Emergency Medicine Update, Nov. 2002

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1. Probiotics do work - readers of this periodical already know this (PIDJ May 2002). However, not all yogurts have the appropriate cultures. Since the culture medium itself may not be kosher, you should advise your patients that keep kosher that yogurts with the prefix BIO are the ones that have the right lactobacillus. *Dr. Lazar Personal Communication*
2. Tetracyclines are contraindicated in children due to teeth staining, but this is only on prolonged use and not with doxycycline, which in Israel is available also as a syrup (Vibramycin). *Clin Peds May 2002*
   Since doxycycline is in the ACP chart first line for community acquired pneumonias and is much cheaper than Tavanic, we should consider using this medication more often. Actually clindamycin, another no no because of pseudomembranous colitis, rarely causes this in children and young adults. Use it for streptococcal infections.
3. I include these two articles from the May edition of Postgraduate Medicine, a British Journal, for your interest only. Perhaps you should not depend on them, but you know how much I value articles that go against the grain. One says that any handling of a wound predisposes to infection, so just glue or apply steri strip to those wounds without stick needles in them. Remember this if you have forgotten it in the past. Another article recommends just EKG for electrical low voltage exposures. NO CPK, monitoring or myoglobin measurement is necessary. Do the right thing!
4. I am not a guideline lover and I think, therefore, that it is important to highlight that levofloxicin (Tavanic) failed as monotherapy in severe Streptococcus Pneum. pneumonia. Third generation Cephalosporins did little better, while the response to PCN was better, although far from perfect. *Lancet 6 Apr. 2002*
5. Eat crow department. Last issue I said Mannitol is a drug looking for a disease. While older studies agree with me, 100cc of 20% Mannitol improved blood flow and lowered intracranial pressure. Surrogate markers but we have little else. This RCT was done with different doses depending on whether there was aniscoria or not. See the paper for dosages or contact me. *Lancet 11, May 2002*
6. Gentleman and Ladies we live in dangerous times. Brown Recluse spiders do cause areas of gangrene with a later presentation. However, this problem has been reported in places that don't even have brown recluse spiders! Please do not forget Cutaneous Anthrax.
7. The recommendations of the British Thoracic society were presented previously - spontaneous pneumothorax can be needled safely even if greater than 20% and even sent home. This paper confirms this (*AJRCCM May 2002*). Get this paper, or hear a wonderful presentation of it at the Annual Scientific Convention

EMU Looks at: Legal Medicine

This is a well dealt with topic. We will focus on a specific part of this - the issue of *respondeat superior* - a problem relevant in Israel too. The source for this EMU is the Southern Medical Journal May 02.

Repsondeat superior means when a mistake happens not only the one who made the mistake is liable, but also the one responsible for him/her. So let's discuss a few cases:

Meadows vs. Patterson
Dr. Patterson performed an appendectomy on Mr. Meadows. He was admitted to the surgical unit and was cared for by a nurse. During the evening he injured himself. The nurse was sued for not preventing the patient injuring himself. The doctor, too, was sued, as he was responsible for the nurse. How would you rule?
The court ruled that the physician was not liable, as his supervision of the nurse only applied to the treatment of the patient during the surgery.

REA vs. Bush
A private hospital had many physicians on its staff. Mr. Bush had abdominal surgery and later became very ill. Another operation was performed and gangrenous bowel was found caused by a retained sponge. Who is negligent, the doctor or the hospital?
The court ruled that the doctor is responsible for the nurse when she is involved in professional activities that arise from his orders. However, sponges and counting are duties unrelated to the skills of a nurse or a doctor and therefore are the responsibility of the institution.

McCay vs. Mitchell
McCay vs. Mitchell was an action concerning a child that fell from a swing and injured her arm. Dr. Mitchell checked the patient and found a compound fracture of the forearm. The fracture was reduced and immobilized in a cast. The child was in immediate pain, but only a few days later was an attempt made to see Dr. Mitchell. He was unavailable. Dr. Williams was covering for him. He removed the cast and applied a new one. The next day Dr. Mitchell saw the child and the arm was blue. An amputation was necessary. Was Dr. Williams an agent of Dr. Mitchell as he was covering for him?
This was clearly Dr. Williams' fault. Was he an agent of Dr. Mitchell? The case was dismissed on summary judgement. In other words, the court decided that Dr. Mitchell was not responsible.

Edmonds vs. Chamberlain Hospital
Mr. Edmonds was seen by Dr. Loftus in the ED of the above hospital and sent home. He died the next day. Dr. Loftus was sued, as was the hospital as it employed the doctor. The hospital contended that the doctor worked there as a staff physician but he was not an employee (In Israel this would be like a physician who was negligent at a private hospital). Who is right?
The court ruled the patient did not select the ED physician. Who treats the patient depends on who is on duty in the ED on that particular night. This is a hospital decision and therefore the hospital is negligent. In a private hospital in Israel, it would appear to be the opposite.

