

厚生労働科学研究費補助金難治性疾患等政策研究事業（難治性疾患政策研究事業）
小児期・移行期を含む包括的対応を要する希少難治性肝胆膵疾患の調査研究
分担報告書(1)

Logistic regression analysis of congenital biliary atresia in 2017 & 1995-2017

Co-researcher: Prof.Dr.med.Toshiko Sawaguchi, M.D.,Ph.D.,Bachelor of Law
Tokyo University & Graduate University of Social Welfare

Abstract: To compare the situation of congenital biliary atresia in Japan between in 2017 & during 1995-2017, logistic regression analysis was performed. The numerical data were extracted from the open data by Japanese Biliary Atresia Society (<https://jbas.net/>). The logistic regression analysis was performed using SAS9.4EG7.2. Binary distribution, logit model, Newton-Raphson with Ridging as the optimization method, variable selection as the variable decreasing method were selected for logistic regression analysis. Adjusted R square value was 0.5018. Odds value of age of the patients at the transplant operation was 2.20(p=0.0276), 95%CI[3.1377-53.3678].

A. Aim of Research

The aim of this study is to compare the situation of congenital biliary atresia in Japan between in 2017 & during 1995-2017 using logistic regression analysis. (Ethical Consideration) The numerical data were extracted from the open data by Japanese Biliary Atresia Society (<https://jbas.net/>). These data do not include the individual information without no individual sheet and already half-statistically treated.

This open data were free to the public since 1995.

B. Materials & Methods of Research

The numerical data were extracted from the open data by Japanese Biliary

Atresia Society (<https://jbas.net/>). The logistic regression analysis was performed using GLM in SAS9.4EG7.2 by Prof.T.Sawaguchi with the following conditions,

- 1) dependent variable – numerical data belonged in 2017 or numerical data belonged during 1995-2017(2 or 1),
- 2) independent variables- 2-
 - 1) quantitative data shown by 71 categorical data nested by 9~18 categorical data as branches, re-nested by 2~18 categorical data as sub-stems and re-nested by 8 categorical data as the stem and 2-
 - 2) qualitative categorical data nested by 9~18 categorical data as branches, re-nested by 2~18 categorical data as

subsystems and re-nested by 8 categorical data as the stem, & 2-3)4 categorical variables by preoperation, during operation, postoperation and using immunosuppressors,

- 3) Binary distribution, Logit model, Newton-Raphson with Ridging as the optimization method, Variable selection as the variable decreasing method.

C.Results

The convergence standard was satisfied. Adjusted R square value was 0.5018.

Odds value of age of the patients at the transplant operation was 2.20($p=0.0276$),95%CI[3.1377-53.3678]. 95%CI was rather wide.

D.E.Discussion and Conclusion

In 2017, the progression associated with the age of patients of congenital biliary atresia operation in Japan was shown with comparison than before.

F.Research Presentation

論文発表

1. Toshiko Sawaguchi. Logistic regression analysis of congenital biliary atresia in Japan in 2017 & 1995-2017. 75S:S164.2020
2. Sawaguchi T*. Multi-level analysis of symptoms after exposure opened by

JAPAN POISON INFORMATION

CENTER-with multi-visional prospects within multi-level framework. Reviews on Environmental Health 2020-21 in print (after resubmission)

3. Sawaguchi T*, Okamaoto E: *The Data Management for High-risk Groups (including Abuse and DV) in Mother-Child and Pediatric Healthcare and the Study of Related Issues.IMJ 26(6)1-3 2019

4. Fukuchi T, Sawaguchi T *, Ikeda D, Kawahara K,etal: Lifetime Administrative Prospects for Emergency Survival Rate after Traffic accidents The IMJ. 25(4) 2020

学会発表

1. Sawaguchi T: Abroad vocabulary survey of medical safety training and its skill. 89th Annual Congress of Japanese Society of Hygiene 2019, 2019 2:3; Nagoya.Jpn J of Hygiene 73(S) 2019 general oral presentation2019
2. Sawaguchi T: World Drug Report 2017 associated with Opioids. 89th Annual Congress of Japanese Society of Hygiene 2019, 2019:2.3;Nagoya.Jpn J of Hygiene 73(S) 2019 general oral presentation, 2019
3. Sawaguchi T : Comparison between newborn mice & adult mice associated

