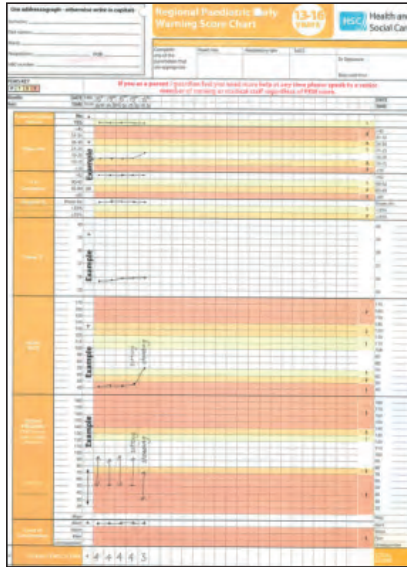


Curiositas - Teenage Kicks

QUIZ 1 - UG quiz



A 13-year-old female presents to the emergency department following a dizzy spell. On examination she is noted to have a significantly low weight. Her observations are as outlined on the chart above.

1. What is the most likely diagnosis?
2. How is this condition managed and what guidelines can be used to guide medical management?
3. Why has there been a rise in incidence since the pandemic?

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QUIZ 2 - PG quiz



A 12 year old girl presents to emergency department after being found collapsed in her bedroom.

1. What abnormality is noted on her ECG and what might this indicate?
2. What is the management of this case within paediatrics?
3. What is the HEEADSSS framework and why might this be useful in assessing adolescents?

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QUIZ 3 - Historical quiz



1. How is this teenager best remembered?
2. What might have added to his risk taking behaviour?

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QUIZ 4 - And Finally...



1. Who are the adolescents depicted on mural A?
2. 'Teenage dreams so hard to beat' (mural B) is a lyric from which song?
3. What significant development in medical education took place in 2021 in the city which links the answers to the above questions?

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CONSIDER CONTRIBUTING TO CURIOSITAS?

Please refer to 'Curiositas: Guidelines for contributors' <http://www.ums.ac.uk/curiositas.html> and email curiositas@ums.ac.uk with your ideas and submissions.



Curiositas: Answers

QUIZ 1

1. This young person is bradycardic, hypotensive and hypothermic with significant postural changes in heart rate suggesting medical instability. Whilst other causes of weight loss and collapse must be considered this presentation is typical of an Eating Disorder (ED). The most likely diagnosis is Anorexia Nervosa. This is the most common ED in young adolescents. Others include Bulimia Nervosa, binge eating and ARFID (avoidant restrictive food intake disorder).¹

2. Management requires a MDT approach with the initial aim to ensure medical stabilisation.² Optimal care is provided in community settings by dedicated ED teams. When medical instability is significant, hospital admission may be required. Physical stabilisation is achieved by refeeding. “*Food is medicine.*”² If the patient refuses feeds the application of the relevant legal framework with psychiatric input may be needed, to deliver life-saving treatment.² The New MEED guidelines were published in 2022 and have replaced the MARSIPAN guidance. They apply to both paediatric and adult patients and provide a framework for assessing medical risk.

3. There was a significant increase in the incidence of ED in young people as a result of the COVID-19 pandemic. Suggested reasons include the disruption of daily and educational routines, social isolation, familial stress and increasing health anxiety.³ Nonetheless, the incidence of ED over the preceding ten years was already rising. A major contributory factor is thought to be the increased usage of social media, and its link to increased body image dysmorphia.⁴

¹ Jafar AJ, Jafar WJ, Everitt EK, Gill I, Sait HM, Tan J. Recognising and managing eating disorders in the emergency department. *Postgrad Med J.* 2023;99(1169):101-11.

² Royal College of Psychiatrists, 2022. Medical Emergencies in Eating Disorders: Guidance on recognition and management. CR233, May 2022. [Internet]. London: Royal College of Psychiatrists; 2022. (cited 2024 Feb 25). Available from: <https://www.rcpsych.ac.uk/improving-care/campaigning-for-better-mental-health-policy/college-reports/2022-college-reports/cr233>

³ Trafford AM, Carr MJ, Ashcroft DM, Chew-Graham CA, Cockcroft E, Cybulski L, *et al.* Temporal trends in eating disorder and self-harm incidence rates among adolescents and young adults in the UK in the 2 years since onset of the COVID-19 pandemic: a population-based study. *Lancet Child Adolesc Health.* 2023; 7(8): 544-54.

