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# **Future Leaders** Communiqué

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VICTORIAN INSTITUTE OF FORENSIC MEDICINE



## **Guest Editorial**

#### by Yee Wen Kong

In this issue, we review a coronial inquest into the death of a young woman who was misdiagnosed. The medical practitioner looking after this patient was a junior doctor working in a busy emergency department. More often than not, when we take shortcuts our diagnoses are usually correct and minimises delay and optimises the use of resources. Like any double-edged sword, shortcuts also increase our vulnerability to making to diagnostic errors, which in this case, resulted in a catastrophic outcome.

Diagnostic errors are challenging to eliminate, especially when there are other contributing factors including fatigue, distractions while multi-tasking and being time poor or under pressure from a large workload. It is easy to look at the case of Ms M's and identify the mistakes made, thinking that we would not have made them in the same situation. As the saying goes, *"Hindsight is 20/20"*. Like this junior doctor, and every other doctor in clinical practice, I too have made diagnostic errors.

I remember Mr C, who I met during my clinical rotation in General Medicine in a small rural hospital. Mr C was an elderly man who presented to the Emergency Department complaining of being lightheaded. His oral intake for the previous few days had been poor. A diagnosis of postural hypotension due to hypovolaemia secondary to a poor oral intake was made. Treatment with one litre of intravenous fluids had a good effect. Once Mr C's blood pressure improved, he was discharged home by the junior medical resident who advised him to keep up his fluid intake.

When Mr C re-presented with the same symptoms late in the evening I was asked to assess him for an inpatient admission. I was the first one to complete a medical assessment as there was only one emergency department resident who was preoccupied with another patient. Blood tests were not performed as pathology services were limited at this time in the rural hospital. Given that Mr C had previously been seen by an experienced and reliable emergency department resident, I trusted the initial diagnosis made that morning. The information Mr C gave me also supported this. As I was tired and hungry, I did not consider other alternative diagnoses. However, Mr C appeared fatigued and the fact that he had re-presented with low blood pressure niggled at me. I decided to take a tube of blood for a venous blood gas. I was shocked to find that the test results revealed a haemoglobin level of 60g/L!

Subsequently, pathological services were called in to run formal blood tests and facilitate a blood transfusion for Mr C. He remained stable overnight and had an endoscopy the next day that revealed a bleeding peptic ulcer. It was endoscopically treated and he was discharged from hospital a few days later. The case of Ms M's we present in this Future Leaders Communiqué issue reminds me how easily my misdiagnosis that could have resulted in an unfortunate outcome.

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### Editorial

#### Joseph E Ibrahim and Nicola Cunningham

Welcome to the third edition of the Future Leaders Communiqué for 2019. It follows closely after the launch of our new design and revamped website – we hope those seeing it for the first time enjoy the new look. We continue to strive to provide a publication that engages and educates new graduates and emerging leaders in clinical care.

Dr Yee Wen Kong is our guest editor. Yee is a third-year basic physician trainee working at Barwon Health in Victoria. Yee studied in a metropolitan hospital medical school and after graduation worked in large regional centres. Her professional clinical interest is in the speciality of Endocrinology. We always marvel at how our guest editors are able to juggle so many commitments, at work and home, and still manage to complete an edition. Congratulations to Yee on this achievement.

This issue focusses on misdiagnoses which is a challenge all clinicians face. Misdiagnoses occur in every speciality or area of practice and with every type of practitioner. Whether we are young or old, novice or expert, medical or surgical, working on inpatient wards or ambulatory clinics, the impact of any misdiagnosis is felt by our patients. So, we need to be prudent. Sometimes we rush or feel compelled to provide a diagnosis—after all that is what we are supposed to do as clinicians and it makes us look confident and assured. It is always better to not overreach. To not become victim to pride and formulate a diagnosis when there is insufficient evidence. It is far better to express our uncertainty about a diagnosis and seek help.

The two commentaries examine very interesting aspects that arise from the case. Dr Ramesh Sahathevan, a neurologist and Principal Research Fellow at the Florey Institute of Neuroscience and Mental Health, seeks to demystify meningitis. While Dr Paul Preisz and Ms Anne Preisz examine the question around using restraints to obtain clinically pertinent information. A difficult and controversial topic.

