Neuro-Oncology Steroid Survey
Department of Neuro-Oncology

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Abstract

The department of Neuro-Oncology sponsored the Neuro-Oncology Steroid survey which was conducted May-July 2011. The purpose of this evaluation was to gauge the use of steroids in conjunction with treatment of brain tumor patients at MD Anderson. This on-line survey was distributed to 51 MD Anderson clinical faculty and staff in the field of neuro-oncology in order to better understand at what stages (pre/post operative, during/after radiation, and as needed for worsening neurological conditions) and how often practitioners administer steroid treatment to their patients. A total of 36 completed the survey, resulting in a response rate of 70.6%. Almost all respondents (97.2%) indicated that they prescribe steroids as a part of patient cancer treatment. Almost 80% (79.9%) reported that they prescribed steroids either very frequently or frequently to regulate neurological symptom flares, and 97.1% suggested that the benefits of steroids either very strongly or strongly outweighed the detriments caused by the interaction/side effects of steroid use. Data indicates that although a majority of the respondents indicated that they have been in practice twenty years or more (33.2%), most of these personnel have been in a neuro-based subspecialty less than five years (28.6%). A majority of the respondents indicated that they have been prescribing steroids to cancer patients less than 5 years (26.5%), and that they have been in a neuro-based subspecialty (including MD Anderson experience) less than 5 years (28.6%). In addition, respondents described their most common subspecialty as neurology and neuro-surgery (both at 40.0%).

On a scale of zero to twelve milligrams, the most common dosage prescribed was 4 milligrams at the pre-operative (68.3%) and post-operative stages (70.0%), during radiation treatment (47.9%), and when needed for neurological worsening condition (80.0%). A dosage of 2 milligrams was the most prescribed amount in the after radiation treatment stage (46.6%). In reference to the frequency of steroid usage prescribed per day to cancer patients (ranging from one to ten times per day), the respondents indicated that at the pre-operative stage, 2 times a day (45.0%) to 3 times per day (45.0%) were the most common rates. During the post-operative period, 4 times a day (40.0%) was mostly referred, while during radiation treatment, 2 times a day (68.2%) was the frequency most cited. Frequencies of 1 time per day were most often administered after radiation treatment (45.4%) while 2 times per day was most commonly prescribed frequency when needed for a worsening neurological condition (56.7%).

When the respondents were asked about the usual duration (choices ranging from 1 day to 10 weeks) they prescribed steroids to their cancer patients in the pre-operative stage, 50.0% suggested that between two and six days was the most common duration in this stage, while 66.6% indicated that between two and seven days was the most common length of time in the post-operative stage. A time of 2 weeks was the most common period in the during radiation treatment phase (26.3%), after radiation treatment (27.2%) and when needed for a neurological worsening condition (30.9%).

When questioned about the average length of time patients are on steroids, the respondents revealed that during the pre-operative stage 65.0% indicated a time frame of between 0 and 5 days, while during the post-operative stage, a time period of 6 to 10 days was most common (38.0%). In reference to the radiation treatment stages 30.0% indicated that 11-15 days was the most cited timeframe during radiation treatment, while the most commonly prescribed period after radiation treatment was both 0-5 days and 16-20 days (27.8%). Respondents also indicated that 6-10 days was the most commonly prescribed duration for patients that had a worsening neurological condition (27.7%).

Respondents were also questioned on their typical procedures for weaning patients from their steroid usage. This process consisted of dosage reduction (one through twelve milligrams) and days
(one through ten) involved in the six step weaning process. A decreased dosage of 2 milligrams was the most prescribed amount during steps one through four, while a 1 milligram dosage reduction was used most frequently administered in steps five and six. Three days was the most common period for patients to be weaned during steps one through three, while 5 days was mostly cited period in steps four and five. In addition, 4 days was listed as the most common duration for patients in step six of the weaning process.

Although this survey had an adequate amount of respondents, obtaining a larger pool would add to the robustness of results and add confidence in reporting results. We recommend the continuation of this survey so that steroid usage can be compared to baseline data in order to define trends related to the administration of steroids in cancer patients. Also, future analysis would be beneficial to further explore the side effects of such treatment in order to better ascertain benefits versus costs implications.