⁴ Sanzari CM, Gorrell S, Anderson LM, Reilly EE, Niemiec MA Orloff NC, *et al.* 2023. The impact of social media use on body image and disordered eating behaviors: Content matters more than duration of exposure. *Eat Behav.* 2023; 49: 101722.

QUIZ 2

1. This ECG shows QRS widening and QTc interval prolongation. Causes of these abnormal findings include structural cardiac defects, sodium-channel blocking, and drug toxicity.¹ This patient’s parent reported a history of self-harm and mental health difficulties. Tricyclic antidepressant medications (TCAs) were in her home. TCAs can cause blockade of myocardial sodium channels, making TCA poisoning a probable cause for

intraventricular conduction delay, prolonged QTc interval and arrhythmia in this case.¹

2. This case was managed as suspected TCA overdose. TCAs (including Amitriptyline) are the second most common cause of drug-overdose associated death in the UK.² Wide ranging clinical effects include anticholinergic, cardiovascular, and CNS effects. Prompt recognition and treatment is essential. Gastric lavage and activated charcoal are indicated if within one hour of ingestion. Standard resuscitation procedures are advised including airway management and ensuring haemodynamic stability. Alkalinisation using sodium bicarbonate remains the standard of care. Other specialist management options include potential use of lidocaine, lipid therapy or ECMO in refractory cases.^{3,4} Following intensive medical stabilisation, this patient required crisis mental health assessment and follow up.

3. Home, Education/Employment, Eating, Activities, Drugs, Sexuality, Suicidal ideation and Safety (HEEADSSS) is a recognised psychosocial interview framework that allows a better understanding of a young person’s situation and needs. This tool is regarded as a cornerstone of adolescent care.⁵ It can help highlight areas of risk including in relation to substance misuse, mood and mental health. Prompt recognition of adolescent difficulties can allow earlier targeted intervention and safety planning.

¹ Van Noord C, Eijgelsheim M, Stricker BH. Drug- and non-drug-associated QT interval prolongation. *Br J Clin Pharmacol.* 2010;70(1):16-23.

² Newton, A. Tricyclic antidepressant overdose. *BMJ Best Practice*, 2023 June. London: BMJ Publishing Group; c2021. [updated 2023 June; cited 2023 Jul 27].

³ Body R, Bartram T, Azam F, Mackway-Jones K. Guidelines in Emergency Medicine Network (GEMNet): guideline for the management of tricyclic antidepressant overdose. *Emerg Med J.* 2011;28(4):347.

⁴ Blaber MS, Khan JN, Brebner JA, McColm R. “Lipid rescue” for tricyclic antidepressant cardiotoxicity. *J Emerg Med.* 2012;43(3):465-7.

⁵ Doukrou M, Segal TY. Fifteen-minute consultation: Communicating with young people—how to use HEEADSSS, a psychosocial interview for adolescents. *Arch Dis Child Educ Pract Ed.* 2018;103(1):15-9.

QUIZ 3

1. Samuel Scott is believed to be the first casualty in the story of the Titanic. He was part of the riveting gang who arrived early at Harland and Wolff shipyard on the morning of April 20th 1910. Later that day, Samuel slipped off a ladder and tragically fell to his death. Following a public campaign, the unmarked grave in Belfast’s City cemetery finally received a fitting headstone, just over a century after his death

