Media and Popular Culture and Controversies in Comatose Patients

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***Abstract*: Comatose patients may have irrevocably lost all brain function. This condition has been distinguished from other comatose states by the term *brain death.* Its assessment has been known as the determination of death by neurologic criteria. The clinical diagnosis of brain death implies that the person has died. When the clinical criteria of brain death are met, it allows organ donation or withdrawal of futile support. Without being unnecessarily hostile to the press, one can argue that the representation of comatose states in the media is concerning. Families confronted with this often unexpected loss of life understand this strictly defined neurological condition well. Unfortunately, the legal cases are surrounded by misinformation and reluctance to understand the implications of these comatose states. Nevertheless, many legal cases are settled in court without much attention. Exposure to the media may solicit physician opinions, and these cases may easily become a spectacle. Bioethical issues do surface under these circumstances.**

Keywords: brain death, controversies, media and popular culture

I. Introduction

Comatose patients may have irrevocably lost all brain function. This condition has been distinguished from other comatose states by the term *brain death.* Its assessment has been known as the determination of death by neurologic criteria. The clinical diagnosis of brain death implies that the person has died.

Brain death can be declared when a neurologist examination of: brain stem reflexes, motor responses, and respiratory drive of a patient are absent in a normal thermal condition, non-drugged comatose patient with a known, irreversible, widespread brain lesion and no metabolic dysfunctions.

Clinical neurologic examination is the gold standard for determination of brain death, and clinical examination should not be replaced by a laboratory test (doesn`t matter if is an ultimate generation).

Families, with all their doubts and uncertainties, face a difficult situation with a loved one in coma. Most have little to relate to, and some seek more information elsewhere. Family members often first browse the Internet, only to discover that a few sites have posted accurate and relevant information. Hospitals may have an Information Center providing booklets or other educational material.

The public likely has been subjected to information on coma before, and the newspaper and local television are the main media outlets. [Brantley M, 2006] It is important to know how the public gets informed and how could the Media and other sources influence the public's perception of coma or if there is a potential influence on a credulous public.

II. Materials and Methods

Information collections regarding newspapers, television, the screen writer, the internet and coma, and the portrayal of coma in motion pictures.

III. Discussions

The daily newspaper remains an important source of information, and its ready availability on the Internet might only increase exposure. Newspapers print newsworthy information on comatose patients in three major domains. These are findings on new clinical or laboratory research, [Burns RB et al, 1995] awakening from coma, and legal proceedings surrounding end-of-life decisions. Research in coma is sparse, but new developments could immediately attract attention, particularly if the findings contradict current tenets in neurology. Failure to correctly diagnose brain death is news and hard to pass up by reporters.

There have recently been reports concerning "miracle awakenings" and unexpected awareness in patients in a persistent vegetative state (PVS). (The stories in the press are often compared to Rip Van Winkle, the fabled Dutchman who fell asleep under a tree and awoke several years later.) The most interesting recent coverage involved the story of an unfortunate, severely brain-injured man Terry Wallis. He remained comatose initially, but then improved gradually. More exceptionally, Wallis started to speak

after 19 years of grunts. Newspapers and the blogosphere covered it extensively, using eye-catching titles: "Miracle in Arkansas," [Brantley M, 2006] "Comatose man's brain rewired itself, doctors say. While fibers were severed, nerve cells stayed intact allowing later recovery," [Marchione M, 2006] and "A man lay in coma-like state, his brain was busy rebuilding." [Kaplan K, 2006] The newspaper coverage remained cautious in some places, but its widespread extensive coverage including a TV documentary, [Discovery Health Channel; 2005] suggested that the diagnosis of PVS can be misleading. (Terry Wallis was most likely in a minimally conscious state but had not been examined by a neurologist before his dramatic improvement.)

Other cases have caught attention. One patient, Sarah Scantlin, from Hutchinson, Kansas, suddenly "awakened from coma after 20 years." However, her doctor said "that she could react to following things with her eyes." During a therapy session, she said "okay" and then began to utter simple sentences. [Brown DL, 2005] In early 2005, a Buffalo firefighter apparently started to speak after he was treated with "a new drug regimen that would take 6 months to become effective." Mr Herbert had a head injury after a roof caved in and "a lack of oxygen" after rushing into a burning apartment. [Staba D, 2006] He remained in a coma for 2.5 months, then apparently regained consciousness, but had speech and vision problems. Gary Dockary, from Tennessee, recovered over a few days after 7 years of "coma or communicating at a lower level." [Smothers R, 1996] Gary Dockary had a gunshot wound to the left forehead, damaging the left frontal temporal area. Although there was dramatic improvement initially, he regressed to his prior state before he died. David Mack recovered after 20 months in a PVS. A CT scan did not show any progressive atrophy. He regained consciousness after 22 months, although there is more evidence that it was after 15 months. [UPI, 1986]