In our discussions with Paul, he explained that "he has reflected on the topic quite a lot over the years and likens restraint to anaesthesia, never an end unto itself but a means to a beginning. When using some anaesthetic drugs, we deprive a patient of the ability to breath for himself for a reason and we take on our best approximation of this role on the patient's behalf. Restraint whether mechanical, physical or by seclusion is analogous, as we deprive the patient of autonomy, the ability to make decisions and to act, including the ability to fully self-care and even to express the need for help. We take on our best approximation of this role and like anaesthesia it carries the need for a high level of planning, clinical supervision and appropriate duty of care."

Enjoy reading this issue and be sure to discuss it with your peers, supervisors and colleagues.

#### **GUEST EDITOR**

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## A Missed Diagnosis

#### Case Number 1337/09 NSW Case Précis Author **Dr Yee Wen Kong**, BBMed, MD

#### i. Clinical Summary

Ms M was a 28-year-old female with a mild developmental disability and a previous history of otitis media which had responded well to antibiotic treatment. She was living with her parents and siblings. Ms M was independent in her activities of daily living with good communication skills. Ms M also attended a training programme to continue learning life skills.

Ms M first became unwell with a 3-day history of left ear pain, vomiting and reduced oral intake. Her family general practitioner (GP) conducted a home visit in the afternoon. Although Ms M did not volunteer any symptoms in their conversation, the GP had no difficulty communicating with her. A diagnosis of left-sided otitis media was made and a prescription for treatment with oral antibiotics written. A few hours later that same day, Ms M's father and her sister witnessed Ms M having a tonic clonic seizure. They called the ambulance and the paramedics arrived 30 minutes later.

Ms M's initial Glasgow Coma Scale (GCS) score of 10/15 improved over the next 25 minutes to 14/15. She was observed to be mildly febrile and complaining of a headache. The paramedics noted that Ms M had no previous history of seizures.

Ms M was transported by ambulance to a metropolitan hospital Emergency Department (ED), where her condition was assessed as Triage Category 3 (that is, needing treatment within 30 minutes). Triage notes recorded that she was "found to be post-ictal by [ambulance]" after a "witnessed tonic clonic seizure" and was "alert, vocalising, unsettled [and] ambulant" on arrival. Nursing staff observed Ms M to be lethargic, agitated and mildly febrile with a temperature of 37.7°C.

Ms M complained of a headache that was not relieved with Neurofen and was given stronger analgesia for it (Panadeine Forte).

Despite the stronger analgesia, Ms M remained in significant pain and was very agitated, which made it difficult for nursing staff to take frequent regular observations of vital signs. In the five hours while she was waiting to be seen by a doctor, only three sets of observations of vital signs were documented.

Nursing staff noted that Ms M was unable to verbally communicate, but attributed this to her developmental disability.

An hour and a half after Ms M's presentation, the Nursing Unit Manager escalated her on the priority queue as "the next patient to be seen by a doctor" due to concerns raised by one of the ED doctors and nursing staff.

However, as it was a very busy Monday night in the ED, Ms M was only formally medically assessed 5 hours after her presentation. In the meantime, pathology tests had not been performed due to her agitation and radiography had not been requested because Ms M had "to be seen by a doctor first".

When a junior doctor in the ED eventually assessed Ms M, she was still irritable and agitated. She was observed to be *"rolling around and making deliberate 'crying sound' vocalisations"*. Ms M's mother stated that Ms M *"was not herself"*. The junior doctor

#### 'The junior doctor did not reconsider the diagnosis or the plan for discharge.'

documented that Ms M did not have any features of a seizure based on the history obtained from Ms M's mother.

The junior doctor concluded that Ms M did not have a seizure. The presentation was interpreted as "a tantrum brought on by unrelieved pain and distress from otitis media". The junior doctor's personal family experiences of people with developmental disability and some of their behaviours contributed to her confidence in making this diagnosis.

