Tetrahydrocannabinol usage in drug resistant epilepsy

Sajeed Ali[1]
Alasdair PJ Parker[2]

1 School of Clinical Medicine, University of Cambridge, Cambridge; **2** Department of Paediatric Neurology, Addenbrooke's Hospital, Cambridge, UK.

Drug resistant epilepsies (DRE) in childhood are devastating disorders causing stress and grief to families. It is understandable that these families may go to great lengths to try treatments that they perceive may be of benefit to their child. We read with interest Ali et al.'s review of the efficacy of cannabinoids in paediatric epilepsy including cannabidiol (CBD) and tetrahydrocannabinol (THC).[1]

Current literature focuses primarily on the efficacy of CBD in the treatment of paediatric epilepsy. The prescription of THC for epilepsy in children is an area of intense social and other media coverage, with consequent stress for politicians, parents, and paediatricians. The administration of parent-sourced therapies for children with neurological disorders is widespread.[2] Many parents do not consider preparations developed outside of good manufacturing practice (GMP) or good distribution practice (GDP) standards as alternative or complementary.[2] In our tertiary centre, we have found that parents may be confused when a paediatrician declines to support prescription.

THC may be provided as a monotherapy or in combination with CBD. The most popular preparations containing THC for which supply was requested by families attending our tertiary centre were unlicensed, with varying amounts of THC and CBD. Clinicians were unsure whether they were produced with GMP/GDP. We were unable to calculate the amount of THC in recreational marijuana cigarettes ('joints'), to compare with these preparations, as reports of the former's composition varied widely.

The National Institute of Clinical Excellence (NICE) is undertaking a review of medical cannabinoid usage including both THC and CBD, which we entirely support. In our centre, parents have declined CBD as they believed THC was needed, but in our review of THC monotherapy only two results were found. One case series demonstrated the use of delta-9-THC,[3] and the other used synthetic THC (dronabinol).[4] Although seizure frequency reduced, the quality of evidence was poor and would be insufficient in our centre to allow prescription. There was little evidence of change in seizure severity, quality of life, side

effects, or long-term complications in children, rather than animal models. Conversely, there is evidence of the deleterious effects of THC in some situations, and potential reduction in these with concurrent administration of CBD.[5]

We note the position statement prompted by NHS England via the British Paediatric Neurology Association (BPNA) on cannabinoids, including GMP/GDP.[6]

We support the NICE systematic review, but note the lack of randomized controlled trial data comparing THC against placebo or current antiepileptic drugs and an absence of clarity regarding short- and long-term effects of giving THC to infants/children with DRE. We are concerned that a possible outcome may be that evidence for the use of THC is sparse and needs further research before doctors can prescribe it for their patients, as outlined by the BPNA.[6]

If so, either NICE or another national body should produce clear guidance on processing requests for prescription of unlicensed preparations and/or preparations which have inadequate evidence of efficacy/safety. This should report which GMP/GDP standards must be adhered to and why paediatricians can not support these requests. This must be in a format that is easily disseminated to the media/social media, and is accessible and understandable for all of the multidisciplinary team caring for children with DRE – the most important members being the parents/carers. This would allow politicians, parents, and paediatricians to once again work in a very constructive manner, and to help vulnerable families affected by DRE and other devastating neurological disorders.

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