

APPENDIX

Assessing the Nutritional Status of Dialysis Patients Using Subjective Global Assessment (SGA)

INTRODUCTION

Because nutritional assessment is difficult, a new technique called Subjective Global Assessment (SGA) was developed. Its ratings have been found to be highly predictive of outcome.^{1,2,3} The procedure is easy to learn and simple to implement. SGA requires no additional laboratory testing or capital outlay. In addition, SGA has been found to correlate strongly with other subjective and objective measures of nutrition.

Although originally used to categorize surgical patients, this nutritional classification system has been shown to be a reliable nutritional assessment tool for dialysis patients.^{4,5} Fenton⁶ found that survival of patients classified as malnourished by SGA was significantly lower than patients classified as nourished, although he did not perform analyses to establish nutritional status as an independent risk factor.

SGA classifies the patient as:

- A. Well-nourished
- B. Mildly malnourished or suspected of malnutrition
- C. Severely malnourished

Clinicians place the patient into one of these categories based upon their subjective rating of the patient in two broad areas: 1. Medical History, 2. Physical Examination.

In general, 60% of the clinician's rating of the patient is based on the results of the medical history, and 40% on the physical examination (see SGA evaluation form in figure 1).

Medical History Section

The first SGA component, the medical history, involves asking questions and evaluating the patient's answers about the following four parameters:

- Weight change
- Dietary intake
- Gastrointestinal symptoms
- Functional impairment

The patient is rated as either nourished, mildly, moderately malnourished, or severely malnourished for each of the four parameters.

Physical Examination Section

Physical evidence of malnutrition is rated differently. There are four categories to select from: normal nutrition, mild malnutrition, moderate malnutrition, or severe malnutrition.

Physical signs to examine include:

- Loss of subcutaneous fat
- Muscle wasting
- Edema
- Ascites (in hemodialysis patients only)

There are several body locations to examine for each parameter.

SGA SCORING GUIDELINES

The clinician rates each medical history and physical examination parameter as either an A, B, or C on the SGA Scoring Sheet. On the basis of all of these parameters' ratings, the clinical observer assigns an overall SGA classification which corresponds to his or her subjective opinion of the patient's nutritional status.

SGA is not a numerical scoring system. Therefore it is inappropriate just to add the number of A, B, and C ratings to arrive at the overall SGA classification. The clinician should examine the form to obtain a general feel for the patient's status. If there seem to be more checks on the right-hand side of the form (more B and C ratings), the patient is more likely to be malnourished. If the ratings seem to be on the left-hand side, the patient is likely to be nourished.

The severely malnourished (C) rating is given whenever a patient has physical signs of malnutrition such as, severe loss of subcutaneous fat, severe muscle wasting, or edema, in the presence of a medical history suggestive of risk, such as continuing weight loss with a net loss of 10% or more, or a decline in dietary intake. GI symptoms and functional impairments usually exist in these patients. Severely malnourished patients will rank in the moderate to severe category in most sections of the SGA form.

When weight loss is 5-10% with no subsequent gain, in conjunction with mild subcutaneous fat or muscle loss and a reduction in dietary intake, the patient is assigned the mildly/moderately malnourished (B) rating. These patients may or may not exhibit functional impairments or GI symptoms. The B rating is expected to be the most ambiguous of all the SGA classifications. These patients may have a ranking in all three categories. In general, if the severely malnourished (C), or well-nourished (A) rating is not clearly indicated, assign the patient to the moderately malnourished classification.

If the patient has no physical signs of malnutrition, no significant weight loss, no dietary difficulties, no nutritionally related functional impairments, or no GI symptoms which might predispose to malnutrition, the patient should be assigned to the well-nourished (A) category.

If the patient has recently gained weight, and other indicators, such as appetite, show improvement, the patient may be assigned the A rating, despite previous loss of fat and muscle which may still be physically apparent. On the other hand, obese patients can be moderately or severely malnourished based upon their poor medical history and signs of muscle loss. Even patients with a normal appearance could be classified as mildly or moderately malnourished because of a poor medical history.

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