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The Glasgow Coma Scale is a neurological scale for assessing a person's level of consciousness, both for initial as well as continuing assessment. A patient is assessed against the criteria of the scale, and the resulting points give the Glasgow Coma Score (or GCS). Class PANEL.FUNCTION Type Clinical First Released Version 2.11 Last Updated Version 2.73 (MIN) Order vs. Observation Order Common Test Rank Get Info 3505 Panel Type Panel Copyright © 2025 Regenstrief Institute, Inc. All Rights Reserved. To the extent included herein, the LOINC table and LOINC codes are copyright © Regenstrief Institute, Inc. and the Logical Observation Identifiers Names and Codes (LOINC) Committee. See for the full LOINC copyright and license. Subscribe to New First Aid For Free The Glasgow Coma Scale (commonly shortened to GCS) is a measurement of a patients level of consciousness, ie how awake the patient is. As the name suggests, the scale was first designed in Glasgow for patients who had suffered a head injury. It is now used across the world by emergency medical staff and first aiders to assess a patients level of consciousness. The Glasgow Coma Scale contains three measurements: Eyes, Verbal and Motor. Each measurement is assigned a score and the GCS is the total of the three scores combined. The minimum GCS score is 3 (completely unconscious) and the maximum is 15 (fully alert). The following table lists the individual components of the Glasgow Coma Scale and how the individual measurements are scored. A GCS of less than 8 is generally considered a serious medical emergency due to problems with the airway. Patients who have a GCS less than 8 are unlikely to be able to protect their airway and are at risk of hypoxia (lack of oxygen). When recording a Glasgow Coma Scale score you should identify the individual components as well as the overall score. e.g: E4 S4 M6 = GCS 14 It is important to remember that GCS scores can fluctuate minute-by-minute, especially in critically unwell patients. The Glasgow Coma Scale does have problems however. It can be quite difficult to learn and also people can interpret the scoring system in different ways. In addition, various factors such as alcohol & drugs can 'mask' a casualties true level of consciousness, especially in a head injury situation. However despite this, the Glasgow Coma Scale is still widely used by emergency medical services and hospitals across the world. See larger image Remembering all the details of the Glasgow Coma Scale can be challenging, especially when dealing with a stressful situation such as a medical or trauma emergency. We recommend buying an aide memoir to help you remember essential information such as how to calculate a GCS. These pocket cards are a great way for first aiders, first responders, EMTs and paramedics to access information whilst in the field. The cards are reasonably priced and available from Amazon. The GCS can be a very complicated scale to use. This entertaining video explains the GCS in a slightly different way and may be more memorable than a boring table! Want to learn more about the Glasgow Coma Scale and other first aid tools? Why not sign up to one of our FREE online first aid courses! Disclaimer The structured approach to assessment of the Glasgow Coma Scale and the Glasgow Coma Scale itself, are tools for the assessment and communication of a patient's level of consciousness. The information provided on this website and in the video is to support your learning and understanding of these tools. Neither the use of this website, the watching of the video, nor completion of the self-assessment tool provide any guarantee as to your competence in these domains. The decision as to whether or not you are competent and safe to utilise these tools in clinical practice is entirely at the discretion of the systems in place in your clinic/country to assess competence of medical, nursing and paramedical staff. By viewing this website and utilising any of the resources herein you are agreeing to these terms. Reliable assessment of the Glasgow Coma Scale is key to user satisfaction and to the conduct of good quality clinical care and research. Along with its spread, varying approaches to assessment emerged over the years after the Scale was described, but none provided sufficient reason to make more than minor alterations to the content of the scale and its application. The goal of the modern structured schema is therefore to reinforce a standard approach to assessment and hence to enhance the consistency of its use. Structured Assessment The structured approach (Nursing Times 2014; 110: 12-16) clearly defines the steps taken in assessing each component of the scale. It sets out standardisation in stimulation and an emphasis on reporting of the three components rather than the total sum. These steps are detailed in the video. Each step is related to assessment against a specific