

CLÁSICOS EN NUTRICIÓN

Comentario al artículo

Studley Hiran O. Percentage of weight loss. A basic indicator of surgical risk in patients with chronic peptic ulcer. *JAMA*, 1936, 106(6):458-460

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En este artículo clásico Hiran O. Studley describe, por primera vez en 1936, la importancia de la pérdida de peso como indicador de riesgo quirúrgico en los pacientes operados por úlcera péptica. Han transcurrido desde entonces 65 años y el porcentaje de pérdida de peso respecto al peso habitual continúa siendo mejor índice de riesgo asociado a desnutrición.

En su trabajo los autores estudian 50 pacientes con úlcera péptica crónica que no respondieron al tratamiento médico y fueron sometidos a tratamiento quirúrgico mediante cirugía programada. En 46 pacientes se disponía de datos que permitían el estudio de varios factores relacionados con la mortalidad como la edad del paciente, la presencia de enfermedades cardiovasculares, la localización de la úlcera, el tipo de operación, la duración de la operación y el cirujano que la realiza. No se pudo encontrar una asociación de ninguno de estos factores con la mortalidad. Sin embargo, pudo observar que los pacientes que fallecieron habían perdido una proporción importante de peso, de tal forma que entre los 18 pacientes que habían perdido más de un 20% del peso habitual fallecieron 6 (33,3%), mientras que entre los que habían perdido menos del 20% del peso habitual solamente falleció un paciente (3,5%) y la causa de la muerte se debió a fleo mecánico.

En este artículo no se realizó análisis estadístico de los datos, pero hemos podido comprobar que el valor de según el test exacto de Fischer es de 0,01. Expresado en medidas actuales de riesgo esto representa un riesgo relativo de muerte de 9,3 (IC 95% 1,22-71,24) para los pacientes que presentan una pérdida de peso mayor del 20% respecto a los que pierden menos de un 20%. Es decir el riesgo de muerte es 9,3 veces superior en estos pacientes.

Desde entonces se han publicado numerosos trabajos que han confirmado la observación del Dr. Studley, y se ha intentado refinar el valor pronóstico de estado nutricional con parámetros más sutiles como medidas antropométricas, valoración de proteínas plasmáticas, o valoración del estado inmunológico.

Sin embargo, ninguno de estos índices han aportado una mejora sustancial a los datos aportados por Studley. Tan sólo en los últimos años la aparición de la “valoración subjetiva global” (Detsky, 1984), ha conseguido mejorar el valor pronóstico de la pérdida de peso, al ponderar esta medida por su evolución en el tiempo e incluir otros parámetros clínicos en la valoración del paciente. No obstante el peso continúa siendo el dato más importante en la valoración del paciente.

No deja de ser curioso que en esta época con un desarrollo tecnológico tan avanzado, un parámetro tan simple como la pérdida de peso continúe siendo el mejor método de valoración nutricional de los pacientes. Probablemente esto se debe a que no disponemos todavía de conocimientos y metodología que permitan valorar el impacto de la desnutrición sobre la función del organismo y de la célula. Y, paradójicamente, no deja de ser sorprendente que en algunas plantas de los hospitales no se disponga de básculas o tallímetros, o que disponiendo de ellas pesar al paciente sea la excepción en lugar de la regla, o que en casi ningún hospital haya un control de la precisión y funcionamiento de estos aparatos. De hecho en muchos centros es más fácil conseguir un TAC que el peso del enfermo.

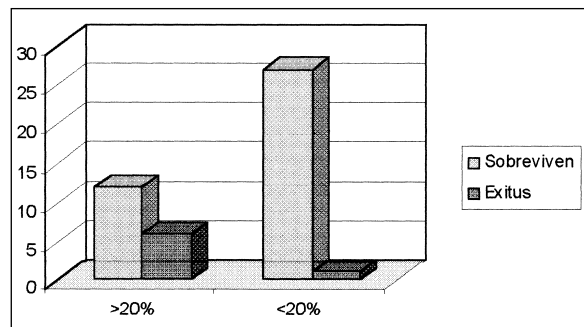


Fig. 1.—Mortalidad en pacientes con úlcera péptica sometidos a cirugía programada según la pérdida de peso. Studley, 1936.