For the public, it is difficult to understand the medical facts, especially when they are also exposed to headlines that suggest that patients are more aware than they normally should be. For the physician, obviously, the accuracy of these reports should be questioned, but it remains difficult to verify these cases and obtain sufficient information. A systematic review of these cases would be useful, but the amassed documents are likely fragmentary and difficult to interpret. Common features of these patients are that they are not in a PVS, but in variable states of severe impairment with marked impairment of mobility, mute but responding. What is most interesting is that, in many cases, a fairly dramatic improvement in communication skills occurs over a period of hours or days, but then—if we believe the media coverage—patients often typically relapse into the previous state. Not uncommonly, dopamine agonists or antidepressants have been introduced prior to clinical improvement, suggesting the possibility of neurotransmitter modulation in some patients in a minimally conscious state. These cases may represent *recovery* (meaning that the diagnosis is correct and there is a true exceptional improvement) or *discovery* (in which the diagnosis is incorrect and changed with a better examination).

The news coverage of comatose patients until recently had remained unexamined. Our review of US newspapers of each state in the United States, over a 5-year epoch, found that coma is an infrequent news story, and we identified a total of 340 stories with "coma" in the headline. [Wijdicks EFM, 2006] Therefore, it is perhaps not likely that the public's perception is influenced by coverage of coma in newspapers. Most stories involved violence, accidents, and drug overdose that was not evident by reading the headline alone. One of ten reports involved drug-induced coma initiated by the physician to reduce intracranial pressure. A common theme in newspaper articles on coma was of physicians displaying no hope while the family disagreed or of family members disagreeing among themselves whether to withdraw support. However, it is evident that when coma is a topic, the editors of major US newspapers select stories that involve young persons involved in violence or trauma. The general impression left by the daily newspaper is thus different from the reality in the hospital (e.g. a recent study in the ICU found that coma is mostly due to drug intoxication, stroke, cardiopulmonary resuscitation, and shock [Senouci K, et al, 2004]. Coverage of coma in US newspapers is more reflective of young individuals in a rehabilitation center rather than severely injured elderly patients in an ICU, and thus offers a more positive outlook.

Physicians and journalists have two entirely different professional cultures, and the chasm between both professions is considerable. [Wang Z et al, 2007, Cohen L, 1988, DeVries WC 1988, Wahl OF, 2004] The most reserved and restrained approach of physicians to reveal information can be contrasted with a highly competitive industry where journalists not only are driven to write a compelling story but also have to meet imposed deadlines. William Osier warned physicians "not to dally with the Delilah of the press." (Delilah begged Samson to reveal his strength and then betrayed him.) In Osier's words, the press, when representing physician's opinions, could potentially undermine the physician's reputation and diminish the confidence of colleagues. [Osler W et al, 1905] Without doubt, some physicians would like to repeatedly offer their opinion and do not object to being cast in the role of a spokesperson. The choice of commentators not only depends on their availability but also on the desire of physicians to be quoted and mentioned as experts. It may be impossible for journalists to recognize experts with conflicts of interest that could bias their response and the true experts may be media shy.

Surely, reporting on coma can be newsworthy and has journalistic appeal. Severe brain injury may occur against a background of medical errors, abuse, alleged police brutality, or other assault. Journalists may have problems sorting out the vast information that is coming along and, in the worst example of their writings, may resort to tabloidization. Catchy headlines on miraculous awakening from coma may foster certain expectations with the public. When citing the medical community, it is uncertain if commonly used words such as "shocked," "spectacular and never seen before," or "doctors cannot explain" truly represent their sentiment. Therefore, for example, portraying simple awakening in headlines, without examination of the true dimensions of the problems facing comatose patients is potentially disturbing. [Wijdicks EF, 2006] Although it remains unclear how much the public carefully judges single sensational cases, the message that readers may draw from the presentation of comatose states and awakening may be distorted. The lack of clarity in reporting has been recognized, [Lantz CL et al, 2007] and a better practice model has been proposed by the

Association of Health Care Journalists. [Schwitzer G, 2004]

National newspapers and also medical societies have professional medical writers. Their task is to prepare a news release and interview the author and related peers. There is a considerable effort to present opposing views, often using direct quotations that are typically verified by the interviewee. Adopting a neutral and nuanced stance toward recent news is warranted, particularly when the scientific finding has not been corroborated. [Larson A et al, 2003, Picard A et al, 2005] When news breaks, the true facts may not be known, and it is the duty of physicians, particularly neurologists, to clarify, explain, and most importantly, caution. More recently, monthly periodicals have appeared with in-depth coverage of neurologic conditions including coma, neuroethics, and other policies and the editors are neurologists in practice. This reasonably ensures a consistent high quality, but the distribution is among physicians, and only abstracts may appear in the Media or Internet. Separate sections on health appear regularly in major national newspapers and are often co written by physicians. These articles (eg, "Health and Fitness" in *The New York Times)* reflect a wide spectrum of views in good measure; however, it is not clear if these columns attract the general public outside of the academia.