criterion. These are summarised in the downloadable GCS Do it this way Aid. The development of the structured assessment drew on input from a range of medical, surgical and nursing specialists across the world to identify areas of satisfaction with the Coma Scale and where 'improvements' might be made. We highlight important topics here. Eye and Verbal Scales The numbers of steps in these two components of the Scale have not been changed since it was first described but the terms applied to some findings were updated. Eye opening 'to pressure' replaced opening 'to pain', in part to reflect accurately the nature of stimulus used; in part also because of reservations about the concept of pain as a component of care and in part because of uncertainty if painful sensation is necessary or even possible in a patient in coma. In the verbal scale 'inappropriate words' and' incomprehensible sounds' were simplified to 'words' and 'sounds'. Motor Response The makeup of the 5 step motor component of the scale was altered in 1976 by the incorporation of an additional, 6th step: the introduction of differentiation between "normal" and "abnormal" flexion. (Acta Neurochirurgica. 1976 34: 45-53) Earlier studies of observer variability had shown that this distinction was difficult for less experienced staff, so it was not included in original descriptions. However, the findings of studies, using early clinical features, collected by researchers, began to show that the distinction was useful in prognosis. This led to the so-called 'extended' motor scale being adopted. This was first for research, but it was then progressively taken up in routine clinical care and is now the most widely used system. The transition between abnormal and normal flexion is only rarely a key factor in decision-making about individual patients and the original simpler scale also remained in use, giving rise to the potential for confusion between two systems. To resolve confusion, it is now recommended that the extended six point motor scale is used for all purposes. Reliable application of all parts of the motor scale should be achieved by the guidance now provided in the video and structured approach. Teasdale G Jennett B Assessment and Prognosis of coma after head injury. Acta Neurochir Suppl (Wien). 1976 34 45 – 55) Stimulation The technique of stimulation to be used to elicit responses was not tightly specified in the original 1974 report. A year later (Nursing times, 1975; 71: 972-973) a more detailed description of practical use of the Glasgow Coma Scale referred to locations for stimulation being finger nail bed, trapezius muscle and supraorbital notch. The assessment of motor responses in people not obeying commands continues to take account of information from finger pressure and trapezius / supraorbital sites. In practice the sequence will usually be in that order, finger tip pressure having been used first it when eye opening does not occur spontaneously or to sound. Some concerns have been expressed that undue force exerted repeatedly on the finger nail bed can produce damage (albeit very rarely); pressure on the side of the finger has been proposed as an alternative. In the absence of evidence about the equivalence of the responses to the different sites, the fingernail continues to be recommended, peripherally rather than proximally, with variation over time in the finger stimulated in any given patient. Both trapezius and supraorbital sites are recommended for central stimulus in a standard sequence of graded intensity. Information about the relative performance of these two different stimuli would be a useful topic for future research. Pressure behind the jaw,(retromandibular / styloid process) is difficult to apply accurately and is not recommended for routine use. Stimulation by rubbing the knuckles on the sternum is strongly discouraged; it can cause bruising and responses can be difficult to interpret. Teasdale G. Acute impairment of brain function-1. Assessing 'conscious level'. Nursing Times.1975 71(24):914-7 Teasdale G, Allen D, Brennan P, McElhinney E, Mackinnon L. The Glasgow Coma Scale: an update after 40 years. Nursing Times 2014; 110: 12-16 Director's Corner: Executive Coaching By EM Coach February 22, 2023 By Mark L. Plaster, MD, JD June 18, 2020 By Michael Silverman, MD July 30, 2020 By Mark L. Plaster, MD, JD, Salim R. Rezaie, MD & William Sullivan, DO, JD July 30, 2020 By Matt Strain March 03, 2020 By Debjeet Sarkar, MD & 2LT Mark Winters September 04, 2019 By EM Coach November 04, 2019 August 12, 2019 By Debjeet Sarkar, MD & AJ Folsom August 24, 2018 The GCS Aid is available in a number of different languages. Acknowledgements ARABIC - Dr Saad shehata mohamed, Qatar armed forces hospital, Qatar and Dr Mohammed Said Heriza, United Nations Assistance Mission in Afghanistan. BANGLA - Dr Indranil Ghosh. BOSNIAN - Rusmir Gadžo, Primary health care services, Sarajevo Canton. CATALAN – Albert Homs, Hospital de Cerdanya, Girona, Spain. CHINESE – Dr Yirui Sun, Huashan Hospital, Shanghai, China. DANISH – Dr Susanne Scott, Rigshospitalet, København, Denmark GAELIGE/GAELCI – Dr Johnny O'Mahony, Mater Misericordiae, Dublin, Ireland. GREEK – Dr Marina Pltsika, Plymouth, UK and Klaire Exrachou, Leeds, UK. GUJARATI - Dr Tushit Mewada and Dr Ketan Patel. HINDI - Dr Rajiv Chawla and Mr Sanjay Khusrija. 