Print

From: Rodney Pommier

Sent: Monday, March 19, 2012 6:07 PM

To: Susan L. Anderson

Subject: RE: Dr. Pommier FW: CARCINOID Digest - 18 Mar 2012 to 19 Mar 2012 - Special issue (#2012-165)

I'll try to clarify.

Like Dr. Woltering and his group, I use octreotide on ALL neuroendocrine operations. Based on this research, I use it regardless of whether the patient has syndrome or not. I also use it for all pancreatic NET operations. I operate on all patients with a bolus dose of 500 mcg before the operation and then on a drip during the operation with lots of extra vials of octreotide available to administer during the operation as needed. I completely agree with Dr. Woltering's philosophy that octreotide is "cheap" and I consider it invaluable if it prevents or reduces the severity of any carcinoid events in the operating room, compared to the consequences of letting such a complication occur. Therefore, I use it.

As Dr. Woltering also points out, the definition of carcinoid crisis is a moving target. What constitutes a crisis? To date, only 1 SERIES of patients has been published on carcinoid crisis and prophylaxis with octreotide and they used a definition of the patient having a blood pressure of <80 for a duration of >10 minutes as an event, but also recorded the other events, like high blood pressure, heart arrhythmia. They found that these events occurred only 7% of the time, but not at all if you any got octreotide DURING the operation. They didn't specifically separate events where the blood pressure went <80 for >10 minutes from full blown "crisis". I wish they had.

To keep things consistent, we reviewed the anesthesia records of our patients for their blood pressure, heart rate, heart rhythm, etc at 5 minute intervals. If we found anything out of the ordinary, we reviewed them at 1 minute intervals to get the actual duration of the "event" down to the minute. We therefore used the same definitions, but I also made note of whether either I as the surgeon or the anesthesiologist declared that we thought a full blown "carcinoid crisis" had occurred, demonstrated by marked hemodynamic instability. If we found an "event" we looked for other possible explanations, like ongoing blood loss, twisting of blood vessels, etc. If we found another plausible explanation for the event, t didn't count as being due to carcinoid. Our series has more patients treated with octreotide than theirs did.

So, using those criteria, we found that "events" that we attributed to carcinoid occurred in 29% of our patients. That's over 3 times higher than previously reported in the other series using the same definitions. All the patients that had them had prophylactic octreotide and they all had liver metastases. None occurred in a patient without liver metastases. They occurred whether I was resecting liver tumors or doing something else, like resecting a small bowel tumor and leaving the liver tumors alone.

The majority of these "events" were in fact a blood pressure <80 for >10 minutes and not what most would call a full blown carcinoid crisis. Marked hemodynamic instability that had been officially declared as a "carcinoid crisis" occurred in 5% of patients. Because the other group didn't report the percentage of their events that was a carcinoid "crisis", we don't know if that's similar to what they got, or not.

Regardless of whether you call it a "crisis" or not, having one's blood pressure <80 for >10 minutes during an operation is known from lots and lots of surgical/anesthetic research to not be a good thing. It is known to correlate with a higher chance of postoperative complications. We found that having one of those events occur during the operation correlated with a much higher chance of having not just a postoperative complication, but a serious postoperative complication. However, no one has yet shown that if you prevent these events, with octreotide or by any other means, you will actually prevent the postoperative complications. However, that is the hope.

Lastly, giving octreotide during the event did treat that particular event. However, getting that extra dose of octreotide for that event did not necessarily prevent another event from occurring later during the operation. Therefore, the finding in the previous series that getting any octreotide during an operation completely prevents events is not supported by the findings of our series. That's why I say that one should not be complacent that if you give octreotide during an operation, the patient will be safe and protected. The events may still occur and one should be prepared to aggressively treat them with more octreotide.

I am starting a randomized blinded study this summer of octreotide drips at 500 mcg/hr during the operation and giving extra doses of octreotide as needed for events compared with a placebo saline drip and just giving the extra doses of octreotide for events as they occur. The outcomes will be the number of events that occur, how much extra octreotide has to be given during the operation, and postoperative complications. If there's a big difference between the two approaches, we'll probably see it in the next 100 patients, or so. Then Dr. Woltering's questions he says we need to ask ourselves about how much improvement is worthwhile come to the forefront. Unfortunately, statistics indicate it will take several hundreds of patients to show a 20% difference in outcome, and that would be a big difference. What about a 5% difference? Well, that will take a thousand patients to show. What if it saves 1 life in 1000, or 10,000. Well, that will take more patients than will be diagnosed and operated for carcinoid in the next century, so we won't be able to detect that kind of difference.

Dr. Woltering and I have already discussed this over the telephone. He and I agree that definitions are critical. That's why we tried to be careful about this. We tried to compare apples to apples by using the same definitions that were used in the only paper on the topic. As he indicates, we will undoubtedly discuss it more when we meet at the SSO meeting in Orlando.

Rodney F. Pommier, M.D.

Professor of Surgery

Division of Surgical Oncology

Oregon Health & Science University

Portland, OR

"Sunny Susan" Anderson.... in beautiful Tempe, AZ, USA, where the sun shines more than 300 days each year, the sky is bright blue, flowers are always blooming and birds singing! It is a GREAT day to be alive, count our blessings and enjoy life! Visit my homepage at:

<http://www.carcinoidinfo.info> http://www.carcinoidinfo.info/ Visit my husbands homepage for deep-space astrophotography with how-to's and much more at: <http://www.astroshow.com/> http://www.astroshow.com/