- with orexin and orexin receptor. 89th Annual Congress of Japanese Society of Hygiene 2019, 2019:2:3; Nagoya. Jpn J of Hygiene 73(S) 2019 general oral presentation, 2019
4. Sawaguchi T: Children at Healthy Japan 21 with an Analysis of the Indicator Framework. 89th Annual Congress of Japanese Society of Hygiene 2019, 2019:2:3; Nagoya. Jpn J of Hygiene 73(S) 2019 general oral presentation, 2019
5. Sawaguchi T: Sociomimetics approach for parent & child health 21. The 29th Annual Meeting of the Japanese Association of Epidemiology; 2019:1.31; Tokyo Program. p.33 抄録あり, 2019
6. Sawaguchi A, Sawaguchi T. Sociomimetics approach for parent & child health 21 second report. The 29th Annual Meeting of the Japanese Association of Epidemiology; 2019:1.31; Tokyo Program. p.33 抄録あり, 2019
7. Takahashi M, Sawaguchi T. Sociomimetics approach for maternal & child health 21 third report. The 29th Annual Meeting of the Japanese Association of Epidemiology; 2019:1.31; Tokyo Program. p.33 抄録あり, 2019
8. 澤口聡子、白田由香利、橋本隆子. 世界の国々の GINI 係数と neonatal mortality の経時的変化分析—Shape Analysis による affin/nonaffin 分割—. DEIM2019 第 11 回データ工学と情報マ
- ネジメントに関するフォーラム 長崎 2019. 2 DEIM Forum 2019 D1-4 抄録あり <https://dbevent.jpn.org/deim2019/post/papers/210.pdf> 2019
9. T. Sawaguchi V-063 Session for genetic editing technology (2) Future of Schlüsselgewalts on the genome 1 Tokyo University of Social Welfare, Dept. of Social Welfare, Sannou-chou Isezaki, Japan [https://www.dgrm2019.de/InternationaleJahrestagungderDeutschenGesellschaftfürRechtsmedizin\(DGRM\)WissenschaftlichesProgrammHamburg,17.-21.September2019](https://www.dgrm2019.de/InternationaleJahrestagungderDeutschenGesellschaftfürRechtsmedizin(DGRM)WissenschaftlichesProgrammHamburg,17.-21.September2019)
10. T. Sawaguchi. Session for genetic editing technology (1) Future of human natural genetic resources 1 Tokyo University of Social Welfare, Dept. of Social Welfare, Isezaki, Japan [https://www.dgrm2019.de/InternationaleJahrestagungderDeutschenGesellschaftfürRechtsmedizin\(DGRM\)WissenschaftlichesProgrammHamburg,17.-21.September2019](https://www.dgrm2019.de/InternationaleJahrestagungderDeutschenGesellschaftfürRechtsmedizin(DGRM)WissenschaftlichesProgrammHamburg,17.-21.September2019)
11. T. Sawaguchi V-065 Genome editing and Eugenic thought in Japan 1 Tokyo University of Social Welfare, Dept. of Social Welfare, Sannou-chou Isezaki, Japan [https://www.dgrm2019.de/InternationaleJahrestagungderDeutschenGesellschaftfürRechtsmedizin\(DGRM\)WissenschaftlichesProgrammHamburg,17.-21.September2019](https://www.dgrm2019.de/InternationaleJahrestagungderDeutschenGesellschaftfürRechtsmedizin(DGRM)WissenschaftlichesProgrammHamburg,17.-21.September2019)

- www.dgrm2019.de/Internationale
 Jahrestagung der Deutschen
 Gesellschaft für Rechtsmedizin
 (DGRM) Wissenschaftliches Programm
 Hamburg, 17.-21. September 2019
- Held during 19th-20th September in 2020.
- G.Application and Registration of
 Patents
 Nothing
12. Sawaguchi T. Regression analysis
 with autoregressive errors of symptoms
 after poison exposure. The 90th Annual
 Meeting of the Japanese Society of
 Hygiene.27th March 2019
13. Sawaguchi T. Logistic regression
 analysis of congenital biliary atresia in
 Japan in 2017 & 1995-2017. The 90th
 Annual Meeting of the Japanese
 Society of Hygiene.27th March 2019
14. Sawaguchi T (Graduate School of
 Tokuba University) Solvability by
 loss via Healthy Parents & Children
 21.The 78th Annual Meeting of the
 Japanese Society of Public Health.25th
 October 2019
15. Sawaguchi T Methodology and
 Evaluation of Potential Medical Expense
 Calculation in Pediatric Surgery.The 57th
 Annual Congress of the Japanese Society of
 Pediatric Surgeons. Acceptance at 15:01 in
 Japanese time on 13/2 in 2020.
- Held during 19th-20th September in 2020.
16. Sawaguchi T. Methodology and
 Evaluation of Latent Medical Cost Calculation
 in Pediatric Surgery-Comparison with
 Existing Methodologies. Acceptance at 15:01
 in Japanese time on 13/2 in 2020.