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INCIDENCE OF ACUTE ANGLE CLOSURE GLAUCOMA IN THE NORTHERN IRELAND DIABETIC EYE SCREENING PROGRAMME

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and the healthcare team and emphasises the need for good communication, to improve health literacy amongst PwCF and improve patient safety when travelling.

Travel recommendations to PwCF should be a synthesis of the concerns articulated by the PwCF, as well as recommendations from the CF healthcare team. In order to support these, we have prepared a new and novel short animation entitled “*All aboard – Travel Recommendations with Cystic Fibrosis*”⁷ to help guide PwCF considering travelling.

The arrival of SARS CoV-2 in early 2020 and post-BREXIT arrangements have further transformed and confounded the travel landscape for PwCF. CF multidisciplinary teams should be aware of these patient-articulated factors that may still limit travel opportunities for those patients who are clinically fit-to-travel and should attempt to engage with the relevant stakeholders through enhanced communication to help facilitate travel arrangements for PwCF.

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CONFLICT OF INTEREST:

None

AVAILABILITY OF DATA AND MATERIAL

None available

COMPETING INTEREST

None

REFERENCES

1. Pachas D. Not Letting CF Hold Me Back From Traveling. [monograph on the Internet]. Bethesda, MD: Cystic Fibrosis Foundation; 2021. [cited 2021 Nov 11]. Available from <https://www.cff.org/community-posts/2021-08/not-letting-cf-hold-me-back-traveling>. [Last accessed Jan 2022]
2. Miller R, Blanch L, Lenaghan S, Anderson A, Doe S, Bourke SJ. Travelling abroad with cystic fibrosis: Assessment of risks and healthcare requirements. *Respir Med*. 2017;125:92-3. doi: 10.1016/j.rmed.2017.01.007.
3. Cystic Fibrosis Trust. Going on holiday with cystic fibrosis. [monograph on the Internet] [cited 2021 Nov 11]. Available from <https://www.cysticfibrosis.org.uk/the-work-we-do/support-available/going-on-holiday>. [Last accessed Jan 2022].
4. Josephs LK, Coker RK, Thomas M; BTS Air Travel Working Group; British Thoracic Society. Managing patients with stable respiratory disease planning air travel: a primary care summary of the British Thoracic Society recommendations. *Prim Care Respir J*. 2013;22(2):234-8.
5. Ahmedzai S, Balfour-Lynn IM, Bewick T, Buchdahl R, Coker RK, Cummin AR, *et al*. British Thoracic Society Standards of Care Committee. Managing passengers with stable respiratory disease planning air travel: British Thoracic Society recommendations. *Thorax*. 2011;66:Suppl 1:i1-30. doi: 10.1136/thoraxjnl-2011-200295.
6. Hirche TO, Bradley J, d’Alquen D, De Boeck K, Dembski B, Elborn JS, *et al*. European Centres of Reference Network for Cystic Fibrosis (ECORN-CF) Study Group. Travelling with cystic fibrosis: recommendations for patients and care team members. *J Cyst Fibros*. 2010;9(6):385-99.
7. Cystic Fibrosis CF Education. “All aboard. Travel recommendations for cystic fibrosis (CF). Belfast: Cystic Fibrosis CF Education; 2022 Jan 7 [cited 2021 Jan 15]. Video 1.46 min. [Last accessed Jan 2022].

INCIDENCE OF ACUTE ANGLE CLOSURE GLAUCOMA IN THE NORTHERN IRELAND DIABETIC EYE SCREENING PROGRAMME

Editor,

This project aimed to ascertain the risk of acute angle closure (AAC) after the administration of tropicamide within the Diabetic Eye Screening Programme Northern Ireland (DESPNI). DESPNI provides a regional screening service to all of those with diabetes mellitus in Northern Ireland. There are 112000 patients on the register, of these 87 000 have regular annual eye screening using fundus photography.¹ At DESPNI, mydriasis using tropicamide can improve the quality of fundus images obtained. AAC is a rare complication of mydriasis, estimated risk of 0.3–



0.03%, and is an ophthalmic emergency that might lead to permanent visual loss if left untreated.² During 2007-2010, of the 95265 DESPNI episodes with Tropicamide dilation, 2 cases were identified, giving the risk of 1 in 31755 and annual incidence was 0.75 cases.³ The recommendations to DESPNI included clear instructions of AAC symptoms and emphasising the need for urgent treatment should they occur. This was after peer-to-peer education regarding AAC awareness in ophthalmic screening healthcare programme.

