ELECTROPHYSIOLOGICAL DIAGNOSIS, ABLATION THERAPY FOR ARRHYTHMIA IN MONGOLIA

Mendsaikhan Purevjav
Khurelbaatar Mungun-Ulzii
Tsevendee Saruul
Dagdan Battaran
Edilkhan Dosjan
Erkhembaatar Byambajav
Tur Gerelmaa
Tumurbaatar Gansukh

Introduction: For many years antiarrhythmic drugs were only available treatment for arrhythmias in Mongolia. Since 2016, catheter ablation therapy became available, as the first Electrophysiology laboratory was established, and Initial rhythmology team was formed based at Third State Central Hospital. As the only functioning electrophysiology laboratory in Mongolia, the rhythmology team of the Third State Central Hospital, together with Asia Pacific Heart Rhythm Society (APHRS) and Silk Road Heart Rhythm Society (SRHRS) performed 187 ablations during the past 4 years. We performed this study to analyze the epidemiological characteristics and electrophysiological findings in patients who have received diagnostic and treatment procedures by the rhythmology team of the Third State Central Hospital.

Methods: This descriptive study was completed based on electrophysiological procedure recordings of patients who have received electrophysiology study and ablation therapy at the Third State Central Hospital, Mongolia, during January 2016 to January 2019. The ablation procedures were assessed and classified according to the arrhythmias induced using standard electrophysiological techniques and definitions. Immediate success and complication rates were included in the database as well as phone follow up was done to screen the reoccurrence of arrhythmias.

Result: A total of 187 patients received electrophysiological procedures between January 2016 to January 2019. The mean age 43.4 ± 15.6 years and 47% were males. Seven patients underwent two ablation procedures for coexisting arrhythmia, bringing the total number of procedures to 194. The type and distribution of the ablation procedures were atrioventricular nodal re-entry tachycardia ablation 47%, accessory pathway ablation 37.7%, ventricular tachycardia ablation 3.3%, atrial fibrillation ablation 2.6%, other types of ablation 6.6%. There was a strong relationship between age and SVT mechanism, the proportion of AVRT in both sexes decreases with age, whereas AVNRT and AT increases (p < 0.003). The overall success rate was 98.1% with major complications rate of 1.1% (2 cases of complete AV block needing implantation of pacemaker, 1 case of cardiac tamponade) and there was no mortality.

Mean procedure duration was 78 ± 50 minutes for AVNRT, 87 ± 68 minutes for AVRT and 260 ± 129 minutes for atrial fibrillation ablation. Recurrence of documented tachyarrhythmia rate was 7.9%.

Conclusion: This is first report from the single functioning electrophysiology laboratory in Mongolia. In assistance with international teams rapid increase in skills of the local team was achieved. The team is
aiming at further increasing the skills and initiation of advanced electrophysiologic diagnosis and therapy.