IMJ
Official Journal of the Irish Medical Organisation

Ir Med J; February 2022; Vol 115; No. 2; P534

February 17th, 2022

The Fetal Alcohol Spectrum Disorder (FASD) UK Report

J.F.A. Murphy - Editor of the Irish Medical Journal

There has been a recent UK report on the current status, understanding, and challenges of fetal alcohol spectrum disorder (FASD)[1]. FASD is a broader term than fetal alcohol syndrome (FAS) and it includes those affected by antenatal exposure to alcohol but do not fulfil the full criteria for FAS. The full criteria being antenatal growth retardation, facial dysmorphology, central nervous system dysfunction, and neurobehavior disabilities.

There have been debates for many decades whether FASD is rare or whether it is rarely diagnosed. The problem is that there is no diagnostic test that confirms the presence of the condition. The diagnosis is based on the history of antenatal exposure to alcohol and the clinical and developmental findings. In Irwin and Sharif's[2] survey of Irish paediatricians, 40% of respondents stated that they asked about alcohol intake in pregnancy in the context of a child presenting with developmental delay.

There are many challenges in identifying children with the disorder[3]: there is the lack of professional training, there are the complexities around making the diagnosis, there is the uncertainty around what is considered a harmful level of alcohol in pregnancy and there is the long interval between the antenatal exposure and the subsequent diagnosis of neurodevelopmental difficulties. The establishment of a central organisation for FASD is recommended.

In the future there is potential of using ethanol biomarkers in infants meconium samples. Alcohol is metabolised by the fetal liver to fatty acid ethyl esters (FAEEs). A pilot study of 235 infants from the west of Scotland suggested that 15% of pregnant women were consuming significant quantities of alcohol during later stages of the pregnancy[4].

Fetal alcohol syndrome was first described in 1973 by Jones and Smith[5]. They reported four children with neurodevelopmental delay who had similar clinical features. They were growth deficient and had microcephaly, similar facies, and cognitive delay. The common factor was that their mothers drank heavily during the pregnancy. The authors concluded that alcohol was a potential teratogen.

There is now a better understanding of how alcohol exposure affects the fetus. The alcohol crosses the placenta and results in nearly equal concentrations in the mother and the fetus. In addition, the alcohol taken by the mother passes through the placenta and diffuses rapidly into the amniotic fluid. It is removed more slowly than the mother eliminates it from her own system. This reservoir of alcohol is swallowed by the fetus and enters their systemic circulation. The fetus has limited powers to metabolise alcohol and its effects are more prolonged.

It is not known what level of alcohol is toxic to the fetus. The advice from HSE is clear, no amount of alcohol at any stage of pregnancy is safe for your baby. The HSE offers a module called 'Hidden Harm' which outlines the adverse effects of alcohol and drug use in pregnancy on the fetus.

Every mother presenting at their first antenatal visit is asked by the midwife about their prescribed medication, alcohol, and recreational drug use. If there is a disclosure made regarding alcohol use, a referral is made to the social work department. A subsequent assessment which includes psychological and social factors is undertaken. Where necessary, the liaison midwife linked to the addiction services becomes involved in the provision of support, advice, and services to the mother.

The prevalence data on FASD is confusing with widely different rates being reported in different studies. Lange et al[6], in an analysis of 24 unique studies consisting of 1,416 affected children calculated a prevalence rate of 7.7 per 1,000. Clearly the rates differ in different countries depending on the cultural attitudes towards alcohol.

The Royal College of Paediatrics and Child Health (RCPCH) has commenced a study to determine the incidence of FAS in the UK and Ireland. It will also investigate the available services, and the awareness of the condition among doctors.

The case definition is the presence of all three of the following: facial features – smooth philtrum, thin upper lip, short palpebral fissures, poor growth – in utero less than the 10th centile and postnatal failure to thrive, structural or functional brain abnormality – head circumference < 10th centile, developmental delay, and abnormal neurological signs.

As yet there is no single agreed set of guidelines for the diagnosis of FASD. There are currently at least five different alternatives in use. The ones that have emerged as potentially the best are the Canadian advisory group on FASD[7] and the Scottish 2019 Sign[8].

Prevention can be implemented at a number of levels. Primary prevention is aimed at increasing public awareness about the dangers of alcohol in pregnancy to the fetus. Secondary prevention which involves targeted screening and support for women at increased risk of excess alcohol exposure during the pregnancy. Tertiary prevention is the provision of support and services for women with the likelihood of another pregnancy with FASD.

The Report emphasises the need to develop innovative approaches to support and treat those living with the condition.

References:

1. Department of health and social care. Guidance. Fetal alcohol spectrum disorder: health, needs, assessment Sept. 2021. www.gov.uk/government/publications/fetal-alcohol-spectrum-disorder-health-needs-assessment/fetal-alcohol-spectrum-disorder-health needs-assessment.
2. Gill I, Sharif F. Out of sight, out of mind: A national survey of Paediatricians in Ireland regarding fetal alcohol spectrum disorder. Ir Med J 2017;110(3):528
3. Aiton A. Neglect of fetal alcohol spectrum disorder must end. BMJ 2021;375:n2969
4. Abernethy C, McCall KE, Cooper G et al. Determining the pattern and prevalence of alcohol consumption in pregnancy by measuring biomarkers in meconium. Arch Dis Child Fetal Neonatal Ed 2018;103(3):F216.
5. Jones KL, Smith DW. Recognition of fetal alcohol syndrome in early infancy. Lancet 1973;302: 999-1001.

6. Lange S, Probst C, Gmeil G, Rehm J, Bard C, Popova S. Global prevalence of fetal alcohol disorder among children and youth: a systematic review and meta-analysis. JAMA Pediatrics 2017;171(10):948-956
7. Canada FASD research network. www.canfasd.ca/topics/diagnosis
8. Scottish intercollegiate guidelines network. Sign 156. Children and young people exposed prenatally to alcohol 2019.