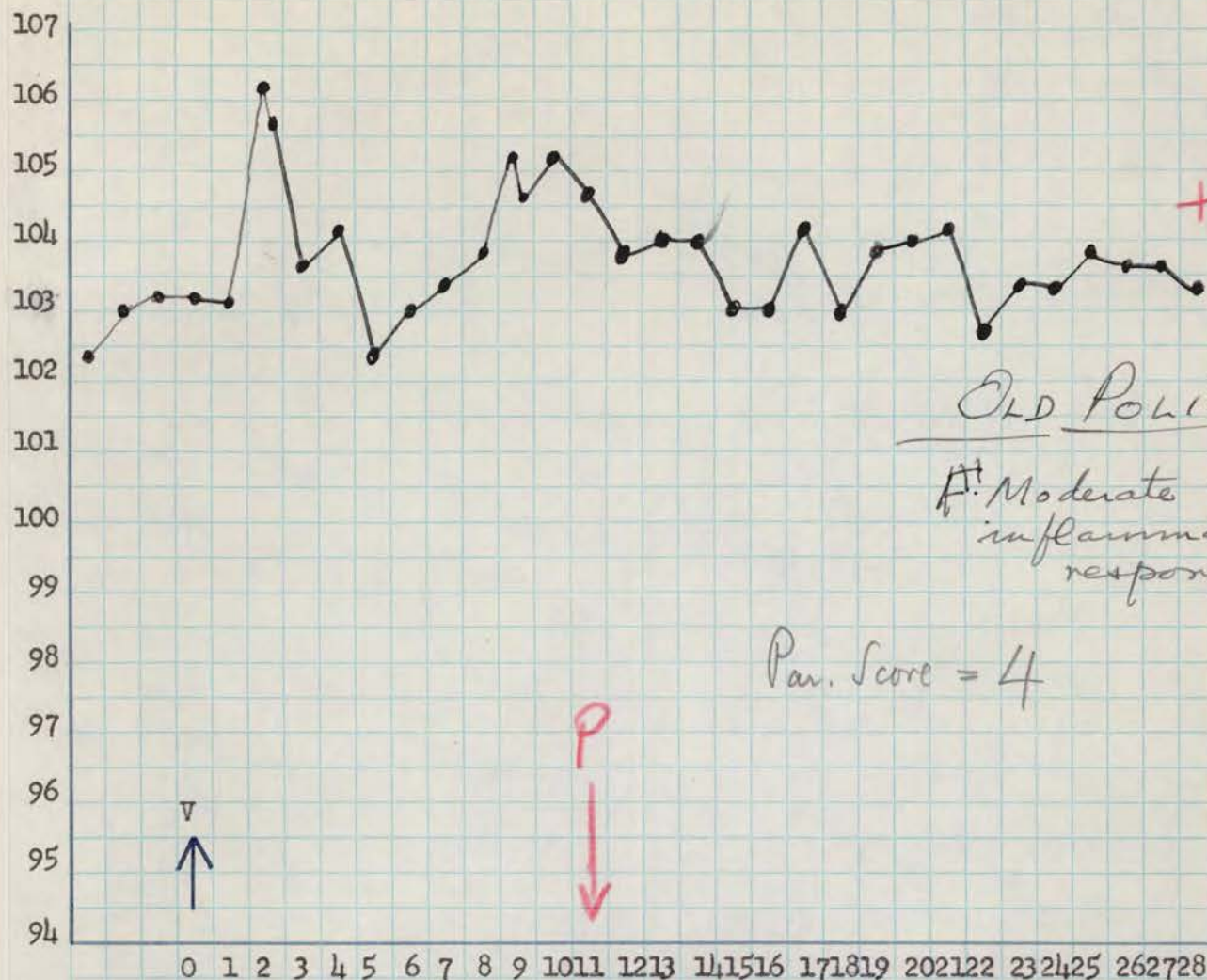
6/28/51 - AM - Same

6/30/51 - PM - "

7/2/51 - AM - Partial Paralysis of lowers + upper; weakness of back; sits up.

7/9/51 - Partial Paralysis of upper + lowers, sits up.
sacrificed

CNS - 2A



Old Polio

† Moderate
inflammatory
response

Par. Score = 4

June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30/1 2 3 4 5 6 7 8 9

Cortisone

25 25 25 25 25 25 25 25 25 25 25 25

6-20 - Temp. checked - 105.2 in A.M. - 104.6 2 hrs. later

6-21 - 5:00 PM - Pilonator, excited

6/22/51 - AM - Pilonator; this very easily, weak uppers.

5 P.M. - definite partial paralysis of both uppers - most marked in deltoids - cannot hang on or climb.

6/23/51 AM - marked P. paralysis of both uppers.

6/24/51 AM - Same.

6/25/51 AM - Extensive paralysis of uppers, weak lowers; sit up.
PM - Extensive paralysis of uppers; partial of lowers + back, sit up.

