

EDITORIAL

WHEN SURGERY IS INDICATED BUT NOT NEEDED

BY

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The word "indicated" has many related and overlapping meanings. Those relevant to medical care are : 1. suggested as necessary or advisable , 2. pointed to as a suitable or desirable course of action. In the medical field, we incorporated the word "indicated" as equivalent to the word " needed", and whatever is needed for the patient should be offered to him whenever possible. But is all what is indicated is needed ? Let us see.

Let us take the example of a very common condition in medical practice, inguinal hernia. For many decades the repair of the abdominal wall defect was by direct stitching of the edges of the defect together. This was o.k. except for a recurrence rate of 10% attributed to the tension applied by necessity to the tissues around the edges of the defect. Hence, the idea of bridging the gap by a synthetic patch was offered as a solution and the era of ' tension free mesh repair ' emerged with a recurrence rate of only 2%. This is an 80% reduction in the only major complication after inguinal hernia repair.

Hence and according to the prevailing paradigm in medical practice the use of mesh in hernia repair was considered indicated and what is indicated is applied. Synthetic mesh is now used by almost all the surgeons in almost all hernia repairs. It is considered the standard of care. Though this development seems logical, it is at the same time- obvious that it is not needed in most of the cases. How is that?

Out of every 100 patients 2 will develop recurrence whether the mesh is used or not and hence the mesh was not needed for these 2. And 90 patients will not develop recurrence whether the mesh is used or not, and the mesh was not needed for these 90 patients. Only 8 patients benefitted from the mesh. So we can say that the mesh was needed in only 8 out of every 100 patients in whom it was used.

So we considered the use of mesh as indicated in all 100 patients when in fact it was only needed in 8 patients. Our excuse- if any- is that we do not know which 8 will benefit, we only come to know in retrospect. The use of mesh in Hernia repair is only one example, but similar situations exist in all specialties e.g. antibiotics as prophylaxis against surgical site infection and anticoagulation as prophylaxis against deep vein thrombosis.

It is obvious that the accepted concept in contemporary medical practice is that a medical intervention becomes indicated if it is of benefit for some and once indicated it is applied. And if we cannot identify in advance those who will benefit from others who will

not, we then apply the intervention to the whole cohort of patients that include those who will benefit.

Shouldn't we try to identify those who will benefit from any particular intervention and apply it to them only? And thus save a lot of resources and more importantly save those who will not benefit from the side effects of an intervention that offers them no benefit. I think we should and I think we can.

I am sure there is a lot of research going on in this direction separately by experts in different specialties according to the intervention in question. But I will suggest here an approach that applies to all interventions of similar or comparable situations. Assume that all the detailed data, medical, demographic, familial, social and environmental of the millions of inguinal hernia patients all over the world were on record including follow up after surgery. I am sure that advanced computer assisted statistical analysis of these data will be able to identify certain common features for those who developed recurrence different from those who did not. Such features could then be considered as risk factors for developing recurrence and the mesh is used for only those at risk.

Comprehensive data recording for all the patients who present to the health care facilities will guarantee a compiled data base suitable- at analysis- to uncover the profile of patients who develop certain complications, e.g. deep vein thrombosis, surgical site infection etc.... Such profile is considered the risk factors of developing the complication for future patients; and these are the subgroup of patients who deserve protection by an extra intervention.

The procurement of these data is not as difficult as it seems. A lot of these data will be filled- in by the patient himself- personal, familial and social data. Many of the data will be collected by the nursing staff – nursing history, basic and general medical information. While doctors will record the specific medical information. Data handling will be the job of I.T. experts and the analysis is the job of the statisticians who must be consulted in advance about the suitable way of data recording and storage.

Let us intervene in the sub group who needs the intervention not in the whole cohort of patients which includes among many others those who need the intervention.

Let us reserve the word 'indicated' to the situation where the action is 'needed'.

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