The junior doctor presented Ms M's case to a senior doctor, along with her confident diagnosis of otitis media and plan to discharge Ms M with analgesia, antibiotics and GP follow-up as required. This doctor, who was one of the two senior doctors in charge of the busy ED that night, accepted the diagnosis without any further investigations or physically reviewing Ms M. Ms M did not have any further regular observations. Despite ongoing concerns expressed by Ms M's mother and the Nursing Unit Manager about Ms M's condition, the junior doctor did not reconsider the diagnosis or the plan for discharge.

Approximately an hour later, Ms M was discharged from ED in a very lethargic state and requiring physical assistance to transfer from the bed into a wheelchair. This was attributed to exhaustion and drowsiness induced by further analgesia (Painstop and Phenergan). Ms M also required significant assistance from both her mother and nurse to transfer into a taxi. Ms M continued to complain of pain after arriving at home. Approximately seven hours post-discharge from ED, Ms M's sister observed her to have a dusky complexion and not breathing. Ambulance officers attended and found Ms M in cardiac arrest. They performed cardiopulmonary resuscitation before urgently transferring her to the ED. Ms M died in the ED.

#### ii. Pathology

Autopsy findings reported by a forensic pathologist revealed the cause of Ms M's death to be "acute Streptococcus pneumoniae meningitis with left otitis media as the antecedent cause".

#### iii. Investigation

Ms M's sudden and unexpected death was reported to the coroner at the time as there was no clear cause. Witness statements were obtained from the treating medical and nursing staff from the Emergency Department and the family to establish the circumstances surrounding Ms M's death. During the investigation, several issues were raised about the assessment and care that Ms M received at the Emergency Department.

First, that Ms M's presentation with a first seizure episode, altered mental state and inability to communicate received insufficient attention despite her mother's concerns. Second. Ms M's abnormal behaviour had been incorrectly attributed to a developmental disability without clearly establishing her usual pattern of behaviour from her family. Third, the misdiagnosis and failure in recognising signs of deterioration. Fourth, that collateral history was obtained from Ms M's mother rather than from her father and sister who were eyewitnesses to the seizure episode.

At the inquest, two independent expert opinions were sought to evaluate the medical care Ms M received in the Emergency Department. Both expert testimonies were highly critical of the junior doctor's inappropriate and missed diagnosis and concurred that meningitis should be a likely differential diagnosis in Ms M's case. This would have prompted the need for regular neurological observations and directed considerations for further investigations (such as blood tests, CT brain scan and lumbar puncture) and commencement of intravenous antibiotics.

One expert and a consultant emergency physician expressed that "bacterial meningitis could not be excluded purely on history and examination" in setting of Ms M's presentation of headache, fever and altered mental state. C THE COMMUNIQUÉS

This expert acknowledged that there might be difficulty in identifying an altered mental state in Ms M due to her developmental disability and, that the clinical signs of meningitis might be masked by her existing antibiotic therapy. However, he pointed out that "acute bacterial meningitis is a recognised complication of otitis media" and the significant deviation from her usual behaviour should have prompted further investigations. This included "CT brain scan, white cell and neutrophil count, C-reactive protein (CRP), erythrocyte sediment rate (ESR) and blood culture" and "consideration for lumbar puncture".

The other expert, also a senior emergency medicine specialist, was in agreement and advised that there should be a "lower than normal threshold for performing investigations" in patients with developmental disability because of a higher risk due to their difficulty in articulating their symptoms. He estimated that Ms M "possibly had a 50 per cent chance of survival" if she had been treated with intravenous antibiotics.

He also emphasized the importance of identifying acutely ill and deteriorating patients like Ms M, because this would have prompted staff to *"appropriately* [observe]" these patients "and antibiotic treatment [could] be started in a timely fashion". The expert also advised of the need for hourly observations of patients in the Emergency Department. In Ms M's case, she should also have hourly neurological observations for at least four hours because the presentation was a first episode of seizure.

In addition, he placed importance in the documentation of

differential diagnoses by junior doctors because it demonstrates their reasoning process and may guide patient management.