Si el estado de nutrición influye en el riesgo quirúrgico del paciente, surge la pregunta de si podemos revertir este riesgo con el soporte nutricional. Desde el estudio del Veterans Affairs Total Parenteral Nutrition Cooperative Study Group. Sabemos que la nutrición parenteral perioperatoria mejora el pronóstico de los pacientes severamente desnutridos, pero aumenta los riesgos de los pacientes con desnutrición moderada. Ello plantea a su vez varias cuestiones: Primero: probablemente el tipo de nutrición parenteral que estamos utilizando no es suficientemente bueno y es necesario refinar las soluciones de nutrición parenteral y de los nutrientes que administramos por vía intravenosa. Segundo: probablemente la nutrición por vía enteral ejerce un efecto adicional más allá de la función plástica y energética de los nutrientes, ya que las complicaciones de la alimentación enteral son inferiores a las de la nutrición parenteral independientemente de

las complicaciones relacionadas con el catéter. Tercero: la disponibilidad y eficacia de nuevos métodos de alimentación artificial nos obligan a médicos y cirujanos a seleccionar más cuidadosamente el método terapéutico en los pacientes. No deja de ser llamativo que el año 2001 ante ciertas intervenciones de cirugía mayor, se haga sistemáticamente una valoración preanestésica y se omita la valoración del riesgo nutricional e incluso simplemente pesar al paciente.

Referencias

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Percentage of weight loss: A basic indicator of surgical risk in patients with chronic peptic ulcer

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The general mortality rate among patients suffering from peptic ulcer has been materially reduced by surgical care. The reduction has been due chiefly to early operation in those having one type of ulcer lesion; that is, ruptured ulcer¹. The rate following operations for chronic peptic ulcer, uncomplicated by rupture or gross hemorrhage, has always been much lower, but proportionate progress in reducing this figure further has not been made. This rate has remained for some time at a relatively stationary level of about 10 per cent², except in selected series. To present further observations on the sequence of events leading to this sustained rate is my object in this communication.

The ordinary patient chronically ill with peptic ulcer is to be dealt with here. Those patients with ruptured peptic ulcer, with acute hemorrhage or with gastrojejunal ulcer are naturally not under consideration, since they all present preoperative and operative conditions which are in no wise comparable to those in patients with the usual chronic peptic ulcer. Those patients who had had previous operations for peptic ulcer, other than anastomotic procedures, however, are included, since these patients present problems of the same

type found in many with chronic ulcer coming to their primary operation.

The cases of fifty consecutive public ward patients operated on at the Lakeside Hospital for chronic peptic ulcer of nonemergency type were reviewed in a search for a factor or factors contributing to postoperative mortality. Special attention was paid to the following possible factors, which are commonly considered to be of major importance in determining the immediate postoperative outcome: age of the patient, positive preoperative cardiorespiratory signs leading to postoperative pulmonary complications and death, a secondary operation in contrast to a first or primary operation for peptic ulcer, the presence of pyloric stenosis, the location of the ulcer, the type of operation, the duration of the operation, and the surgeon. Detailed study, the results of which are too extensive to be reported here, failed to demonstrate any of these possible factors as being of chief or consistent importance in determining the postoperative mortality rate. It was observed, however, that the patients who died after operation had quite regularly lost preoperatively a considerable proportion of their weight. The relationship between the preoperative loss of

weight and the postoperative mortality was consequently chosen for further investigation.

In order to do this, it was found practical to determine the percentage of preoperative weight loss as follows: First, the record of the highest level of weight in health for the patient was noted. This was commonly found under the heading of "best weight." Many of these patients were followed in the outpatient department for months or years before operation, and in some of these repeated weighings showed great variation, associated with remission or recurrence of symptoms. If the record in the outpatient department showed a weight approximately as high as that in the statement of the patient, it was used in preference. Second, the last preoperative weight, commonly found recorded a few days before operation, was noted. This figure subtracted from the highest weight reading was accepted as the number of pounds of preoperative weight loss. This was expressed as a percentage of the highest weight level and was considered as representing the weight lost preoperatively.