This audit aims to assess the incidence and management of AAC occurring within 72 hours of DESPNI attendance with tropicamide mydriasis between 01/09/2016 to 28/02/2021. A retrospective case-note review was carried out, cross referencing medical and DESPNI records, to identify relevant AAC episodes occurring within 72 hours of a DESPNI visit with mydriasis. The standards were extracted from 'Ophthalmic Services Guidance Eye Drops Instillation by Unregistered Health Care Professionals for use within NHS Ophthalmic Services'. For this current audit, 159 patients were identified as having had AAC during 01/09/2016 to 28/02/2021. Only one had AAC within 72 hours of DESPNI's tropicamide dilation and was successfully managed. Over the 54 months period of observation, 206334 patients were screening by DESPNI with a dilation rate of approximately 75%, so altogether 154750 patients were dilated. The incidence of AAC within the screening programme was calculated to be 1 event per 154750 episodes. The annual incidence of angle closure was 0.2 cases per year.

This improves our ability to inform patients of the low risk of AAC within DESPNI. The AAC incidence within DESPNI was calculated to be 1 event per 154750 episodes, this is less than reported in other publications such as the population-based Rotterdam Study, where AAC incidence was 3 in 10000 following tropicamide mydriasis.⁴ We advocate the provision of clear instructions to patients in diabetic screening regarding access to emergency ophthalmic care following dilation to prevent visual loss in this rare event.

The authors declare no conflict of interest.

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REFERENCES

1. HSC Public Health Agency. Northern Ireland Diabetic Eye Screening Programme Annual Report. 2016-2017. [monograph on the Internet]. Belfast: HSC Public Health Agency; 2018 Dec 10 [cited 2021 Sep 20]. Available from: <https://www.publichealth.hscni.net/publications/diabetic-eye-screening-programme-annual-report-2016-2017>. [Last accessed Jan 2022].
2. Klein R, Klein BE, Neider MW, Hubbard LD, Meuer SM, Brothers RJ. Diabetic retinopathy as detected using ophthalmoscopy, a nonmydriatic camera and a standard fundus camera. *Ophthalmol*. 1985;**92**(4):485-91.

3. Lagan MA, O'Gallagher MK, Johnston SE, Hart PM. Angle closure glaucoma in the Northern Ireland Diabetic Retinopathy Screening Programme. *Eye (Lond)*. 2016;**30**(8):1091-3.
4. Wolfs RC, Grobbee DE, Hofman A, De Jong PT. Risk of acute angle-closure glaucoma after diagnostic mydriasis in nonselected subjects: the Rotterdam Study. *Invest Ophthalmol Visual Sci*. 1997;**38**(12):2683-7.

STROKE, COVID-19 INFECTION OR HERPES SIMPLEX ENCEPHALITIS: A DIAGNOSTIC DILEMMA

Editor,

We present the challenging case of a 71 year-old healthy woman who presented, during the first wave of the Covid-19 pandemic, with a two day history of headaches, fever, confusion and expressive dysphasia. She had no new respiratory complaints. Her background history was not contributory. She was admitted to a Covid-19 isolation unit and a nasopharyngeal swab for viral PCR was sent to test for SARS-CoV-2. Her examination was notable for expressive and receptive dysphasia, vertical gaze nystagmus, right upper limb pronator drift and a positive Babinski's sign on the right side. She was unable to follow more than one stage commands and exhibited perseverance. There was some fluctuation in her clinical signs initially. She was pyrexial at 37.9 degrees but was otherwise haemodynamically stable.

Initial investigations showed a normal serum WCC and CRP of 19.0. Typical laboratory findings of Covid-19 infection such as lymphopaenia, raised ferritin, deranged liver function tests and raised D-Dimer were absent. An urgent CT brain was completed which showed no acute abnormalities. At this time viral PCR for SARS-CoV-2 returned negative. A lumbar puncture was performed which showed CSF containing WBC 396 per microlitre (differentiation - 87% lymphocytes and 13% polymorphs). The CSF gram stain was negative, glucose was 5.2 mmol/L and protein was 1.12 g/L. Herpes simplex virus 1 was detected on viral PCR. MRI brain showed left temporal and posterior insular oedema with cortical effacement without restriction on diffusion weighted images. (figure).

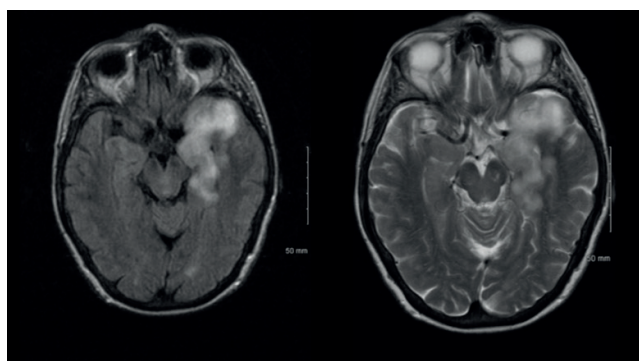


Figure 1.
MRI Brain demonstrating left temporal and posterior insular oedema with cortical effacement without restriction on diffusion weighted imaging.



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