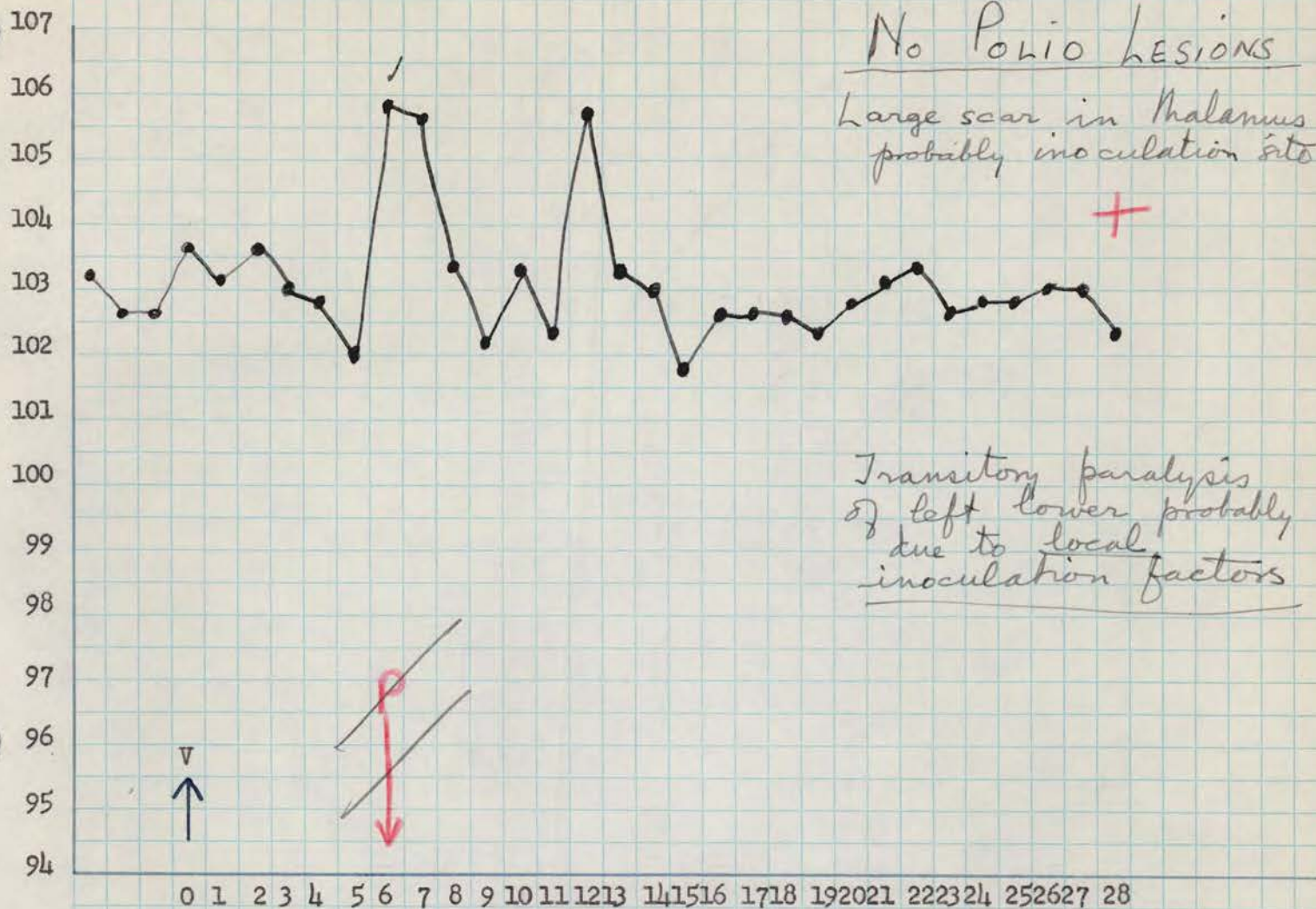
6/26/51 - AM - Same

6/27/51 - AM - Same

6/28/51 - AM - Same

7/2/51 - AM - Same

7/9/51 - Partial paralysis of lowers + deltoids; sit up
Sacrificed - CNS in 2 A



June 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30/1 2 3 4 5 6 7 8 9

Cortisone

25 25 25 25 25 25 25 25 25 25 25 25

6/17/51 - 10:00 AM - weak left lower - 12 noon - partial paralysis of left lower - especially foot & ankle

6-20-51 Partial paralysis of left lower same - no progression since 6-17-51

6-21-51 - 5:00 PM - Condition same; no progression.

6-22-51 - AM - Same

6-23-51 - AM - Same

6-24-51 - AM - no progression

6-25-51 - AM - Pilo motor, excited? - left lower same.
PM - " " - Paralysis of left lower
not noticeable; more + Clinico well.

6/26/51 - AM - Pilo motor, otherwise looks ok.

6/27/51 - AM - Same

6/28/51 - AM - ok.

7/9/51 - no paralysis discernible
Sacrificed

CNS in 2A