2021 Best Research Poster Award

Barwon Health

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Risk factors associated with epilepsy in children and adolescents: A case-control study from Syria

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INTRODUCTION

Epilepsy is a major public health concern in low-income countries as they contain 80% of total cases worldwide [1]. Syria has been in war since 2011 which has negatively impacted living conditions and resulted in a high human cost which eroded the healthcare system. Malfunction of medical equipment, and public transportation were among the main obstacles inhibiting healthcare access in Syria which made it even more difficult to prevent the risk factors of epilepsy in the last years [2, 3].

OBJECTIVES

This is a frequency-matched case-control study which aims to identify significant risk factors of epilepsy in infants, toddlers, children, and adolescents in Syria.

METHOD

This is a case-control study from 3 medical centres in Damascus, Syria. Data were collected using questionnaires introduced by trained doctors. The control group included patients from a general practice clinic while cases were taken from the three paediatric neurology clinics.

RESULTS

The sample consisted of 334 patients with 167 cases and 167 controls. Multivariable analysis confirmed the association between positive family history in 1st degree (OR, 3.37, 95%CI 1.2 -9.47) and 2nd degree relatives (OR, 3.98, 95%CI 1.84-8.62), febrile seizures whether they were simple (OR, 15.08, 95%CI 3.27 -69.5) or complex (OR, 13.32, 95%CI 1.58 -112.32), developmental delay/regression (OR, 14.31, 95%CI 6.3 -32.49), and CNS infection (OR, 34.05, 95%CI 2.02-573.92). Head trauma, parental factors, consanguinity, asphyxia parameters and other risk factors were not found to be significantly associated with epilepsy (P>0.05).

DISCUSSION

We found several factors to be associated with epilepsy; having a positive family history in first and/or second degree, having a history of simple or complex febrile seizure, being bluish or delayed crying at birth, having a history of CNS infection or malformation, and having development delay and/or regression were all found to be significantly associated with epilepsy.

CONCLUSION

While some results were similar to other studies, others were not. Efforts should be made to facilitate healthcare access and proper diagnosis.

REFERENCES & ACKNOWLEDGEMENTS

1. (WHO) WHO. Epilepsy 2019 [Available from: https://www.who.int/news-room/fact-sheets/detail/epilepsy.
2. (WHO) WHO. Seven years of Syria's health tragedy 2018 [Available from: https://www.who.int/mediacentre/news/releases/2018/seven-years-syria/en/.
3. Kherallah M, Sahloul Z, Jamil G, Alahfez T, Eddin K. Health care in Syria before and during the crisis. Avicenna journal of medicine. 2013;3(2):51-3.

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