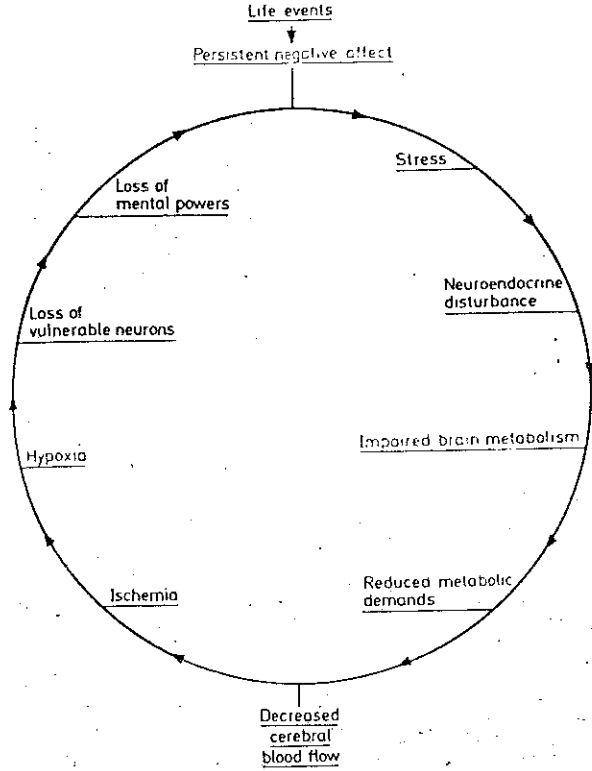


9.



10

Equation for Indication to Treat.

$$\text{Indication for treatment} = \frac{\text{effectiveness of treatment} \times \text{risk of deterioration if left untreated}}{\text{side effects} \times \text{probability of spontaneous improvement}}$$

47

18

5 ¹⁹⁰⁷ S. Hitzig (1838-); ^{S. Hitzig} correspondence between stimulation of specific brain regions and specific peripheral ~~movements~~ motor activity.

6 ¹⁸⁵²⁻¹⁹³⁹ S. Cajal (1852-1939); the neuron model of brain activity.

3 ¹⁸⁶⁸ G. Crisinger (1817-); all mental diseases are brain diseases.

1 ^{Phrenology} Phrenology is the Greek word for diaphragm and for

4 ¹⁸²⁴⁻¹⁸⁸⁰ P. Broca (1824-); specific brain lesions produce specific behavioral ^{mind} deficiencies (e.g., aphasia) (defects).

7 ¹⁸⁶⁴⁻¹⁹¹⁵ A. Alzheimer (1864-); global neuronal degeneration produces global cognitive degeneration.

8 ^{Goldstein} (L. Goldstein) ^{coll.} brain lesions ^{may} produce characteristic cognitive changes.

^{Bonhoeffer} ~~Bonhoeffer~~ (1868-); any brain lesion may produce the "characteristic" organic brain syndrome.

9 ¹⁹¹⁷⁻ K. Roth (1917-); no one-to-one correspondence between severity of brain lesion and severity of behavioral and cognitive changes.

~~9. View circle~~

2 Galen (129-199); the brain is the seat of consciousness and sensations.

1. Cerebral Glucose Metabolism ↑
(Glucose/Pyruvate Ratio ↑)
 2. Protein-Sparing Under Stress
 3. Improved phosphorylation
 4. ATP/ADP Metabolism ↑
 5. Release of Acetylcholine in Hippocampus
 6. Decreased Erythrocyte Flex Rigidity
Resulting in Better Capillary Circulation
- Neotropic Drugs: Paradigms - Mechanisms - Strategies

Neotropic Mechanisms

+2

1. Cerebral Glucose Metabolism ↑
(Pyruvate/Lactate Ratio ↑)
2. ~~Protein~~ RNA Synthesis ↑ (or Protein-Sparing)
3. ~~Adenylate~~ Cyclic AMP-Phosphodiesterase ↓
4. Na/K-ATPase ↓
5. Phospholipase ↑
6. Lipofuscin ↓
7. Polyribosome/Ribosome Ratio ↑
8. Decreased Erythrocyte Rigidity
Resulting in Better Capillary Circulation

~~+0~~ 11

Neotropic Effects

(At the Experimental Level)

72

1. Enhancement - but No Primary Stimulation or Inhibition of Cerebral Functioning.
2. Facilitation of Learning and Memory.
3. No Autonomic or Neurotransmitter Effects.
4. Increased Well-Being.
5. Ego-Strengthening

13

Neotropic Effects

72 12

(At the Physiological Level)

1. Up-regulation of EEG
2. Increase of Interhemispheric Conductivity
3. Homeostatic Regulation of rCBF
4. Improved Cortical and Glial Metabolism at the Cellular Level
5. ~~Protein-Sparing Under Stress~~
6. 5. Increased Resistance to Anoxia.

"Time Windows"

#

14

between Reversible Impairment
of Cerebral Functioning
and Neuronal Destruction.

Operationalized Time Windows:

15

- a. between established High and Low levels of Cognitive Functioning.
- b. between ~~Fixed~~ and Changeable Functioning.

Practice (Learning) Effects

#

16

for

Tapping Speed - Reaction Time -
Digit Recall

Methodology of Neurotic Trials,

17

1. Exclude Affective Disorders.
- ~~2. Exclude Only~~
2. Focus Evaluation on Cognitive Performance.
3. Eliminate in 3-week ~~trial~~ Pretrial
All Non-Responders to Placebo and Practice.
4. Minimum ~~to~~ Trial Periods: 8-12 hrs. E₁.