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Klochkov, Yulia V. Ryabinkina. Researcher center of neurology, Moscow, Russia. RWANDAN – Dr Alphonse Zeta Mutabazi, Kigali University Teaching Hospital, Kigali, Rwanda. SINHALA - Dr. M. Ninesh M.D Pinto, Lanka Hospitals PLC, Colombo Sri Lanka, S.G Samaranayake, Suwasevana School of Nursing, Kandy, Dr. Nilupul Perera, Lanka Hospitals PLC, Colombo, Sri Lanka. SLOVAKIAN - Istvan Bodor and MUDr Attila Ganyovics, Falck Zachranna, Kosice, Slovakia. SPANISH – Ma Esther Gorjón Peramato, Enfermera de Emergencias, SUMMA112, Spain. SWEDISH – Dr Martin M T Van. THAI – Apichaya Amrapala, Imperial College School of Medicine, London, UK. TAMIL - Dr. Arulvelan. TELGU - Ms. Swarnalata Gunti. TURKISH - Mustafa Sabak, MD, Gaziantep University Faculty of Medicine /Gaziantep/Turkey. URDU - Prof khalid Mahmood and Dr sundas Ali, Lahore General Hospital, Lahore Pakistan. VIETNAMESE – Dr Mai Linh. Cho Ray Hospital, Ho Chi Minh City, Vietnam. WELSH –Dr ffion Dewi - Morriston Hospital, Wales. MeSH Heading Glasgow Coma Scale Tree Number(s) E05.318.308.940.968.875.250 E05.944.500 N04.452.859.564.800.250 N05.715.360.300.715.500.800.325 Unique IDD015600 RDF Unique Identifier Scope NoteA scale that assesses the response to stimuli in patients with craniocerebral injuries. The parameters are eye opening, motor response, and verbal response. Previous Indexing Brain Injuries (1976-1989) Coma (1976-1989) Head Injuries (1976-1989) Severity of Illness Index (1986-1989) Public MeSH Note91; was see under TRAUMA SEVERITY INDICES 1990 History Note91(90); was see under TRAUMA SEVERITY INDICES 1990 Date Established 1991/01/01 Date of Entry 1989/05/25 Revision Date 2018/06/29 Glasgow Coma Scale Preferred Concept UIM0023945 Scope NoteA scale that assesses the response to stimuli in patients with craniocerebral injuries. The parameters are eye opening, motor response, and verbal response. Terms Glasgow Coma Scale Preferred Term Term UI T046167 Date01/01/1999 LexicalTag EPO ThesaurusID NLM (1990) Biology is the study of living things. It is broken down into many fields, reflecting the complexity of life from the atoms and molecules of biochemistry to the interactions of millions of organisms in ecology. This biology dictionary is here to help you learn about all sorts of biology terms, principles, and life forms. Search by individual topic using the alphabetized menu below, or search by field of study using the menu on the left. Trending Biology Topics The list below contains the most popular biological concepts. You can also view the complete list of biology terms here. 100%(1)100% encontró este documento útil (1 voto)1K vistasEste documento presenta una escala para evaluar el nivel de conciencia de un paciente. La escala incluye 3 secciones: 1) apertura de los párpados, 2) respuesta motora y 3) respuesta verbal. …Descripción mejorada con IAGuardarGuardar Escala de Glasgow para más tarde100%100% encontró este documento útil, undefined Is a patient's GCS score a strong indicator? Advanced airway management, including tracheal intubation, is used for ventilatory or oxygenation failure, impending airway compromise, or inability to protect the airway. The evaluation of a patient's risk for aspiration can be highly subjective. One common adage states: "If the GCS is less than 8, then intubate," offering a seemingly simple and more objective standard to guide airway management.ADVERTISEMENT Using the Glasgow Coma Scale (GCS) score of 8 or below to evaluate the need for intubation is promoted by the ATLS course and the East Association for the Surgery of Trauma (EAST) practice management guidelines.[1] [2] This practice is also commonly applied to patients with non-traumatic causes of obtundation. However, the evidence behind this practice is not clear, prompting many to re-examine this oft-repeated maxim. Glasgow Coma ScaleADVERTISEMENT The Glasgow Coma Scale was created in 1974 as a system to evaluate and document the level of consciousness in patients with head injuries. [3] It is comprised of three subscales: motor response, verbal response and eye movement. While the GCS was not initially designed to be summed into one score, this practice became widely adopted.[4] Today, the GCS remains a key component in the evaluation of patient's level of consciousness, its use spanning across emergency medicine, pre-hospital care, neurosurgery and trauma surgery. Despite its widespread use, the GCS score has been criticized for its complexity and lack of consistent reliability, demonstrated across several studies.