Of the fifty cases, forty-six were found to have the necessary data for the determination of the preoperative weight loss. In four of the fifty cases a statement of weight was not to be found. It was necessary in twenty-three cases, exactly half of the forty-six, to utilize the best weight figure as given in the patient's statement.

Among the forty-six cases there were seven postoperative deaths, or a mortality rate of 15 per cent. If all patients who had had previous operations for peptic ulcer had been excluded (a usual custom in reports of this kind), the postoperative mortality rate would have been 12.5 per cent.

In the study of the relationship of loss of weight to the postoperative outcome, two preliminary points came up for consideration as possible modifying factors to any correlation. The question arises, would the loss of a certain percentage of weight in a heavy person be as important as the loss of the same percentage in an individual of light or medium weight? Secondly, would the rapidity with which the loss of weight occurred modify any correlation that might be found between the percentage loss of weight and the postoperative

ve outcome? It was found that while each of these considerations might be of significance their importance was relatively small and their modifying influence on the basic question was of no practical value. With these two preliminary considerations excluded as essentially modifying factors, the relationship between the percentage of preoperative weight loss and the postoperative mortality rate was brought out in a striking way by the following procedure:

The patients were arranged in sequence according to the individual percentage weight loss and the series was then arbitrarily divided into three approximately equal groups (table I): group A, fifteen patients who lost 14 per cent body weight or less; group B, sixteen patients who lost from 16 to 21 per cent; group C, fifteen patients who lost from 22 to 43 per cent. The deaths in the series were found to be distributed as follows: one in group A, one in group B and five in group C.

In group B the single death occurred in a patient who had lost 21 per cent of his weight; in this group of sixteen patients there were only two others, or three in all, who had lost more than 20 per cent of weight. Adding these three to the fifteen patients of group C, each of whom lost a still greater percentage, it is seen that the mortality with one exception (one death in group A) is confined to those who had lost more than 20 per cent of weight prior to operation. The forty-six cases are thus placed in two groups, instead of three, in table 2.

The difference in the mortality percentage between the two groups A and B is more pronounced when it is considered that the one death among the twenty-eight who lost less than 20 per cent of body weight was found at autopsy to be associated with ileus that was of mechanical and not of infectious origin. This death was associated with a lesion that has no appreciable relationship to the subject being discussed here. Thus, with one exception, all the patients who lost less than 20 per cent of their preoperative weight lined to be discharged from the hospital, improved. Among the eighteen patients who lost more than 20 per cent weight, there were six

Table I
Preoperative Percentage of Weight Loss and Postoperative Mortality in Three Groups

| Weight Loss Class | Numer of Cases | Mean | | |
|-------------------|----------------|-------------------------------------|-------------------------|--------|
| | | Percentage Preoperative Weight Loss | Percentage Weighth Loss | Deaths |
| A. Smallest loss | 15 | 14 or less | 8,7 | 1* |
| B. Medium loss | 16 | 16 to 21 | 17,8 | 1 |
| C. Greatest loss | 15 | 22 to 43 | 26,8 | 5 |

* The patient with ileus of mechanical origin.

Table II
Preoperative Percentage of Weight Loss and Postoperative Mortality: Cases Arranged in Two Groups

| | Mean | | |
|---------------------------------------------|------------------------|-------------------|--------|
| | Percentage Weight Loss | Numer of Patients | Deaths |
| Group A. Those losing less than 20 per cent | 12,6 | 28 | 1* |
| Group B. Those losing more than 20 per cent | 26,1 | 18 | 6 |

postoperative deaths, or 33 1/3 per cent mortality, as shown in the accompanying chart.

Comment

The policy of delay in advising surgical treatment of patients with chronic peptic ulcer has long been urged and is now generally followed. Surgical treatment is usually sought only when unrelieved symptoms force the abandonment of other methods of therapy. During the period of delay while full trial is given to medical management the loss of weight is often considerable, particularly in those patients whose symptoms do not adequately respond and for whom operation is advised as a last resort. This phenomenon of a greater loss of weight was found in about 40 per cent of our patients coming for nonemergency surgical treatment of peptic ulcer, and it is likely to develop in any series of cases under good but prolonged medical management.

