Chapter 5

Discussion

This study was made to compare the efficiency between combination treatment of electroconvulsive therapy (ECT) and atypical neuroleptics with single treatment of atypical neuroleptics in schizophrenic patients. In addition, the safeness of treatments was also compared between the combination treatment of electroconvulsive therapy (ECT) and atypical neuroleptics with the single treatment of atypical neuroleptics in schizophrenic patients.

Conclusion of Results

General Information included personal information and clinical information of combination treatment of ECT & Atypical Neuroleptics Group with single treatment of Atypical Neuroleptics Group.

Personal information :

Comparison of age between ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group shows that schizophrenic patients in both groups have similar proportion of age. By which, ECT & Atypical Neuroleptics Group have 5 schizophrenic patients or 45 percent of their group in the range of 15 -30 years of age, and 6 schizophrenic patients or 55 percent in the range of 31 - 45 years of age. As for Atypical Neuroleptics Group, there are 4 schizophrenic patients or 36 percent in the range of 15 -30 years of age, and 7 schizophrenic patients or 64 percent in the range of 31 - 45 years of age. In overall view, there are 9 schizophrenic patients or 41 percent of 15 -30 age's group and 13 schizophrenic patients or 59 percent of 31 - 45 age's group.

Comparison of sex between ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group shows that there are half female schizophrenic patients and half male schizophrenic patients in this study. In which, there are 5 male schizophrenic patients or 45 percent and 6 female schizophrenic patients or 55 percent in ECT & Atypical Neuroleptics Group. As for Atypical Neuroleptics Group, there are 6 male schizophrenic patients or 55 percent and 5 female schizophrenic patients or 45 percent of Atypical Neuroleptics Group.

Comparison of status between ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group shows the marital status of both groups. Where all of the schizophrenic patients in ECT & Atypical Neuroleptics Group are single. However 2 of schizophrenic patients or 18 percent in Atypical Neuroleptics Group are married and 9 schizophrenic patients or 82 percent of the Atypical Neuroleptics Group are single. In this study, there are 2 schizophrenic patients or 9 percent of married schizophrenic patient and 20 schizophrenic patients or 91 percent of unmarried schizophrenic patients in this study.

Comparison of employment between ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group shows that 19 schizophrenic patients or 86 percent of the schizophrenic patients in this study are unemployed. ECT & Atypical Neuroleptics Group have 10 schizophrenic patients or 91 percent of unemployment and 1 schizophrenic patient or 9 percent of employment. As for Atypical Neuroleptics Group, there are 2 schizophrenic patients or 18 percent of employed schizophrenic patients and 82 percent or 9 unemployed schizophrenic patients.

Comparison of clinical history between ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group shows the duration of illness in ECT & Atypical Neuroleptics Group are about 10.09 years with standard deviation of 6.07 and 13.36 years with standard deviation of 8.19 for Atypical Neuroleptics Group. In average, schizophrenic patients of ECT & Atypical Neuroleptics Group have 3.09 times of hospital admission with

standard deviation of 1.04. In average, Atypical Neuroleptics Group have 3.09 times of hospital admission with standard deviation of 1.45. At the inclusion point, the schizophrenic patients of ECT & Atypical Neuroleptics Group have approximately 40.55 BPRS scores with standard deviation of 7.65 and Atypical Neuroleptics group have 41.45 BPRS scores with standard deviation of 7.06.

Clinical Information :

Comparison of BPRS between ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group at week 0 and 6 are not statistically significant but during week 1-4 have a statistic significant at $P< 0.01$. Whereas, during week 5, the difference of these 2 groups have a statistic significant at $P<0.05$.

The result shows that rate of improvement in BPRS score of both groups, ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group have a statistic significant at $p<0.01$. However, between week 5 - 6 of ECT & Atypical Neuroleptics Group, the statistic significant is at $P<0.05$. The rate of improvement in both groups, decreases as time passed. For example, during the time between week 0 -1, the rate of improvement is 13.82 in ECT & Atypical Neuroleptics Group and 7.73 in Atypical Neuroleptics Group. But during week 5 - 6, the rate of improvement goes down to 0.45 in ECT & Atypical Neuroleptics Group and 2.27 in Atypical Neuroleptics Group.

The figure comparison of BPRS between ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group shows that the BPRS of ECT & Atypical Group decrease in a more rapid rate then Atypical Neuroleptics Group. However, the decreasing rate start to slow down at the 2nd. week of the experiment. Whereas BPRS of Atypical Neuroleptics Group decrease with a constant rate throughout the experimental period. At the 6th week, BPRS score are approximately the same in both groups.

The BPRS score of ECT & Atypical Group shows that all schizophrenic patients in ECT & Atypical Neuroleptics Group have the similar pattern of BPRS scores.

However, the schizophrenic patients who start out with a higher score, have a faster rate of decreasing during the first two weeks. After the second week, every patients have a constant rate of scores. The pattern of BPRS score in Atypical Neuroleptics Group shows the decreasing rate of BPRS score in every schizophrenic patients are constant throughout the experimental period. At the 6th week, every patients end up at the same level of score.

The monitoring of side effects in both groups of treatments, in which, the UKU scores of ECT & Atypical Neuroleptic Group are generally higher than Atypical Neuroleptics Group. Also in both groups, the female patients have slightly higher scores than male patients.

Comparison of UKU Side Effects Rating Scale between ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group shows that the monitor of UKU side effects rating scale in Atypical Neuroleptics Group are a bit higher at the starting point (week 0), but after that, the score fluctuate throughout experimental period. As for ECT & Atypical Neuroleptics Group, UKU score remain more constant and higher than Atypical Neuroleptics Group. However during week 1-6, the comparative groups did not have statistic significant to their differences; only a statistic significant at $P<0.05$ at the starting point of the experiment.