[5] Concordance between attending emergency physicians in calculating GCS scores have been reported as low as 38%. In a third of cases, GCS scores on the same patient varied by two or more points.[6]ADVERTISEMENT In a prospective study of neurologists evaluating GCS scores, exact inter-rater agreement was 71% for 267 consecutive patients in the ICU.[7] This variation in calculating a patient's GCS score can have significant changes in therapy if utilizing hard cut-offs to decide critical decisions such as airway management. Gag and Cough Reflex The general principle behind intubating a patient for a GCS < 8 is the theoretical loss of protective airway reflexes. Moulton et al. demonstrated a strong correlation with decreasing GCS and the absence of a gag reflex[8]. However, the same study showed that many patients with GCS above 8 also had attenuated or absent gag reflexes, especially when they were exposed to sedative medications. Conversely, several patients with GCS < 8 maintained their gag reflex. [8] A subsequent prospective observational study of 208 adult patients by Rotheray et al. revisited this issue. While the analysis showed a significant correlation between reduced GCS and absence of cough and gag reflexes, it also found that 36% of patients with GCS < 8 maintained a normal gag reflex and 24% maintained a normal cough reflex. Similar to the Moulton study, this study also found that between one-fourth to one-fifth of patients with a normal GCS had an absent gag or cough reflex.[9] While there is correlation between protective airway reflexes and level of consciousness, exceptions to this rule warrant evaluation of airway reflexes independent of the GCS. A GCS of 3 does not guarantee the absence of airway reflexes in the same manner that a "normal" GCS does not guarantee presence of airway reflexes. Further complicating the matter, evaluation of a patient's gag reflex also raises the risk of inducing emesis and leading to an aspiration event. Aspiration with decreased GCS While assessment of airway reflexes is theoretically important for the evaluation of airway protection, current studies have not shown a consistent relationship between a reduced GCS and adverse events such as aspiration. Adnet et al. found increased frequency of suspected aspiration pneumonia in patients admitted to the Toxicologic ICU with a GCS < 8. However, 10/68 patients with GCS of 9-14 also had radiographic evidence of aspiration, again highlighting the risk of airway compromise in more alert patients.[10] A 2017 retrospective analysis of 528 patients with carbon monoxide intoxication found that altered mental status (AMS) on arrival, defined as GCS < 8, was strongly associated with the development of aspiration pneumonia with an odds ratio of 9.46. The same study found significantly increased ventilator use, length of hospital stay and in-hospital mortality. However, this study was limited by its broad definition of AMS, which didn't factor in the clinical heterogeneity of a GCS range of 3-8.[11] It is also important to question how often witnessed aspiration leads to development of clinically relevant disease. In a study looking at rates of hospital-acquired pneumonia in 228 patients admitted to a level 1 trauma center ICU, witnessed aspiration was significantly associated with development of hospital-acquired pneumonia. However, the overall mortality, ICU length of stay and duration of mechanical ventilation did not vary significantly with witnessed aspiration.[12] In contrast, some prospective observational studies found significantly lower rates of aspiration pneumonia/pneumonitis in patients with impaired consciousness. In 2009, Duncan et al followed 73 patients with decreased level of consciousness secondary to intoxication, the GCS ranging from 3 to 14.[13] Twelve of these patients had an initial GCS < 8 and 5 patients with a GCS of 3. None of these patients had episodes of aspiration and none required endotracheal intubation. Notably the one patient who required intubation had a GCS of 12 on admission. While several patients required some level of airway support, such as nasopharyngeal or oropharyngeal airways, most patients rapidly improved to their baseline level of consciousness within 24 hours. This evidence suggests that certain unconscious or obtunded patients can be safely monitored for clinical improvement without a definitive airway. In the trauma setting, early intubation is often considered in the context of traumatic brain injury (TBI) to avoid aspiration and hypoxia leading to secondary brain injury.[14] Additionally, there can be significant uncertainty whether a patient's decreased cognition is due to TBI or intoxication. Much of the research in patients with traumatic injuries has focused on mortality as an outcome, rather than aspiration. In a prospective study of 412 adult major trauma victims with severe TBI and initial GCS score of 3-8 per paramedics, the sole use of a GCS score did not accurately predict patient desaturation, clinical aspiration, or duration of ICU stay.