In Ms M's case, the junior doctor had considered meningitis as a differential diagnosis, but had not documented it. Documentation of meningitis as a differential diagnosis may have prompted further investigations and other medical and nursing staff This was based on the history of events taken from Ms M's mother and the junior doctor's own personal family experiences of people with developmental disability. The junior doctor also did not consider performing any investigations and did not reconsider the diagnosis. Was despite the signs and symptoms that did not support the initial diagnosis, thereby making the mistake of premature closure.



to pay more attention to Ms M's subtle behavioural changes that indicated her deterioration (such as increased lethargy).

Regardless of the diagnosis, both experts agreed that Ms M was not appropriate for discharge as she was in distress and had signs of clinical deterioration.

#### iv. Coroner's Findings

The coroner concluded that Ms M's death was due to misdiagnosis and the failure to recognise clinical deterioration. Ms M's death was primarily because of the missed diagnosis of meningitis contributed by the misinterpretation of her seizure episode. This was due to cognitive errors such as anchoring and premature closure.

The junior doctor was 'anchored' to her diagnosis that Ms M's signs and symptoms were due to a behavioural response to pain from otitis media. Ms M's death was also compounded by the failure to recognise signs of clinical deterioration. This was attributed to the lack of regular documentation of vital signs and assessment of Glasgow Coma Scale (GCS) score. In addition, concerns raised by Ms M's mother and ED nursing staff regarding Ms M's condition should have been a red flag (that is an alert or warning). Unfortunately, these concerns were not given sufficient attention.

The coroner recommended that patients with a first presentation of seizure should be assessed by a senior doctor and have a standard battery of investigations performed (e.g. blood tests). All patients presenting with a GCS score of less than 15 should have an assessment of their GCS during admission and before discharge. In addition, all clinical staff in ED should have annual education regarding the recognition, investigations and management of sepsis. These recommendations were made to promote the assessment of acutely unwell and deteriorating patients.

#### v. Author's Comments

Misdiagnoses occur commonly in healthcare with rates of at least 20% in the Emergency Department and may result in significant patient morbidity and mortality (1-3). Doctors often diagnose patients based on recognising the patterns of signs and symptoms of their presentation (pattern recognition), usually in the interest of time constraints. Unfortunately, there are common pitfalls and errors in diagnostic reasoning when taking mental shortcuts. Clinical judgement is important in helping us to avoid these. It is a skill that is difficult to cultivate through the theoretical curriculum of medical school and requires years of clinical practice and experience. This is why supervision by senior doctors is an important component in junior doctors' training.

Bacterial meningitis is a potentially fatal condition, especially when the diagnosis is delayed or missed, as in Ms M's case. As junior doctors, we are well aware of this fact from medical school. Even the junior doctor looking after Ms M had considered this diagnosis and looked for photophobia. However, early recognition of bacterial meningitis can be difficult because the classic clinical features that we were taught in medical school (triad of fever, neck stiffness/ headache and altered mental state) may be absent or overlooked. In Ms M's case, the junior doctor did not recognize that she had an altered mental state even though her mother has stated that she "was not herself".

In addition, the first signs of bacterial meningitis are often similar to the symptoms of less serious illnesses (e.g. viral infections), so it can be difficult to come to this diagnosis in the first instance. This is why having a low threshold for suspecting meningitis is important. However, we also need to avoid over-investigating every patient with a headache and fever with a lumbar puncture. Achieving a good balance between the two requires a high level of clinical acumen that most junior doctors do not yet have.

The missed diagnosis of meningitis stemmed from the incorrect interpretation of Ms M's seizure episode. To her credit, the junior doctor in Ms M's case had acknowledged that Ms M might have had a seizure at home and proceeded to take a collateral history from Ms M's mother regarding the event. Unfortunately, the error came from the failure to take a collateral history from an eye witness of that event (Ms M's sister or father).

The junior doctor also did not identify the incongruence between the history she took from Ms M's mother and that documented on ambulance and triage notes. This led to significant downstream implications on the diagnosis and management for Ms M.

