

Journal Club- Estimating Energy Needs in Critically Ill Obese

Main Points

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Goals of Feeding Obese pts in ICU:

-Net protein anabolism

-Avoiding overfeeding

Can predictive equations help us meet this goal?

- It is accepted that IC is gold standard- impracticality forces researchers to look at other possibilities: most studies have looked at predictive equations in **healthy** obese adults
- Controversies:
 - Which formula to use
 - Which wt to use- an important factor in the obese pop given the changing proportion of FFM to inactive fat mass as wt increases

All articles:

- Overall, the HB equation most closely estimated needs, though different wts were used
 - 1st: AdjBW (w/ a stress factor)
 - 2nd: ActBW
 - 3rd: ActBW
- However, IC overwhelmingly was concluded to be the most accurate measure of energy needs
 - problem lies in the availability of IC and w/ some pts contraindicated
- Only the 2nd article actually recommended using the predictive equations
 - asserts that the C equation is indicated for hypocaloric feeding

BMI- Third article was the only one that looked at morbidly obese pts (up to BMI of 53)

-Not able to find studies w/ extremely morbidly obese (Patient A.M.- BMI over 100?)

Drawbacks:

- each study used a different mix of equations (aside from the HB) with a variety in the wts used
 - Would it make any difference to do a study where each equation was looked at, each type of wt used? Or a meta-analysis?
- Each study had a small number of patients (36, 28, 44) with a wide range of BMIs

Overall:

-IC is gold standard

-Equations are too imprecise to recommend one (though HB came the closest in each study)

-Hypocaloric feeding may be beneficial

-more studies need to be done to determine amount, length of time, method for determining calories given (how much to restrict)

References

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