Since the foregoing evidence shows a high postoperative mortality rate to be closely associated with a large percentage of weight loss preoperatively, the presence of such weight loss in any single patient may function as a readily observable sign of special operative risk.³ A specific method

Summary

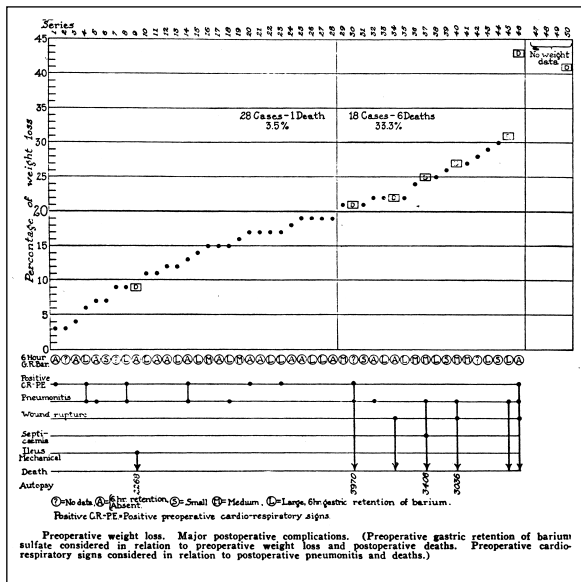
The factor of preoperative weight loss was found to be outstanding in a study designed to account for the mortality rate in a series of fifty consecutive patients from the public ward service of the Lakeside Hospital who were operated on for chronic peptic ulcer and who exhibited the usual clinical syndrome. On forty-six of these patients there were found comparable data on the preoperative weight loss, and among these there were seven deaths. On four patients, among whom there was one death, the weight data were not present. It was found that when the weight loss factor reached as high as approximately 20 per cent or above, it was associated with a postoperative mortality rate of 33 1/3 per cent in contrast to a rate of 3.5 per cent among those who had lost less weight. e. g., were in better preoperative condition according to this standard.

Conclusion

The physical state represented by a large loss of weight constitutes a major hazard faced by those suffering from chronic peptic ulcer. It must be included along with rupture of the ulcer and serious hemorrhage as a third possible major complication in the medical management of these patients, as some of them are of necessity transferred for surgical care in this state, which was found to exhibit a high operative risk. By the recognition of this phenomenon an additional basic guide in estimating surgical risk is obtained, and there is reason to believe that more patients will be saved, provided efforts are concentrated on the preoperative preparation of those who have lost a good deal of weight, regardless of other appearances in the individual.

References

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3. D. M. Berkman (Preoperative Management in Cases of Gastric Retention, *M. Clin. North America* **5**: 411 [Sept.] 1921) has identified gastric retention as associated with special operative risk, whereas E. S. Emery Jr. and R. T. Monroe (Peptic Ulcer, *Arch. Int. Med.* **55**: 271-292 [Feb.] 1935) have designated hypersecretion. J. F. Weir (Preoperative Treatment of Complications of Gastrointestinal Disease, *M. Clin. North America* **11**: 1407-1413 [May] 1928) in addition to gastric retention, has emphasized vomiting, pain and fatigue. A. J. Walton (Prognosis in surgical Treatment of Peptic Ulcers, *Lancet* **2**: 37-39 [July 7] 1934) suggests concerning a group of patients with a higher postoperative mortality rate, the severity of the illness as a general factor of note. The percentage of preoperative weight loss, as noted above, may measure the significance of these various manifestations in the estimation of the patient's ability to undergo operation safely.



Preoperative weight loss. Major postoperative complications. (Preoperative gastric retention of barium sulfate considered in relation to preoperative weight loss and postoperative deaths. Preoperative cardiorespiratory signs considered in relation to postoperative pneumonitis and deaths.)

may be developed for overcoming preoperatively this extra hazard. Such an accomplishment may assist in reducing the postoperative mortality rate in this troublesome field of surgery from about 10 per cent to that level (about 3 per cent) usually associated with other serious major operations for nonlethal diseases.