Another highlight of Ms M's case is the failure to recognize her clinical deterioration. While there was insufficient attention paid to the concerns from Ms M's mother and nursing staff, it is also apparent that the lack of documentation of regular GCS scores and vital signs played a major role. In Ms M's case, she was so agitated that nursing staff found it difficult to take routine observations of her vital signs. If nursing staff had persisted in obtaining regular observations, it might have involved some form of restraint, be it chemical or physical. Restraints have significant physical and psychological impact on patients and their families. Therefore, the benefits need to be weighed against the risks to draw the fine line between non-maleficence and beneficence.

Ms M's case serves to remind us to recognize our limitations in clinical experience and have humility when dealing with situations where family or nursing staff has raised concerns. It also teaches us to have a low threshold to suspect an altered mental state, especially in those with developmental disability.

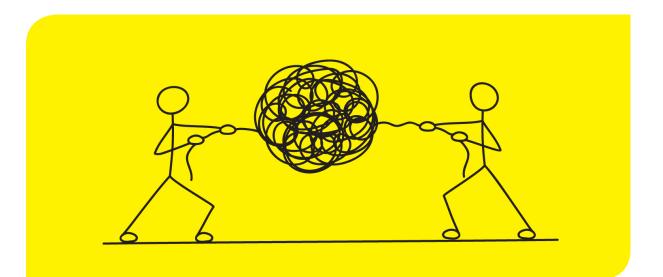
#### vi. References

- Fordyce J, Blank FSJ, Pekow P, et al. Errors in a busy emergency department. Annals of Emergency Medicine. 2003;42(3):324-333.
- Forster AJ, Rose NG, van Walraven C, et al. Adverse events following an emergency department visit. Qual Saf Health Care. 2007;16(1):17–22. doi:10.1136/ qshc.2005.017384
- 3. Lu TC, Tsai CL, Lee CC, et al. Preventable deaths in patients admitted from emergency department. Emerg Med J. 2006;23(6):452–455. doi:10.1136/emj.2004.022319

#### vii. Keywords

Meningitis, misdiagnosis, clinical judgement, deterioration, seizure.





### Meningitis – Demystifying this enigma

by **Dr Ramesh Sahathevan**, MD, M.Med, Ph.D, FRCPI, FRACP Consultant Physician and Neurologist Principal Research Fellow, Florey Institute of Neuroscience and Mental Health Senior Fellow, Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne and Lancet Neurology Commission on Stroke

Meningitis simply refers to inflammation of the meninges, the membranous tissue that is layered over the brain and spinal cord. In everyday clinical practice, the term meningitis is almost synonymous with an infective cause of inflammation. However, it should be remembered that other conditions such as autoimmune disease, malignancy and drug reactions may result in a similar picture.

With regards to infective causes, it is generally considered that viral pathogens are more common than bacterial ones, but it should be remembered that bacterial

meningitis carries a higher risk of mortality and morbidity. Other less common infective causes of meningitis include fungi and parasites. In considering these less common causes of meningitis, be sure to ask about comorbid disease and risk factors, recreational pursuits and hobbies, and recent travel. Do not overlook the presence of injury or infection in the head and neck region in someone whom you suspect to have meningitis. Be mindful of ear and sinus infections, especially in susceptible groups like the paediatric population.

The Global Burden of Disease (GBD) Network publishes yearly updates on the incidence and prevalence of common diseases from across the world.

In recent years, there have also been associated publications focused on specific conditions, one of them being meningitis.

Based on specific systematic analyses of the GBD published in 2018, we know that meningitis mortality rates have decreased by approximately 21% from 1990 to 2016, but that incidence rates have increased by approximately 13% in the same time frame. This increase in incidence is noteworthy because it is mainly due to the volume of

#### 'Globally, pneumococcal meningitis remains the most common type, and is also associated with the highest rates of mortality and morbidity.'

cases in certain developing regions of the world, and that it might actually be higher if not for the success of vaccination programmes.

The incidence of meningitis in Australia is significantly low at 0.5 cases per 100,000 people. Globally, pneumococcal meningitis remains the most common type, and is also associated with the highest rates of mortality and morbidity. A patient presenting with fever, headache and neck stiffness should be considered as having meningitis until or unless proven otherwise.

