

연성 전기 경련 요법의 임상적 고찰과 마취제 pentothal과 propofol에 따른 경련기간의 비교에 관한 연구

송헌일*[†] · 민경준* · 최인근* · 유태혁*

A Clinical Study on Softening E.C.T. & Comparison of Propofol and Pentothal as Anaesthetic Agents on Seizure Duration

Hun-Il Song, M.D.,*[†] Kyung-Joon Min, M.D.,*
Ihn-Geun Choi, M.D.,* Tae-Hyuk Yoo, M.D.*

ABSTRACT

The authors performed this preliminary study to investigate the effect of softening E.C.T. and propofol was compared to pentothal for induction of anaesthesia for E.C.T. on seizure duration.

The results were follows ;

1) E.C.T. was performed in 60 psychiatric inpatients who were admitted during the study period. Of them 51.7% were diagnosed as schizophrenia, 21.6% as major depressive disorder, 16.7% as bipolar I disorder, manic and 10% of others. 2) Mean number of E.C.T. was 12.2 times a patient. 3) The most common target symptoms were persecutory delusion in schizophrenia, psychomotor retardation or agitation in major depressive disorder, and violent aggressive behavior in bipolar I disorder, manic. 4) Pre-ECT medication usually used were atropine 0.0093mgkg⁻¹, pentothal 2.76mgkg⁻¹ or propofol 1.42mgkg⁻¹. 5) The duration of seizure, as measured clinically, was reduced with propofol(20.5 sec) in comparison with pentothal (35.7 sec)(p<0.001). This suggests the possibility that additional treatments may be needed for the same clinical effect in psychiatric illness when propofol is used as the induction agent.

KEY WORDS : Electroconvulsive therapy · Target symptom · Duration of seizure · Propofol.

서론

가 (Kalinowsky 1980).

1938 Ugo Cerletti 1940 Bennet가 curare
Lucio Bini , , E.C.T. 1951 curare
(Salzman 1980). succinylcholine .
1950

Department of Neuropsychiatry, College of Medicine, Hallym University, Seoul, Korea

[†] : , 150 - 020 94 - 200
) (02) 639 - 5260,) (02) 677 - 9095

가 (Frankel 1977).

E.C.T.

가 E.C.T. atropine E.C.T.
 pentothal propofol
 succinylcholine
 E.C.T. E.C.T.
 E.C.T. MECTA
 E.C.T. EEG monitoring
 seizure duration

연구결과

1. 대상 환자의 진단, 성별 및 연령분포

60 E.C.T.
 31 (51.7%), 13 (21.6%),
 10 (16.7%), 6 (10.0%)
 20 29
 가 31 18 (58.0%) 가
 13 6 (46.2%) 30 39
 가 51.6%,
 가 48.4%
 가 38.5%, 가 61.5% (Table 1).

2. 진단별 E.C.T. 시행 횟수 및 평균 입원일수

E.C.T. 14.9
 가 (13.6),
 (12.2)
 72.3 가 (63.2
), (52.7) 5
 30 7
 201 (Table 2).

3. 치료의 대상이 되었던 주된 증상들

(33.3%) 가 (26.1%),
 (10.1%)
 가 28.9% 가
 (15.8%), (13.2%)
 (13.2%)
 (35%), (30%),
 (20%)
 E.C.T. (Table 3).

4. 마취제로 pentothal 또는 propofol 사용환자의 비교

1) 대상환자의 특성

pentothal pr -

연구대상 및 방법

1. 연구 대상

1993 5 1 1997 4 30
 60

2. 연구 방법

, ECT
 atropine, succinylcholine pen -
 hal propofol . 10
 ofol pentothal pr -
 seizure duration
 DSM - -R

