Review of: "Costs of Full Endoscopic Spine Surgery: a Narrative Review"

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An alternative method

The subject is crucial nowadays as endoscopic and robotic approaches are presented as alternative to many open approaches with a tendency of increased costs and no evidence of benefit.The method is very well explained with transparency and rigor. Nevertheless the findings are the same as most of other articles aiming at considering cost evaluation as a criteria to introduce or not a new approach/technique: further investigation because there's no standard system of gathering costs.

As the invitation for the review stated that it is" meant to provide authors with constructive suggestions to improve their papers" I'm about to share our experience to approach this kind of issues .

In fact the issue of how to calculate costs is always present and hardly solvable. We tried to overcome it starting from these two consideration:

1 for these cases of clinical decision there is usually no need to consider indirect costs (such as the quota of cost of the hospital staff or the quota of the maintenance of the whole building) because these are fixed costs always present no matter the introduction of something new. Dealing with the direct clincal costs only simplify the logic of what to consider, reduce heterogeneity and still permits to evaluate costs.

2 the introduction of a new approach/technique in comparison with an existing approach/technique, should be evaluated in terms of added value which is a broader concept than the only economics and permits to formulate assessments based on more criteria. The definition of value we use is inspired by the Value Based Health Care [1] but it is applied as an instrument to take decisions as an evidenced base management tool. The value original equation is enriched by the benefit on the economics side deriving from the utilization of the eventual freed-up resources:

VALUE	CLINICAL OUTCOME
	DIRECT COSTS+/- FREED-UP RESOURCES

Summarizing the findings in the article:

- FESS seems not inferior to open approach
- Most patients undergoing FESS had a shorter length of stay
- Even if the criteria to calculate costs weren't homogeneous, direct costs linked to the surgical intervention were generally available especially in reference to the more expensive endoscopic instruments

Does the endoscopic technique described in the article add value and so it is worthy the introduction? It depends on the relative monetary value of direct costs and freed-up resources (days of stay become available by the shorter length of stay and can be use to treat additional patients): if the increase of direct costs (such as instruments) is compensated by the opportunity cost of re-using the days of stay, given the same clinical outcome between the 2 approaches, it is plausible that the new technique at least doesn't decrease value . The findings are still to be precisely defined but it is possible to get a reasonable solution from which to go to a step further in an easier way than looking for a standard way to calculate costs. I'm leaving in the foot notes the referral of some articles in which costs are evaluated according to this method[2]

[1] [1] "What is value in healthcare?" by M. Porter, New England Journal of Medicine,December 23, 2010
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[2] Bottoni Edoardo; Giuseppe Mangiameli; Alberto Testori; Federico Piccioni; Veronica Maria Giudici; Emanuele Voulaz; Nadia Ruggieri; Francesca Dalla Corte; Alessandro Crepaldi; Giulia Goretti , **Elena Vanni**: **Early Hospital Discharge on Day Two Post Robotic Lobectomy with Telehealth Home Monitoring: A Pilot Study,** Cancer 23-10-02 doi: 10.3390/cancers15041146.

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