Bass vs. Barkdale
An interesting case. A health professional (in the US it was an NP but could as well have been a stager) wrote a prescription that Dr. Quinn signed and that later caused Ms. Bass' blindness. Dr Quinn is guilty. Right?
The court ruled that the NP was under the supervision of the physician but not her employer. Therefore the physician was guilty of not properly supervising the NP but not for signing her prescription.

Estate of Shirley Dannenhold vs. Knoxville Pathology Group
A pap smear was done and read by a technologist as normal. The technologist was employed by the hospital, but supervised by an independent pathologist. Months later

she went to another gynecologist who repeated the Pap smear and she was found to have invasive cancer and died. Who is liable?

The court has not yet decided

The cases aren't easy and it isn't clear who is responsible for whom. Just remember the nurse, the lab tech, the stager (intern) and the floor cleaner may all be your responsibility. Or they may not be.

My feeling is what I was taught early in my career: we all hang together.

Invited Commentary

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The issue of respondeat superior is one of the legal issues that trap medical personnel. Lawyers are always looking for deep pockets. Orderly and nurses generally do not have resources to pay the gigantic verdicts that certain cases generate. The lawyers are looking for bigger fish. They therefore try to get the fat cats (those with the largest insurance coverage collectively). In order to spread the net as wide as possible in a lawsuit such as the ones above they will sue everyone: the nurses, treating physician, section and department heads and the hospital itself. From the cases above determination of who has a right to control the acts of the negligent actor, determines whether the negligent acts can be impugned to other parties.

If you want to avoid impugned negligence, the patient must be clearly informed that the treating doctor is not an employee of any other entity (if such were the case) and any reference of the patient is to an independent entity. Since these cases are handled on a contingent basis, lawyers may be reluctant to sue people with a strong defense and who can retaliate with a counter-suit against the lawyer.

Emergency Medicine Update Looks at: In Flight Emergencies

Many of us fly abroad, and some of us may have had an opportunity to treat patients en route. EMU presents information on the treatment of in flight emergencies based on the following articles: BMJ 25, Nov. 2000 p1336; BMJ 1995 311:374-6, and NEJM Apr. 4, 2002 p1067.

I personally have taken care of two people in airplanes while in flight. One had chest pain and it is important to note that airplanes are a dry environment (humidity contact of air akin to a desert) (10%) and have air pressure equal to that of 2500 m (7000 feet). A second patient took a Valium overdose in an attempt to sleep on the airplane. I also saw a psychiatric patient act out - but as no Haloperidol or any other psychoactive drug was available, I did not treat this patient. Nevertheless, the most common emergencies are fainting, hyperventilation and cardiac, respiratory and gastrointestinal problems.

- Firstly, you will often be asked to fill out a form documenting that a person is healthy to fly. Oxygen is easy to arrange and most carriers are adept at handling the equipment. Wheelchairs are also easy to arrange in advance. Medications that are injectable now must have documentation of need for the medication and a pharmacy label.
- Malpractice is a concern. In the USA you are protected as long as you take no money (gifts are OK) and render reasonable care. While the USA, Canada, and the UK do not require that you provide service, many European countries and Australia require that you do. Jurisdiction is from three places - where the aircraft is registered, where the incident occurs and the country of citizenship of the patient and the doctor.
- By 2004 all airplanes in the USA will have AED and the personnel will know how to operate them. Quantas already has them. Virgin Atlantic has telemetry. US

planes carry D50, adrenalin, ventlflows (IV), aspirin, and injectable antihistamine, inhaler, and NTG. AMBU ventilation (BVM) can be done in flight, but no materials for intubation are available. El AL does have such materials. Virgin Atlantic stocks 23 medications and even Foley catheters, but no intubation equipment. Bronchodilator inhalers are available, but the sir pressure in the plane does not allow for inhalations. We have previously reviewed that MDI, that is hand held inhalers, are enough

- Almost all airlines have 24 hours ground based medical assistance. As such, medical personnel in flight may be asked to insert a VF (IV) or give basic medications, but are not allowed to overrule the AED, the people operating it or the ground medical officer.
- Remember a diversion can cost up to $100,000 and you should do what is possible to avoid this scenario. Consultation with the ground medical officer will assist in this decision.
- Surgical emergencies are not well provided for and except for a sensational treatment of a tension pneumothorax aboard a 747 (see BMJ 1995 above) abilities to treat surgical problems are limited.
- None of these articles discuss the issues of Economy Class Syndrome, and a recent case of a twenty two year old with massive PE that presented dead to Tel HaShomer after flying from Bangkok to Israel highlights this problem. I personally am considering Clexane before flying to the USA.