The presence of focal or general neurological deficit only adds to the suspicion. In determining if meningitis is present, a good history and physical examination is key, followed by judicious use of investigations. A lumbar puncture (LP) should be considered in all patients in whom there is a significant index of suspicion and should ideally be done following appropriate brain imaging. This allows identification of cerebral oedema and other potential causes of raised intracranial pressure and so significantly reduces the risk of coning. It must be remembered that an LP is a safe procedure with a low level of serious complications. Having a cerebrospinal fluid (CSF) sample for analysis helps to guide management but treatment of a patient with suspected meningitis should never be delayed for a lumbar puncture.

Third generation cephalosporins are the treatment of choice in meningitis, with the addition of vancomycin to cover for suspected penicillin-resistant organisms, until culture and sensitivity results are available. Occasionally, additional therapy should be considered to cover for specific pathogens such as Listeria. There may be a role for adjuvant corticosteroid therapy in the treatment of bacterial meningitis but the evidence is conflicting.

In developed countries, the addition of dexamethasone is shown to reduce mortality in patients with pneumococcal meningitis but not in those with meningococcal or Haemophilus infection. Interestingly, there is no benefit to mortality from the use of dexamethasone in developing countries. In addressing the case of Ms M, there are points to be considered:

- We must learn to listen to our patients. It is a required skill of a doctor to be able to distil the information gathered during a history taking and I readily admit that it is no easy task. In situations where history taking is a challenge, learn to pick up cues and seek a collateral source. This is especially true of populations who are vulnerable like Ms M.
- In a patient with a history of fever and seizures, consideration that their presentation is behavioural must be one of exclusion and approached with the greatest caution. The clinical evaluation of such a patient must be complete and appropriate treatment instituted, before an assumption of such sort is made.
- Do not underestimate the presence of an infection, injury or other insult in the head and neck area when assessing someone with suspected central nervous system inflammation. It is more likely that a unifying diagnosis is present rather than not.

Ms M's case serves as a reminder. I agree with the guest editor that 'hindsight is 20/20 vision'. I too have been in similar situations to the one described by Dr Yee Kong of her own experience, that might potentially have resulted in a disastrous outcome for my patient. I was lucky to have the benefit of oversight from senior staff who did not simply take me at my word but checked for themselves my reported findings, recognizing the gravity of the situation and my lack of experience and training at the time. I am forever in their debt.

#### References

Meningitis Collaborators. Global, regional, and national burden of meningitis, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016 GBD 2016 Lancet Neurol 2018; 17: 1061-82 Available at: https://www.thelancet.com/journals/laneur/article/ PIIS1474-4422(18)30387-9/ fulltext.

Brouwer MC, McIntyre P, Prasad K, van de Beek D. *Corticosteroids for acute bacterial meningitis*. Cochrane Database of Systematic Reviews 2015, Issue 9. Art. No.: CD004405. DOI: 10.1002/14651858.CD004405. pub5

Available at: https://www.cochrane.org/CD004405/ARI\_corticosteroids-bacterial-meningitis.

van de Beek D, de Gans J, Tunkel AR, Wijdicks EFM. *Community-Acquired Bacterial Meningitis in Adults*. N Engl J Med 2006; 354:44-53. DOI: 10.1056/NEJMra052116 Available at: https://www.nejm. org/doi/10.1056/NEJMra052116.







## **Restraint** – A Fine Line

by Dr Paul Preisz, MBBS, FACEM **Consultant Emergency** Physician Director, Emergency Medicine, St Vincent's Hospital Darlinghurst Senior Staff Specialist Sydney Hospital Associate Professor and **Emergency Stream Director**, University of Notre Dame Senior Lecturer, University of **New South Wales** and Ms Anne Preisz BAppSciPhys, MBioeth Network Director of Clinical Ethics, Sydney Children's **Hospital Network** 

There is currently a global shift in the concept of patient restraint in health care; both in reducing and, where possible, eliminating its use. As described in New South Wales Government policy, "there is a delicate balance between the need to prevent and manage aggressive behaviour so that staff, consumers and visitors are safeguarded, and the need to promote the health and welfare of consumers in the least restrictive manner". Nonetheless it is exceptionally difficult to medically assess and manage a potentially unwell patient who is aggressive, unpredictable or unable to cooperate. Even senior clinicians should undertake this task thoughtfully and with caution.

