knee with tibial-femoral dislocation documented by physical examination and MRI.

There were 72 knee injuries involving multiple ligaments. In these 72 injured extremities, 12 vascular injuries were identified. Four of these were identified by physical examination and 5 by routine arteriography. There were 3 additional vascular injuries not identified by either preoperative physical examination or arteriography. In the 4 patients who had an abnormal physical examination at presentation, all underwent immediate revascularization. The remaining 8 patients had normal pulses on initial examination. All underwent arteriography and 5 had vascular injuries detected by arteriography and underwent successful repair. There were 3 patients who had a normal physical examination and an arteriogram interpreted as normal but who subsequently proved to have a popliteal artery injury. Two of the 3 patients who had normal pulses and angiograms interpreted as normal had their popliteal artery injury discovered during release of the tourniquet following the repair of their ligamentous injuries. The third patient developed a pseudoaneurysm that bled following arthroscopic repair of the knee injury.

Comment: This is a selective series. There were no limb losses reported with popliteal artery injury in this group of patients, suggesting significant referral bias. However, it is important to note that both physical examination and arteriography may not detect a popliteal artery injury occurring in the setting of a knee dislocation. Despite normal arteriography and a normal physical examination, delayed presentation of a popliteal artery injury does happen. The take-home message here is that a single arteriogram or a single physical examination is not sufficient to rule out popliteal artery injury in a patient with a knee dislocation. Patients with knee dislocation should, at the very least, be followed by serial physical examinations.

Prehospital HMG Co-A Reductase Inhibitor Use and Reduced Mortality in Ruptured Abdominal Aortic Aneurysm

Feeney JM, Burns K, Staff I, et al. J Am College Surg 2009;209:41-6.

Conclusion: In patients with ruptured abdominal aortic aneurysms prehospital statin use appears to be associated with increased survival.

Summary: One of the pleotrophic effects of statins appears to be reduction of inflammatory mediators. These mediators include heat shock proteins, tumor necrosis factor α, multiple interleukins, nuclear factor κ b, as well as nitric oxide. Statins likely have free radical scavenger activity. Statins also appear to exert anti-inflammatory and antioxidant affects that improve mortality in septic shock populations and patients with severe sepsis who were taking statins appear to develop septic shock less frequently. Theoretically, similar shock mechanisms could be active in the setting of a ruptured abdominal aortic aneurysm (rAAA).

The authors performed a retrospective review of their patients with rAAAs from January 2000 to December 2008. They compared hospital and ICU lengths of stay, cardiac morbidity, and number of cardiac events per patient between survivor groups with and without pre hospital statin use. Mortality, cardiac morbidity, and gender were also compared. The Physiologic Operative Severity Score for the Enumeration of Mortality and Morbidity (POSSUM) was also calculated for all patients analyzed.

There are 121 records screened with 40 patients excluded due to the presence of active cancer, chronic immune suppression or living wills or advanced directives against live sustaining treatment,. There were no statistically significant differences between statin users and non-users with respect to age, gender and POSSUM scores. Mortality in the group without pre hospital statin use was 63.8%. In the group with pre hospital statin use mortality was 34.8% ($p=0.018$, odds ratio 0.30 to 0.11). Hospital and ICU lengths of stay, cardiac morbidity, and number of cardiac events per patient were not statistically different among survivors.

Comment: This study provides further evidence for the ever-widening pleotrophic effects of statin medications. It does have several limitations including its small sample size and the fact that endovascular repair of ruptured aneurysms and the use of statins increased over the study period. Patients were included in this study if they used any statin at any dose for any period of time up to their time of admission for rAAA. What is now needed is prospective studies on dose related response and time delays in the generation of the pleotrophic effects of statin medications.