2. Samuel Scott was 15 when he died, falling into the adolescent age bracket (10-24 years of age). Adolescent males are more likely to be involved in traumatic accidents than their female counterparts, and the cause of trauma in this age group differs from both paediatric and adult cases.¹ In 2023, the most common



cause of trauma in adolescents is a road traffic accident (RTC). In 1912, vehicle use was a fraction of today's, and it is likely the commonest cause of trauma in adolescents was different.² Falls tend to be the second most common traumatic mechanism of injury in adolescents. Risk-taking behaviour in adolescent males is higher than any other age group and is a contributory factor in their higher mortality rate.^{1,3,4} Physiologically, the pre-frontal cortex does not mature until the early 20's and this area is essential for decision making. This impacts on adolescents appreciating risk and can lead to increased impulsivity.³ As a young adolescent male, it is likely Samuel experienced these reduced perceptions of risk and a stronger inclination to focus on reward leading to his untimely, traumatic death. Over 100 years on, mortality rates within adolescent populations have not shown a significant decline compared with other age groups. This points to a need for better health education and interventions to reduce trauma and subsequent mortality within this age group.⁴

¹ Mullen S, Tolson A, Bouamra O, Watson B, Lyttle MD, Roland D., *et al.* Comparison of injury patterns and interventions between adolescent, adult and paediatric trauma cases: a cross-sectional review of TARN data. *BMJ Open.* 2023;13(5):e064101. doi: 10.1136/bmjopen-2022-064101.

² Emsley C. 'Mother, what did policemen do when there weren't any motors?' The law, the police and the regulation of motor traffic in England, 1900–1939. *Historical J.* 1993;36(2):357-81.

³ Reniers RL, Murphy L, Lin A, Bartolomé SP, Wood SJ. Risk perception and risk-taking behaviour during adolescence: the influence of personality and gender. *PLoS One.* 2016;11(4):e0153842. DOI: 10.1371/journal.pone.0153842

⁴ Roberts Z, Collins JA, James D, Bouamra O, Young M, Lyttle MD, *et al.* Epidemiology of adolescent trauma in England: a review of TARN data 2008–2017. *Emerg Med J.* 2020;37(1):25-30.

QUIZ 4

1. Arguably Northern Ireland's most famous teenagers – these are the 'Derry Girls'. 'Derry Girls' first aired in 2018 on Channel 4 and has become one of the channel's most popular and widely acclaimed shows. The series follows a group of typically innocent and naive teenagers in their journey through adolescence. The series was based in a fictional school, Our Lady's Immaculate College. Filming occurred across many Belfast locations including Hunterhouse College, a cross community all girls' grammar school in Belfast. Set during the politically unstable background of early 1990's life in Northern Ireland, it has received praise for sensitively and eloquently highlighting the ongoing challenges of the legacy of conflict-related and inter-generational trauma.¹

2. This is a lyric from 'Teenage Kicks'. 'Teenage Kicks' was released in 1978 and was the debut record from the band The Undertones. The Undertones are a rock band whose original members were born in Derry. Despite their most prominent era being in the late 1970's and 1980's, their brand of post-punk music focused not upon the political climate, but on timeless issues of adolescence, love, and relationships. Influential BBC Radio 1 DJ John Peel famously identified 'Teenage Kicks' as his all-time favourite song shortly before his death in 2004.

3. August 2021 saw a new chapter unfold at the Magee Campus in Derry as the Ulster University opened its doors to the first 70 students at the new School of Medicine. Based in a recently-renovated historic listed building, it is only Northern Ireland's second medical school – and its first graduate-entry medical school. This 4-year postgraduate degree hopes to address the relative shortages of doctors within Northern Ireland. As soon as 2025, the first batch of UU doctors will graduate having taken the GMC's Medical Licensing Assessment and joining the roughly 8,000 other UK medical graduates at the start of their careers as doctors.^{2,3}

¹ Derry Girls and containment: Conflict-related and transgenerational trauma in Northern Ireland. *J Psychosoc Stud.* 2021;14(1):3-17.

² Du bras L. The birth of the School of Medicine at Ulster University *Ulster Med J.* 2021; 90(3): 135–137.

³ Yang J. Medical graduates in the United Kingdom (UK) 2003–2022 Number of medical graduates in the United Kingdom (UK) from 2003 2022. New York: Statista; 2023. Available from: <https://www.statista.com/statistics/473206/medical-graduates-in-the-united-kingdom>



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