Restraint in the clinical context of acute behaviour disturbance can be physical, chemical, seclusion or a combination of these. Most areas of medicine provide ready examples of illness which may manifest, at least in part, as behaviour disturbance. Accurate medical assessment in patients with pre-existing neuro-cognitive issues or developmental delay may be even more challenging and information and advice from family and others is very important in understanding an individual's usual baseline state, health and personality.

'These clinical scenarios are challenging, and should be viewed universally as high risk.' Different levels and types of behaviour disturbance require careful clinical judgement and different practices for restraint are often required.

On occasion, rapid treatment for a critical disorder, such as hypoxia or sepsis may be what is actually needed. At other times, sedation or physical restraint may be required to allow for effective assessment, management and monitoring. The least restrictive form of restraint should be adopted in such cases. These clinical scenarios are challenging, and should be viewed universally as high risk.

The ethical justification for the use of restraint requires rigorous interrogation. Impingement on an individual's liberty and autonomy relies on the harm principle first articulated by Philosopher John S Mill. This subsequently formed the basis for the current NSW Mental Health Act which holds that the only justification for limiting an individual's freedom is when that individual poses a significant imminent threat to either themselves or others. This is a value laden assessment, so to be justifiable it requires a robust assessment of a person's cognitive state and consciousness.

Capacity is a difficult bedside assessment but is a necessary component for the legal conception of 'competence'. Autonomy or the ability to self-determine is only supported when an individual is able to comprehend and appreciate the information provided which is necessary to make a choice. This capacity may fluctuate, as may the ability to consent to treatment, due to a disordered cognitive state. This vulnerability predicates a greater moral obligation of a health care practitioner to offer respect, protection and privacy to that person. Social justice both distributive and procedural, requires clinicians to provide equitable care to this cohort of patients who may also be socioeconomically disadvantaged or be otherwise discriminated against.

In the absence of the ability for a patient to think clearly, the medical practitioner has a 'duty of care' to their patient. They should consider Hippocratic principles of non-maleficence and what the person would have wished for had they been thinking clearly. This may be based on information obtained from next of kin, friends or close associates if possible. Social work and psychological medicine can be a valuable resource in these instances.

Avoiding harm and doing good, or beneficence, are essential principles in order to uphold respect for vulnerable individuals.

The legal frameworks involve concepts of duty of care, consent,

Gillick competence (whether patients under 16 years old is able to consent to medical treatment without parental permission), confidentiality guardianship (for patients over 16 years old in NSW) and various sections of the mental health act although there is legislative variance between the states.

There are several fundamental guiding principles. Restraint must be essential for the patient's immediate safety, medical care and well-being. All alternative less

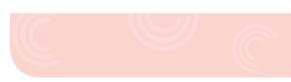
#### 'Restraint should only be performed in a safe clinical location by trained staff with appropriate monitoring and equipment available.'

restrictive options should be considered and only be dismissed for robust clinical reasons. Procedure should be based on sound clinical principles and protocols and current guidelines should be utilised. Governance of the risks of restraint including airway obstruction, aspiration, pressure injuries and psychological harm requires clear pathways and a senior clinician must be responsible for overall care.

Restraint should only be performed in a safe clinical location by trained staff with appropriate monitoring and equipment available.

It is analogous to anaesthesia in a patient with unknown prognosis, diagnosis, and potential risk factors. Expertise should be of an appropriate standard and clear documentation of the nature and time restrained is essential. Restraint should be scaled down and withdrawn as soon as clinically feasible. The overall utilisation of patient restraint in particular health care facilities and in the health care system at large should be recorded and monitored. Other less restrictive means of managing this cohort should always be prioritised.

In the setting of acute behaviour disturbance, temporary withdrawal of liberty and autonomy may be required so that necessary urgent care can be provided in a safe and timely manner. Planning and clinical care, once restraint is achieved, should be initiated early and adjusted as information becomes available and as the patient's condition changes. Restraint is therefore never an end point of itself but rather a beginning for collaborative patient care.



