

difficulty during endotracheal intubation may be cardiopulmonary resuscitation of the patient or the inability to align the anatomical structures using the sniffing position in the case of trauma patients [5,6]. An inexpensive option to facilitate endotracheal intubation in the case of direct laryngoscopy may be the use of an endotracheal tube stylet [7]. However, it is important to bear in mind that a wrong profile of the stylet can have the opposite effect and make endotracheal intubation more difficult, making it more traumatic for the patient. Therefore, the aim of the study was to compare the efficacy of the first intubation attempt with and without the endotracheal tube stylet during simulated intubation performed by novice paramedics.

The study included 64 paramedics who participated in courses in airway management. The criterion for inclusion in the study was voluntary participation in the study and less than one year work experience in emergency medicine. During the training, all participants participated in lectures standardizing endotracheal intubation based on direct laryngoscopy. Then they participated in 30-minute training workshops during which they performed endotracheal intubation with the use of an adult's respiratory tract model. On the next day after the training they were to perform endotracheal intubation in a manikin representing 5-year-old child. For this purpose, a Pediatric HAL® S3005 simulator (Gaumard® Scientific, Miami, FL, USA) was used, whose tongue was inflated to simulate difficult airway. The Macintosh blade no. 2 was used for intubation, as studies show that both the Miller blade and Macintosh blade are equally effective in pediatric patients. Participants performed randomized crossover intubation with and without an endotracheal tube stylet. Before each test, the stylet was profiled so that the 3 cm distal stylet were bent at 45°. The participants performed the intubation first with one method and then after 30 min they performed the intubation with another technique. Among other parameters, the effectiveness of the first intubation attempt and the time of the first intubation attempt, defined as the time from the introduction of the laryngoscope in patients mouth to the moment of an effective ventilation attempt confirmed by the manikin's chest lift, were evaluated.

The efficacy of the first intubation attempt with and without the endotracheal tube stylet was varied and amounted to 93.8% vs. 79.7%, respectively ($P < .001$). The mean time of intubation when using the endotracheal stylet was 17.5 ± 5.5 s and was statistically significantly shorter than when the guide was not used 28.5 ± 6 s ($P < .001$). All participants of the study concluded that intubation with the use of a stylet is a more optimal method of intubation of a patient with difficult airway.

In the simulation study, the use of the endotracheal tube stylet was associated both with higher effectiveness of the first intubation attempt and shorter duration of intubation, which in the conditions of real rescue operations may translate into the reduction of hypoxia as well as the reduction of potential intubation-related injuries.

Source of support

No sources of financial and material support to be declared.

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<https://doi.org/10.1016/j.ajem.2019.01.021>

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Antibiotic stewardship: The treatment of uncomplicated lower limb cellulitis



Cellulitis commonly causes patient emergency department visits and hospital admits in the United States. Since the emergence of Methicillin-resistant *Staphylococcus aureus* (MRSA) infections, many practitioners are reluctant to take a conservative approach to treating cellulitis. Some studies have shown an incidence as high as 204 cases per 100,000 people for emergency department cellulitis visits [1,2]. The expense of these visits is vast and places avoidable strain on health care dollars. The average hospital stay (5 days) for patients treated for cellulitis costs roughly \$7341 [1,3].

Often, fear of poor outcomes and MRSA infections lead to inappropriate antibiotic choices. One study revealed that 14% of cellulitis admits met standard criteria for outpatient treatment but instead received inpatient care [4]. In this article we lay out a straightforward method for determining and give recommendations for treating simple cellulitis.

The diagnosis of cellulitis is often a clinical diagnosis, made from history and physical exam. The patient often has a tender, erythematous, demarcated rash in the areas of concern. Difficulty arises in determining if a case of cellulitis is quantified as simple or complicated and choosing the appropriate care. Simple cellulitis can be briefly described as: immunocompetent host (no uncontrolled diabetes, no cancers, etc.), no significant skin breakdown or trauma (epidermis is intact or has minimal erosions), systemic inflammatory response syndrome (SIRS) criteria are not met, mentation is normal, and the patient is hemodynamically stable. For these criteria, inpatient treatment of cellulitis is generally unnecessary. For such patients, treatment with penicillin VK, cephalosporin, or clindamycin is acceptable when accompanied by outpatient follow-up. If unsure which category patients fall into, guidelines such as those published by the Infectious Diseases Society of America (IDSA) can be referenced.