Recovery from coma is rarely breaking news on networks.[Pribble JM,2006, Pribble JM, Goldstein Kmey all , 2006] Dignitaries may receive attention, and less-known individuals may also get caught up in a major news story. Occasionally, survivors of a major catastrophe (eg, mine accident, traffic accident) may get additional attention. In addition, major TV networks employ medical correspondents and may frame recent discoveries into brief documentaries. Finally, advertisements may use the depiction of coma as an amusing means to sell their product. A recent Porsche advertisement that was aired on national TV used awakening from prolonged coma to bring out the surprise on seeing a new car model.

Most of the depiction of coma is seen in TV serials. Daytime dramatic television or "soap operas" do depict coma and its recovery. A recent review of Web-posted story lines of daytime soaps such as "General Hospital" "The Young and the Restless," "The Bold and the Beautiful," and "Passions" found that the recovery of coma was unreal.[Casarett D et al, 2005] Actors representing patients were in a coma for approximately 2 weeks with full recovery in 89% and a mortality of 4%, significantly lower than expected from scientific publications.

There has been an increase in serial medical drama on US television. "ER" is an example of what has been called "medicine as a pop culture icon." [Cohen, M.R. et al, 2004] It depicts an emergency room that provides ideal health care, although it carefully avoids ridicule and displays considerable compassion. "ER" has portrayed coma, most of it drug-induced coma with a good recovery, and one episode with a discussion on brain death and organ donation. The script is accurate and most likely a reflection of the comprehensive advice that screenwriters have obtained. However, more recently, there has been a noticeable deterioration in the accuracy of representation of coma in TV series. The popular series "House, MD"—watched by an estimated 25 million viewers according to Nielsen Media Research—recently aired "son of a coma guy."[Shore, D., 2006] A patient in a PVS for 10 years suddenly awakens after Dr House injects 1-dopa, immediately sits up in bed, and asks for a steak. In "Grey's Anatomy"—another top-rated series—an episode deals with a patient in a PVS for 16 years who was admitted from a nursing home after falling out of bed. The medical team noted no atrophy on CT and believed he was in a minimally conscious state. They suggested to the upset family to start an "amphetamine drip" that awakened him within hours. He became fully lucid ("How long have I been out?") [Horton, P., 2005], laughing and a bit amused that he might be a major embarrassment for his family. "The Drew Carey Show" aired Drew Carey slipping into a coma after an accident. [Helford B, 2001] While his family was considering withdrawal of support, Drew was in a dream-like state, fed by beautiful women pulling off slices from a pizza tree and drinking from a beer fountain. It remains unclear what message, if "message" is the right word, the screenwriter wanted to convey in this episode.

Serious TV documentaries on coma are nearly nonexistent. A recent documentary entitled *COMA* showed a surreal abundance of pity, sorrow, and loneliness in head injury survivors in a rehabilitation center, but without a reasoned analysis of the causes that led to coma and what to expect after recovery from coma. [Wijdicks EFM, 2007]

The influence of the World Wide Web is uncertain, the accuracy unexamined, and there is much miscellany. A patient's family often seeks clarification of medical terminology from the Internet. Several Web sites provide information on rehabilitation after traumatic head injury. Other Web sites provide support and an emotional outlet (www.braintalk.org).

The use of Web sites to pay tribute or to follow improvement after a major brain injury is increasing. The themes are "triumph over tragedy" (www.brookebecker.com) and "from paralysis to power" (www.katesjourney.com). These inspirational web sites emphasize not only unexpected recoveries but also physicians' error. Photos of patients in hospital beds are contrasted with photos showing remarkable recoveries. The Terri Schiavo case has also been documented fully on the family's Web site (www.terrisfight.org). Not only photos and video clips of her parents approaching her but also a hospital dismissal summary with medical details have been posted. The video clips of her examination were particularly successful in convincing some physicians and politicians that she was not in PVS. The site (renamed "Terri Schindler Foundation") contains links to "remarkable cases" of recovery from a severe disability. Indirectly, Terri Schiavo's family puts forth the notion that she was disabled and needed appropriate rehabilitation. Finally, since 2002, www.waiting.com has been providing information about coma, among other information. After a video introduction of attorney Gordon Johnson Jr, the site offers a plethora of medical information and multiple links, including legal issues. The site, maintained by the "brain injury law group," claims an educational purpose.

