Game Changers

DIAGNOSIS DIZZY?

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The 'dizziness' consultation can be one of frustration for both patient and doctor. At times, the history is clear and the diagnosis evident. However, often this is not the case and trying to glean an accurate history and tie in examination findings to arrive at a diagnosis is challenging. Management varies significantly depending on the cause of the dizziness, so a correct diagnosis is crucial.

Obtaining an accurate history remains the cornerstone of diagnosis. However, we have a useful battery of examinations to aid in making the diagnosis. Technology has also advanced with an effective and user-friendly device for use in the outpatient clinic. Traditional vestibular testing involved returning to the department on a different day to see the specialist Audiologist for Electronystagmography and Calorics testing. These provide limited information about vestibular function and the time, cost and patient disruption they cause are not insignificant. This new technology is VHIT (video head impulse testing). It is a simple device worn like a pair of glasses. Sophisticated hardware and software detects the eye movements on head impulse testing and this gives accurate information on the function of all six semicircular canals. This information is immediately available to the ENT doctor and aids diagnosis. This has proven a Game Changer for the ENT dizziness consultation and allows a diagnosis to be made on the first outpatient attendance, which in turn leads to earlier treatment intervention and fewer review consultations.[1]

1. Yung et al. *Consultant-led, multidisciplinary balance clinic: process evaluation of a specialist model of care in a district general hospital* Clin. Otolaryngol. 2014, 39, 95–101

CAN WE PREVENT PSYCHOSIS? INNOVATIVE SERVICE OFFERS NEW HOPE

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Schizophrenia is one of the top ten causes of disability globally.[1] Recent attention has focused on the importance of early intervention and prevention, and the identification of the prodromal or pre-psychotic phase. Clinical characteristics which define those at increased risk of psychosis (an 'At Risk Mental State' or ARMS) have been explored. These include attenuated psychotic symptoms (such as mumbling sounds), brief limited intermittent psychotic episodes (BLIPS) where definite psychotic symptoms last for less than one week, and trait vulnerability (a first-degree relative with psychosis or personal history of schizotypal personality disorder) plus impairment of social functioning.[2] The risk of transition for those who meet these criteria is 18% at 6 months and 36% at 3 years (meta-analysis; n=2500).[3] Research suggests that effective treatments are available; cognitive-behavioural therapy reduced the rate of transition at 12 months.[4]

The STEP (Service, Treatment, Education and Prevention) Team is an initiative for young people aged 16 to 35 years in the Northern Health and Social Care Trust. This is the only bespoke psychosis prevention service in Northern Ireland and one of only a handful in the UK. Intervention includes a variety of methods, including one-to-one and group-based psychological therapies, and considers the need for medication on an individual basis. The STEP Team is representative of a new paradigm in mental health service provision. By intervening early in order to prevent psychosis from developing or progressing much of the associated disability can be reduced with obvious benefits for the individual and society.

1. WHO. Burden of Mental and Behavioural Disorders. Mental health: new understanding, new hope. World Health Organisation, Geneva, 2001;19-45.

2. The psychosis high-risk state: a comprehensive state-of-the-art review. Fusar-Poli P, Borgwardt S, Beechdolf A et al. *JAMA Psychiatry*. 2013 January;**70(1)**:107–120.

3. Fusar-Poli P, Bonoldi I, Yung AR et al. Predicting psychosis: meta-analysis of transition outcomes in individuals at high clinical risk. *Arch Gen Psychiatry* 2012;**69(3)**:220–229.

4. Stafford MR, Jackson H, Mayo-Wilson E et al. Early interventions to prevent psychosis: systematic review and meta-analysis. *BMJ* 2013;346:f185.

THE SUCCESS OF INTRAVITREAL INJECTIONS

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Age-related macular degeneration (AMD) is the leading cause of visual loss in those over 65 years of age in the developed world. Advanced AMD consists of two forms, dry (geographic atrophy or GA) and wet (neovascular AMD): both can coexist. It is increasingly considered that dry AMD may be the default pathway of ageing. While there is currently no medical treatment for dry AMD, wet AMD can be treated using regular intravitreal injections of anti-vascular endothelial growth factor antibodies (anti-VEGFs) such as ranibizumab and aflibercept. Such treatment preserves visual acuity in most patients by preventing scarring.

Excess VEGF inhibition may contribute to GA. In the Comparison of AMD Treatment Trial (CATT) 1185 participants with wet AMD were treated with anti-VEGFs. For the 1011 with no GA at baseline, the cumulative incidence of GA was 17% at 2 years.[1] It's not clear if this was associated with the pathological progress of AMD, or was an effect of intravitreal anti-VEGFS or was part of

normal ageing. Animal models indicate a physiological role for VEGF secreted by the retinal pigment epithelium in the maintenance of choriocapillaris health, crucial for outer retinal function.[2] However interesting the debate may be, the benefits of anti-VEGFs for most patients should be remembered. In the CATT and in the Inhibition of VEGF in Age-related choroidal Neovascularisation (IVAN) trial,[3] both trials comparing anti-VEGF drugs and regimens for wet AMD, the overall mean visual acuity gain after two years of anti-VEGFs was an impressive three lines of vision on the visual acuity charts used.[1,3] The advent of anti-VEGFs in ophthalmology 10 years ago led to a paradigm shift in the treatment of many retinal diseases, transforming outcomes for patients. Patient centered treatment is an ideal approach, but the present challenge is to optimise regimens for wet AMD for the large number of patients requiring treatment.

1. Grunwald et al. Incidence and Growth of Geographic Atrophy during 5 Years of Comparison of Age-Related Macular Degeneration Treatments Trials. *Ophthalmology*. 2017 Jan;**124(1):**97-104.

2. Saint-Geniez M, Kurihara T, Sekiyama E, Maldonado AE, D'Amore PA. An essential role for RPE-derived soluble VEGF in the maintenance of the choriocapillaris. *Proc Natl Acad Sci U S A* 2009 Nov 3;**106(44):**18751-18756.

3. Chakravarthy U et al. Alternative treatments to inhibit VEGF in age-related choroidal neovascularisation: 2-year findings of the IVAN randomised controlled trial. *Lancet* 2013;**382(9900)**:1258-674.