In overall, the most common side effects monitored during the experiment were fail memory, depression, tension / inner unrest, increased duration of sleep, hypokinesia / akinesia, polyuria / polydipsia, weight gain, and headache.The most common side effects in ECT & Atypical Neuroleptics Group are fail memory and headache. And for Atypical Neuroleptics Group are weight gain and polyuria / polydipsia.

Rate of improvement in QL-Index shows that ECT & Atypical Neuroleptics Group have 1.18 rate of improvement which have statistic significant at $P<0.01$. Atypical Neuroleptics Group's rate of improvement is 1.0 and also have a statistic significant at $P<0.01$. However, comparison in rate of improvement between two group of treatments are different insignificantly.

Discussion of Results

1.*The efficiency comparison between combination treatments of electroconvulsive therapy (ECT) and atypical neuroleptics (Olanzapine) with single treatment of atypical neuroleptics (Olanzapine).*

As a result, the comparison was statistically significant in their differences during week1 to week5, which was similar to several of previous studies.[60,65] The initial phase's (week 0) insignificant different, means that both combination treatments and single treatment groups have the homogenous character of clinical signs and symptoms during the starting point of this study. In other word, both groups were started at the similar level of psychopathology. The insignificant during the last week (week 6) of intervention could be interpreted that both, combination treatment and single treatment groups also ended up with the similar level of psychopathology. However during the intervention of this study, one of the patient in single treatment group received additional treatment of electroconvulsive therapy due to her symptoms relapsed.

The Brief Psychiatric Rating Scale score of combination treatment group decreased in a more rapid rate than single treatment group. However, the decreasing rate started to slow down for the combination treatments group of electroconvulsive therapy and atypical neuroleptics, but the single treatment of atypical neuroleptics still decreased in a constant rate throughout the intervention period and potentially, continuously decreasing, which, supported previous studies.[58,66]

From these results, both treatments are beneficial for schizophrenic patients biologically. Combination treatment can rapidly decrease patient's psychopathology causing a shorter hospitalization, which can be beneficial for patients, their family, and the hospital by increase the flow of hospital bed and admission capacity.

This study only use Brief Psychiatric Rating Scale (BPRS) for clinical measurement, in which, increased strength of measurement can be done by include additional measuring material to see the correlation of 2 materials and can be data confirmation. Researcher would like to recommend the Positive and Negative Syndrome Scale (PANSS) which can measure in a more specific symptoms.

The quality of life improved statistically significant in both combination treatment group and single treatment group. By which, both comparative groups improved in quality of life that were in similar level of improvement which made it statistically insignificant. Therefore either of these treatments were beneficial for the patient in psychosocial aspect. However, this study measure quality of life only before and after the intervention period which were not specifically monitored the exact time in quality of life improvement. Therefore, weekly monitored in quality of life are recommended for future studies.

2.*The comparison of side effects between the combination treatment of electroconvulsive therapy (ECT) and atypical neuroleptics (Olanzapine) with single treatment of atypical neuroleptics (Olanzapine) in schizophrenic patients.*

As a result, there were no statistic significant in any of the intervention period, since the sample size of this study were not enough to qualified for a result of statistic significant During the intervention, there were no severe side effect to discontinued neither a combination treatment of ECT with atypical neuroleptics nor single treatment of atypical neuroleptics. Therefore, both group of treatments were safe for the schizophrenic patients.

Some of the side effects in The UKU Side Effects Rating Scale (UKU) are specifically for either male or female, in which, researcher had made data table (table 9) to see the different between male and female patients in both group of treatments. In using The UKU Side Effects Rating Scale, researcher only observed and interviewed the patients. However, some of the side effects recommend additional measuring equipment such as weight measurement for weight gain side effect and measuring tape for gynaecomastia side effect.

This study can only monitored the side effect of treatments but can not strictly compare the side effect between the two treatment's groups due to small sample size and the residue side effects from previous treatments of the patients. In order to study the comparison of side effects between two treatments. The increasing of sample size are needed and the subject patients should never receive any psychiatric treatments in order to eliminate the factors of residual side effects and have a UKU score of zero point at the starting of treatment.

Once again, the researcher hopes that this study could be beneficial to others and somehow could bring to other future advancements of schizophrenia treatment.

Recommendation for Further Study

1. Comparitive study between combination of typical neuroleptics and electroconvulsive therapy with atypical neuroleptics in schizophrenic patient.

2. Comparitive study between maintenance therapy of electroconvulsive therapy and low dose of atypical neuroleptics with maintenance therapy of electroconvulsive therapy and regular dose of typical neuroleptics in shcizophrenic patients.

3. Comparitive study of extrapyramidal side effects in atypical neuroleptics with combination treatment of electroconvulsive therapy and typical neuroleptics in schizophrenic patients.

4. Comparative study of quality of life in combination in electroconvulsive therapy and atypical neuroleptics with atypical neuroleptics in refractory schizophrenic patients

5. The comparative of relapse in combination treatments of electroconvulsive therapy and atypical neuroleptics with monotherapy of atypical neuroleptics.

6. Comparative study of cost economics between atypical neuroleptics with combination treatment of electroconvulsive therapy and typical neuroleptics in schizophrenic in-patient.

7. Comparative study of cognitive side effects between combination treatment of electroconvulsive therapy and atypical neuroleptics with single treatment of atypical neuroleptics in schizophrenic patient.