No doubt, providing information to the patient's family may be improved by the presence of web sites, but little is available, and there is a lack of dependable sources. Easy access to medical practice parameters may be helpful for patients' families to understand the complexity of decision

making and prognostication.

Coma is a useful plot device, and screenwriters use actors to show a dream-like state with actual nightmares, to show change in personality, to show revenge after recovery from coma, to show relief when a patient awakens against all odds, or even more simply, to remove the character from the plot. Films depicting coma are predominantly thrillers, with motor vehicle accidents, gunshot wounds, or violence causing brain injury. Unconsciousness can also be a major theme of a movie (e.g. *Critical Care),* and even the title of a movie (e.g. *Coma)*. The progressive stupor in a child with adrenoleukodystrophy has been dramatically represented in *Lorenzo's Oil*. [Hudson JA, 2000] Cinema (and in particular DVDs) may become one of the most influential of all arts. Thus, the depiction of neurologic disorders demands accuracy. Neurologic advice, similar to advice from historians and scientists, is indispensable if movie directors are to limit a false impression of coma. [Knight J., 2004]

Representation of comatose states in contemporary cinema is inaccurate in most instances. [Wijdicks, E.F. et al, 2006] Rarely are actors—despite being comatose for months—tracheotomized, none display contractures, and none have feeding tubes, reducing the depiction of coma to a sleep-like state. They all have a quiet pleasant look. PVS has been represented in a few movies, most remarkably showing beautiful actresses asleep in *liable con Ella (Talk to Her)*. Not showing the muscle atrophy, decubital ulcers, bladder and bowel incontinence, and feeding tube may be a conscious decision by screenwriters to maximize entertainment, but is a disservice to the viewer. Moreover, in *liable con Ella (Talk to Her),* the physician suggests that awakening after 14 years has been noted and uses a magazine article showing a miracle awakening to convince the friend of the comatose bullfighter to continue care.

The most notable misrepresentations are the miraculous awakenings from coma. Sudden awakening from coma follows a characteristic pattern. Patients in coma for several years awaken within seconds, are lucid, and without apparent cognitive deficit. In many, awakenings are provoked by a stimulus (e.g. mosquito bite). Awakening is either sudden, sitting upright in bed, or may be associated with marked restlessness and agitation. Sudden movement of a hand, reaching and squeezing a family member, is another theme *(Rocky II)*. Success of rehabilitation is emphasized after many years in coma *(Dead Zone, Talk to Her),* belittling the catastrophic injury.

The attending physician is portrayed with little compassion. Consistent with earlier studies, [Golden G., 2005, Flores G, 2002] physicians are displayed as paternalistic with egotistical traits. Patients in PVS are often referred to by physicians as "vegetables" but some screenwriters have taken it a step further by talking about "the garden" (nursing home).

The general viewer is capable of identifying these inaccuracies. However, a survey of key scenes of a series of movies suggested that an unacceptable number of viewers (36%) have difficulty with pointing out these misleading scenes. [Wijdicks EF et al, 2006] Nonetheless, screenplays depicting coma can be factual, and there are several examples *(Dream life of Angels, Reversal of Fortune, Miami Vice,* and *Fracture)*. Most screenwriters choose uncompromising, fantastical entertainment.

IV. Conclusions

Sources of information to the public may involve the newspapers, local TV, internet, and the movies. Without being unnecessarily hostile to the press, one can argue that the representation of comatose states in the media is concerning. Seldom do the media shape the information in a useful way and correctly convey the major consequences of coma and rehabilitation to the public. In only a few instances is it an admirable combination of reportage and essay. The credibility of news reports can be increased by specifically mentioning coma associated with sedating drugs initiated by the physician. Journalists should make the extra call to a physician rather than relying on police reports. Screenwriters do make a mockery of coma and awakenings, creating decidedly unflattering scripts. It is uncertain if that can change.

Coma is a consequence of a brain injury that often leads to a severe disability and agony to family members. There should be a sensible depiction in media outlets and an attempt to frame it correctly. Journalists, screenwriters, TV commentators and correspondents all have a responsibility to be cautious. They ought to. The audience may be quite perceptive but is unable to draw the line.

Unfortunately, the legal cases are surrounded by misinformation and reluctance to understand the implications of these comatose states. Nevertheless, many legal cases are settled in court without much attention. Exposure to the media may solicit physician opinions, and these cases may easily become a spectacle. Bioethical issues do surface under these circumstances. The physician involved with the care of comatose patients should understand and respect different values but maintain optimal professionalism.

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