[15] Furthermore, a retrospective analysis of 6,676 patients presenting with a GCS between 6-8, drawn from the National Trauma Data Bank found that more patients with a GCS of 6 were intubated compared to GCS of 8, 64.3% and 56.9% respectively. Additionally, they found that intubation was significantly associated with increased odds of mortality, longer ICU stay, and overall hospital length of stay.[16] Bottom-line The evidence for using a patient's GCS score as an indication for intubation is mixed. Recent review articles have highlighted the paucity of strong evidence behind the classic adage of "GCS less than 8, intubate".[17] The evaluation of a patient's GCS can vary significantly between providers. While multiple retrospective studies have shown an association between a depressed level of consciousness and aspiration, several prospective studies have contradicted this and appear to show a significantly lower risk of aspiration in these patients. Furthermore, the presence or absence of airway reflexes should not be assumed based on a patient's GCS. One may elect to test a patient's gag or cough reflexes at bedside, understanding that it may also induce vomiting. The Glasgow coma scale can be utilized as one factor to help dictate airway management, but rigid use of a GCS cut-off for intubation is not currently supported by robust evidence. In light of this, emergency physicians should use their gestalt and individually assess each patient's likelihood of airway compromise. References Committee on Trauma, American College of Surgeons. In: Advanced Trauma Life Support Student Course Manual. Chicago, IL: American College of Surgeons; 2018. Mayglothling J et al. Emergency Tracheal Intubation Immediately Following Traumatic Injury: An Eastern Association for the Surgery of Trauma Practice Management Guideline. J Trauma Acute Care Surg 2012. PMID: 23114490 Teasdale G et al. Assessment of coma and impaired consciousness: a practical scale. The Lancet. 1974. PMID: 4136544 Teasdale G et al. Glasgow Coma Scale: to sum or not to sum. Lancet. PMID: 6136811 Green S. Cheerio, Laddie! Bidding Farewell to the Glasgow Coma Scale. Annals of Emerg Med. 2011. 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PMID: 33303004 There are three main sources of possible interference with assessment of one or more component of the scale. Pre-existing factors Language or cultural differences Intellectual or neurological deficit Hearing loss or speech impediment Effects of current treatment Physical e.g. intubation or tracheostomy Pharmacological e.g. sedation or paralysis Effects of other injuries or lesions Orbital/Cranial fracture Dysphasia or Hemiplegia Spinal cord damage Actions to avoid loss of Information Communication Barriers: Adapt the method of interaction to the patient, for example by choice of language, culturally appropriate examining person, or using written communication. Treatment influences In the context of endotracheal intubation or tracheostomy, the verbal component of the score can be denoted as 'not testable,' NT. The motor and eye components can still be assessed and the trend will still be useful*. For pharmacological impairment, temporarily reverse sedation and paralysis (wake up test) Other injuries Adapt the examination technique for patients with spinal cord injury, for example by focusing on tongue and eye movements instead of hand movements Correction of systemic hypoxia and hypertension will optimise the patient's brain function. *Dealing with missing information There are various different strategies for dealing with information that is missing because of factors interfering with assessment such as those described above. Assess, communicate and make decisions using the remaining components. Although guidelines are often expressed in terms of a total GCS 'score,' the trend in whichever of the components (eye, motor or verbal) can be assessed is still valuable. Do not use number '1' to record missing component; use 'NT' (Not testable). Do not report a total score when a component is Not Testable because the score will be low and this could be confusing to medical colleagues. This may also imply that the patient is more unwell than they actually are. It is possible using statistical methods to estimate a missing component from the findings in the other components. This is probably more relevant to research than clinical practice. Meredith W, Rutledge R, Fakhry SM, Emery S, Kromhout-Schiro S. The conundrum of the Glasgow Coma Scale in intubated patients: a linear regression prediction of the Glasgow verbal score from the Glasgow eye and motor scores. J Trauma. 