Question of the Week #9 Patient care

You are monitoring a healthy 32-year-old patient who is undergoing a left inguinal herniorraphy under moderate sedation/analgesia. Your patient is very active and just completed his first triathlon. Initial vital signs on admission to the OR are:

BP: 100/72  
Respirations: 12  
Pulse: 48  
Oxygen saturation: 100%  
EKG shows normal sinus rhythm with a PR interval of .30 seconds.  
Skin pink, warm. Patient is alert, pleasant, oriented X 3; denies any discomfort.

What is your assessment for this patient? What intervention(s) are needed?

Response:  
This case study is an excellent example of why baseline EKG knowledge is so important for those RN’s in the monitoring role.

First degree heart block is defined as a PR interval greater than 0.2 seconds (McCance and Huether, 2006). Common in young adults and athletic individuals, less frequently it may also be found in intrinsic AV nodal disease, infections of the heart (e.g. Lyme disease), acute MI’s (especially acute inferior MI’s), with certain electrolyte imbalances, especially potassium excess or deficiency, and with drugs that increase the refractory time of the AV node, such as calcium channel blockers, beta-blockers, cardiac glycosides, and any drug that increases cholinergic activity (Levine & Brown, 2009). The monitoring RN should also be aware of the side effects of any drugs given in the OR suite which may lower the heart rate, and be alert for actions which may precipitate a vasovagal response.

A thorough assessment, review of the patient’s history, and medication reconciliation prior to admission to the OR suite will assist in determining the etiology of the heart block. Electrolyte and drug screens may be appropriate based on the patient’s history. Patients with long-standing Systemic Lupus Erythematosus (SLE) and borderline first-degree block, or those patients with first degree block and coexistent bundle branch block are the exceptions to the benign prognosis typically associated with this arrhythmia. These patients may be at increased risk for developing more significant cardiac disease.

In addition to reviewing the patient’s H&P, it is always a good idea to look at the total patient and how he/she is responding to any sign or symptom outside the usual norm. In this case, the patient is handling the arrhythmia without a problem. Continued monitoring, notifying the surgeon of the condition, and patient education are all appropriate nursing interventions.

References:
There are many resources, both on-line, in hard copy, and in person, for EKG review. Here is a list to get you started. If your facility doesn’t offer an EKG course, encourage your educator or manager to explore that possibility. Additional in-house resources include your anesthesia care provider, the educator for cardiovascular services, nurses in ICU and telemetry, and your ACLS instructor. This topic may also be of interest for one of your monthly AORN chapter or staff in-service meetings.

EKG quizzes. Retrieved
http://www.gwc.maricopa.edu/class/bio202/cyberheart/ekgqzr.htm

3 good study guides which provide an overview of cardiac anatomy, electrical physiology, and practice rhythm strips are:
Ellis, Karen. EKG Plain and Simple
Aehlert, Barbara. EKG’s Made Easy
Huszar, Robert J. Basic Dysrhythmias: Interpretation and management