#### References

- New South Wales Government. Aggression, Seclusion & Restraint in Mental Health Facilities in NSW Policy Directive 2012 [Available from: https://www1.health.nsw.gov. au/pds/ActivePDSDocuments/ PD2012\_035.pdf].
- 2. Downes MA, Healy P, Page CB, et al. Structured team approach to the agitated patient in the emergency department. Emerg Med Australas. 2009;21:196-202.
- 3. New South Wales Government. Management of patients with Acute Severe Behavioural Disturbance in Emergency Departments Guideline 2015 [Available from: https://intranet. nnswlhd.health.nsw.gov.au/ docs/GL2015\_007-management-of-patients-with-acute-severe-behavioural-disturbance-in-emergency-departments-v-002.pdf].
- Isbister GK, Calver LA, Page CB, et al. Randomized controlled trial of intramuscular droperidol versus midazolam for violence and acute behavioral disturbance: the DORM study. Ann Emerg Med. 2010 Oct;56(4):392-401.e1.

- Isbister GF, Calver LA, Downes MA, Page CB. Ketamine as Rescue Treatment for Difficult-to-Sedate Severe Acute Behavioral Disturbance in the Emergency Department. Ann Emerg Med. 2016 May;67(5):581-587.e1.
- Mill JS. On Liberty. London: Longman, Roberts & Green, 1869.

## **Further Reading**

- Clinical Excellence Commission. Take 2 - Think, Do Information for clinicians 2015 [Available from: http:// www.cec.health.nsw.gov. au/\_\_data/assets/pdf\_ file/0008/305846/3.Take-2-Think-Do-Information-for-Clinicians.pdf].
- 2. Brouwer MC, Thwaites GE, Tunkel AR, et al. Dilemmas in the diagnosis of acute community-acquired bacterial meningitis. Lancet (London, England). 2012;380(9854):1684-92.
- Thomas KE, Hasbun R, Jekel J, et al. The diagnostic accuracy of Kernig's sign, Brudzinski's sign, and nuchal rigidity in adults with suspected meningitis. Clinical infectious diseases : an official publication of the Infectious Diseases Society of America. 2002;35(1):46-52.
- 4. University of Iowa Health Care (2019). Clinical and Diagnostic Reasoning Department of Internal Medicine. [online] Available at: https://medicine. uiowa.edu/internalmedicine/ pain/genetherapy/genetherapy/ internalmedicine/genetherapy/ internalmedicine/internalmedicine/node/8416. [Accessed 19 Jul. 2019].
- Bradley, E. A. (2002). Guidelines for managing the client with intellectual disability in the emergency room. Toronto: University of Toronto, Center for Addiction and Mental Health and Surrey Place Centre.
- New South Wales Government. Aggression, Seclusion & Restraint in Mental Health Facilities in NSW Policy Directive 2012 [Available from: https://www1.health.nsw. gov.au/pds/ActivePDSDocuments/PD2012\_035.pdf].
- 7. Fulde G and Preisz P. Managing aggressive and violent patients Aust Prescr 2011;34:115-8.

### **Comments** From Our Peers

"Collateral history! So, so important. Not only for kids but also for patients who have intellectual disability, patients with dementia, those who are drug and alcohol affected!"

"It may be a cliché but 'mother's know best' is particularly relevant here." "When progressing through our early years of training, all junior doctors enter a danger zone. When inexperience paired with overconfidence in our knowledge becomes a dangerous combination!" "Patients and their families know themselves better than we do; so if they say that something or someone's behaviour is untoward, we should take this seriously."

"If a patient presents or progresses in a way that is 'not quite right', this should prompt us to think we might have missed something."

#### Disclaimer

All cases discussed in the Future Leaders Communiqué are public documents. We have made every attempt to ensure that individuals and organisations are de-identified. The views expressed are those of the authors and do not necessarily represent those of the Coroners' Courts, the Victorian Institute of Forensic Medicine, Monash University, the Department of Health and Human Services (Victoria) or the Victorian Managed Insurance Authority.

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