Table 1. Demographic variables () = %

Diagnosis Variables	Schizophrenia	Major depressive disorder	Bipolar I disorder, manic	Others	Total
Sex					
Male	16(51.6)	5(38.5)	4(40.0)	2(33.3)	26(43.3)
Female	15(48.4)	8(61.5)	6(60.0)	4(66.7)	33(56.7)
Total	31(51.7)	13(21.6)	10(16.7)	6(10.0)	60(100.0)
Age					
Below 19	3(9.7)	1(7.6)	0	0	4(66.7)
20 to 29	18(58.0)	2(15.4)	4(40.0)	3(50.0)	27(45.0)
30 to 39	6(19.4)	6(46.2)	4(40.0)	3(50.0)	19(31.6)
Over 40	4(12.9)	4(30.8)	2(20.0)	0	10(16.7)
Educational status					
Primary	8(25.8)	2(15.4)	1(10.0)	0	11(18.3)
Middle	7(22.6)	1(7.7)	2(20.0)	2(33.3)	12(20.0)
High	11(35.5)	7(53.8)	5(50.0)	4(66.7)	27(45.0)
College	3(9.7)	1(7.7)	2(20.0)	0	6(10.0)
Uncertain	2(6.4)	2(15.4)	0	0	4(6.7)
Socioeconomic status					
Upper	2(6.5)	3(23.1)	2(20.0)	2(33.3)	9(15.0)
Middle	18(58.1)	7(53.8)	6(60.0)	3(50.0)	34(56.7)
Lower	11(35.4)	3(23.1)	2(20.0)	1(16.7)	17(28.3)
Marital status					
Married	7(22.6)	8(61.5)	4(40.0)	2(33.2)	21(35.0)
Single	23(32.2)	5(38.5)	6(60.0)	5(50.0)	37(61.7)
Widowed	1(3.2)	0	0	1(16.7)	2(3.3)

Table 2. Numbers of E.C.T. and mean hospitalized day () = Min-Max

Diagnosis	Mean No. of E.C.T.	Mean hospitalized days
Schizophrenia	14.9(5 - 30)	72.3(9 - 201)
Major depressive disorder	12.2(6 - 18)	52.7(16 - 173)
Bipolar I disorder, manic	13.6(7 - 15)	63.2(54 - 85)
Others	8.2(4 - 13)	38.6(7 - 56)
Total	12.2(5 - 30)	56.7(7 - 201)

opofol seizure duration (p< 0.001). Recovery time pentothal propofol 5.8 ± 0.6 , 6.1 ± 0.6 (Table 5)(Fig. 1).

고찰 및 토의

opofol 10 . 265.2 452.7kg (1983) 가
 6 4 . E.C.T. phenothiazine 3 , butyrophen - one 4 , TCA 3 , benzodiazepine 1 , lithium 2 72% 20% (p<0.01)
 antiparkinsonian drug 3 . COPD 1 , old MI 1 , frozen sh - oulder 1 (Table 4).

2) 마취제인 pentothal사용과 propofol사용에 따른 seizure duration의 비교

Total induction dose pentothal 2.76mgkg⁻¹ 가 propofol 1.42mgkg⁻¹ . Seizure duration pento - thal 35.7 , propofol 20.5 pr -

4 가 , sa -
 , , mple hemodynamic response
 가 E.C.T.
 가 E.C.T.
 E.C.T. 2 3
 E.C.T.
 가 methohexital pentothal
 propofol . E.C.T.
 propofol seizure duration
 (Claeys 1988).
 propofol methohexital
 (Rampton 1989).
 pentothal propofol
 10
 methohexital propofol seizure duration
 pentothal propofol
 seizure duration
 가
 가
 seizure duration 가
 (Martensson 1994)가
 가
 1983
 E.C.T.
 15 가 93 5
 97 4 4
 , 가

가 ,
 ,
 E.C.T.
 가
 요 약
 1993 5 1 1997 4 30
 60
 E.C.T.
 1) 60 51.7%,
 21.6%, 16.7%, 10%
 2) 1 12.2 (
 14.9 : 12.2 : 13.6 :
 8.2)
 3)
 4) atropine 0.0093mgkg⁻¹,
 pentothal 2.76mgkg⁻¹, succinylcholine 0.
 80mgkg⁻¹
 5) propofol pentothal
 seizure duration
 중심 단어 : propofol.

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