1998; 44:839-44; discussion 844-5. The scale can be applied without modification to children over 5 years old. In younger children and infants, an assessment of a verbal response as "orientated" and motor response as "obeys commands" is usually not possible. A 'Paediatric Glasgow Coma Scale' was therefore described in Adelaide in which responses were modified as below. Eye Opening Verbal Response Best Motor Response Spontaneous Talks normally Obeys commands To sound Words Localises pain To pain Vocal sounds Flexion to pain None Cries Extension to pain None None   Although several other systems have been put forward, none has gained greater widespread acceptance. The findings on the Adelaide scale can be related to normal child development of response and to the total score to be anticipated at increasing ages.   Verbal Motor Expected Normal Total Score Birth Cries Flexion 9 6 months Vocal sounds   10 6-12 months   Localises 11 1-2 years Words   12 2-5 years   Obeys 13 >5 years Orientated   14 References Simpson D Reilly P. Pediatric coma Scale. Lancet. 1982;450 Reilly PL, Simpson DA. Sprod R. Thomas L. 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Nevertheless, 85% of the findings in the better studies showed substantial reliability as judged by the standard criterion of a kappa statistic (K) above 0.64 .Each of the components of the Scale was found to be highly reliable (K >0.6 in 89, 88 and 94 % for the eye, verbal and motor components respectively). The reliability of the sum score, although lower, was still substantial (K >0.6 in 77%). Doctors and nurses were found to use the Scale equally well.5 Reliability can be influenced by a number of factors, some potentially open to improvement, and the review pointed to clear benefits from training and education. Reliability was not influenced by diagnosis or treatment such as intubation, but estimates were lower in patients with moderate impairment of responsiveness. Consistency in technique of assessment and clear criteria for assignment of responses enhance reliability.1 The widespread adoption of the scale has been accompanied a loss of standardization.6 The recommended modern structured approach7 aims to promote greater reliability by using a uniform approach based on allocation of ratings by defined criteria. Reliability of the Scale is Substantial Higher than for the sum Score can be variable Reliability is Improved by Training and education Use the Scale, not the Score Standardized approach Bibliography Teasdale G, Knill-Jones R, van der Sande J. Observer variability in assessing impaired consciousness and coma. J Neurol Neurosurg Psychiatry. 1978;41(7):603-610. Baker M. Reviewing the application of the Glasgow Coma Scale: Does it have interrater reliability? Br J Neurosci Nurs. 2008;4(7):342-347. doi:10.12968/bjnn.2008.4.7.30674 Reith FCM, Van den Brande R, Synnot A, Gruen R, Maas AIR. 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Rivkind, MD; Samir Dalal, MD; Shirin Goodarzi, MS Arch Surg. 1990;125(4):498-508 Gennarelli TA, Champion HR, Copes WS, Sacco WJ. Comparison of mortality, morbidity, and severity of 59,713 head injured patients with 114,447 patients with extracranial injuries. J Trauma. 1994; 37:962-8 Non traumatic coma Nontraumatic Coma: Glasgow Coma Score and Coma Etiology as Predictors of 2-Week Outcome. Ralph L. Sacco, MD; R. VanGool, MD; J. P. Mohr, MD; W. A. Hauser, MD. Arch Neurol. 1990;47(11):1181-1184. Comparison of APACHE II, MEES and Glasgow Coma Scale in patients with nontraumatic coma for prediction of mortalityŠtefek Grmec* and Vladimir Gašparović† Critical Care 2001, 5:19–23 Poisoning Reliability of the Glasgow Coma Scale for the emergency department evaluation of poisoned patients. K Heard, VS Bebarta - Human & experimental toxicology, 2004 197-200 The timing and frequency of assessment that are appropriate varies according to the stage after onset of the impairment of consciousness and the pattern in any previous observations of a patient. Observation should begin as soon as possible after onset of the impaired consciousness in order to guide initial management and to establish a baseline against which to interpret later findings. Observations initially should be repeated frequently to establish if the patient is stable or to detect any trends of improvement, or of deterioration from developing complications. When a stable pattern emerges as time passes, the frequency can be reduced. Specific criteria for patients with an acute head injury have been suggested by NICE [1]: Frequency of observation Observations should be performed and recorded on a half hourly basis until GCS equal to 15 has been achieved. If GCS=15 observe: half-hourly for 2 hours, then 1 hourly for 4 hours, then 2 hourly thereafter; Should the patient with GCS equal to 15 deteriorate at any time after the initial 2-hour period, observations should revert to half-hourly. Urgent reappraisal by the supervising doctor A sustained (that is, for at least 30 minutes) drop of one point in GCS level (greater weight should be given to a drop of one point in the motor score of the GCS); Any drop of 3 or more points in the eye-opening or verbal response scores of the GCS or 2 or more points in the motor response. NICE : National Institute of Clinical Excellence Clinical Guideline 176 Head Injury :Triage, Assessment, investigation and early management of head injury in children, young people and adults. 