Much of the fear regarding cellulitis comes from an apprehension of missing MRSA. Cultures have shown however that MRSA is less likely to cause cellulitis, with up to 79% of infections caused by beta hemolytic strep. Even when MRSA was cultured, 91% of patients treated with non-MRSA covering antibiotics had proper responses. The risk of MRSA in such situations is low therefore MRSA coverage is unnecessary [5].

In summary, cellulitis accounts for a significant health and cost burden in the emergency department. A large percentage of these cases can be treated as outpatients. Following societal guidelines, published by

IDSA, and not inappropriately covering MRSA can improve patient's experiences and decrease their overall cost of care.

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9 January 2019

<https://doi.org/10.1016/j.ajem.2019.01.022>

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The Emergency Medical Treatment and Active Labor Act (EMTALA): Assisting physicians to honor medical oaths



Oath-taking in medical education is an integral part of becoming a physician. One hundred percent of medical schools confirm the practice of oath-taking amongst their medical students [1]. Central to these medical oaths is the principle of non-discrimination [2]. The value that all patients should be treated equally is fundamental to the practice of a physician. Emergency medicine is unique due to the passage of the Emergency Medical Treatment and Active Labor Act (EMTALA), that while protecting patients, can also assist physicians in upholding their non-discriminatory oath.

There is no unified medical oath used by medical schools. However, many medical schools select The Declaration of Geneva, while some schools still use an unmodified translation of the Hippocratic Oath [1]. The Declaration of Geneva states that a physician swears to serve “humanity”, without “considerations of age, disease or disability, creed, ethnic origin, gender, nationality, political affiliation, race, sexual orientation, social standing, or any other factor” [3]. As medical oaths elude to, discrimination embodies many forms, including race, immigration status, and sexual orientation. Discrimination based on financial status also exists, yet is a practice in medicine that is regularly employed by many specialties. Physicians and hospitals can limit or deny care to an individual based on insurance status or their ability to pay for their care.

In 1986, EMTALA was passed in order to ensure that everyone within the borders of the United States had access to emergency medical care, regardless of their ability to pay [4]. EMTALA was created in response to a practice called patient dumping, where

uninsured patients were transferred to public hospitals before assessment or stabilization [4]. EMTALA is based on the principle that it would be unethical to withhold life-saving care, based on ability to pay, when a patient presents to an ED with an acute, life-threatening condition. Moreover, the law intentionally uses the language “any individual” in order to eliminate any opportunity to discriminate [4]. As a result, the law essentially eliminated financial discrimination through denial of care.

Working in an environment protected by EMTALA, emergency medicine physicians treat patients without consideration of ability to pay. Patients at the very least must be assessed and stabilized before insurance status is confirmed. Effectively, EMTALA established universal access to emergency care, allowing emergency medicine physicians to practice medicine while upholding their non-discriminatory oath to their patients [4].

Unfortunately, EMTALA does not apply to other medical specialties, where patients may be denied care if they are uninsured or unable to pay. Therefore, the evolution of healthcare financing and the business side of medicine may take higher precedence than the moral obligation to patients, as stated in medical oaths. Often physicians work within the constraints of institutions where healthcare administrators do not take similar oaths. The disparate moral obligations of those treating patients and those deciding who receives treatment potentially forces physicians into ethical dilemmas. As long as the moral obligations of healthcare administrators do not match those of physicians, we cannot expect physicians to act otherwise.

This also brings into question the relevance of medical oath-taking, if financial discrimination is not only acceptable, but commonly practiced. When surveyed, only one in four practicing physicians reported medical oaths taken during medical school as having a strong influence on their practice, instead relying heavily on their own sense of right and wrong [5]. Rather than providing ethical standards for practicing physicians, it may be that oath-taking is merely an expression of tradition and that there exists gaps in the application of medical oaths after medical school [1].

Whether intentional or happenstance, EMTALA assists emergency medicine physicians to honor the medical oath they likely recited in medical school, specifically pertaining to non-discrimination. Expecting physicians of specialties that EMTALA does not reach to provide care for all people is ignoring the for-profit nature of our healthcare system. There needs to be a legal framework, mirroring the implementation of EMTALA, that allows not only emergency medicine physicians, but all physicians, to uphold their moral obligations.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Conflicts of interest

None [AB], none [JJ].

IRB approval

Not applicable — perspective article.

Prior poster/abstract presentations

None.