2014 Rigid criteria for what changes should prompt actions are not appropriate; circumstances vary widely and the role of the scale is to support not replace clinical decision-making. Nevertheless, some factors can provide guidance. If responsiveness reduces, the features to take into account in deciding action include: The pattern of responsiveness before the change: the more stable the pattern, the more a change may be important The level of responsiveness before the change: the lower the preceding responsiveness the sooner action is appropriate. The aspect of the scale that has changed and the extent of the change: motor changes usually call for a response sooner than changes to the eye or verbal components. If the change persists when assessment is repeated, including confirmation by a colleague if doubt remains, then the change is more likely to be significant. The core concept in the Scale is that the patient's eye, verbal and motor responses are described in simple, objective terms in order to convey a clear unambiguous picture of their condition.1 The allocation of numbers to the steps in the three responses (e.g. E=3, V=4, M=5) was introduced later to facilitate entry of clinical findings into a databank. The Glasgow Coma Scale Score is produced by adding the numeric values of the three responses into a sum or composite total (e.g. E3, V4, M5 = Score 12).2 The lowest Score possible is 3, indicating deep coma, and the highest Score is 15, indicating normal consciousness. The other 11 Scores can reflect 118 different combinations of the three responses. Not all of these are clinically realistic. Although the Score was initially developed to summarise information about patient groups , it became widely used in clinical practice as a 'shorthand' way of communicating the severity of a patient's condition. A widely used classification system stratifies the early severity of head injury into mild (sum score 13–15), moderate (sum score 9–12) and severe (sum score < 8). Relation between the scale and the score The contribution of the components of the Scale to the sum score depends on the severity of the patients' condition (Figure).3 In mild head injury the motor score has reached its maximum 'ceiling' effect and changes in the Score result only from changes in verbal or eye responses; in moderate head injury the motor score has a stable value and in severe head injury changes in the sum Score reflect changes only in the motor score. The findings in each component of the scale and of the sum score both relate to prognosis. Studies of a very large database of 54040 patients 3.showed definitively that taking account of the findings from the components separately yields more information than using only the sum Score. Furthermore, the importance of the components varies according to the sum score, the motor component contributing most information in severe injury, the eye and verbal in mild and moderate injuries. These findings underline the importance of assessing a patient's impaired consciousness by the three separate clinical responses. Figure showing the relation between the Scale and the Score Clinical uses of the Score The score is commonly used in the construction of clinical guidelines as produced by the Brain Trauma Foundation (severe TBI guidelines)4, the American College of Surgeons and Centers for Disease for control and prevention (National Trauma Triage Protocol)5 and the National Institute of Clinical Excellence (Head injury: assessment and early management NICE guideline)6 for decisions such as transport to a hospital, the need for a head CT, admission to the hospital, intubation, cervical immobilisation, undertaking surgery, and providing air transport. The Score is included in many clinical stratification and severity prediction scores, such as Acute Physiology and Chronic Health Evaluation (APACHE) II7, Revised Trauma Score (RTS).8 It is a required component of the NIH Common Data Elements for studies of head injury.9 Recently the GCS Score and a pupil reactivity score have been combined into a new GCS-P score, with extended information about brainstem dysfunction (More information).10 Recommended practice in the use of the scale and score The Score has limitations. It provides a less complete description of the patient than separate description of the three component responses of the scale. Also, the Score contains less prognostic information.3 Therefore, in clinical practice the three responses of the Scale should always be described rather than the sum Score alone. In a minority of patients one or other of the components cannot be tested, usually the verbal response. In clinical monitoring this can be denoted by recording N T. 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