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## THINKING ABOUT THINKING

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**T**he act of making clinical decision is an interactive

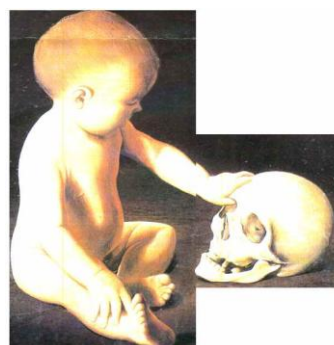
process of identifying the problem, considering the possible solution, and then deciding which solution is best. The process is summarized by a single word called thinking<sup>1</sup>. Unfortunately, the medical schools insist too much in the curricula on memorization of data.

The assumption seems to be that if you know the data you will always be able to apply it. This assumption is almost always wrong. Moreover, residency program give priority to learning procedures and technique rather than to think about the outcome. The policy of going back to books once we face difficulties or complications, should be preceded by active thinking on how to get out of the trouble, thinking helps in building up the process of self dependency. So an attempt to stimulate thinking should always be considered in surgical practice.

In surgical practice one plus one is not always equal to two, on so many occasions we face, strange, difficult, unusual, unexpected or even unbelievable situations, and the right key for this closed door is the active and serious thinking.

No doubt, the surgeon is the one who actively use his brain before he use his hand. The cutting part of surgery gives a feeling of pleasure and enjoyment to the surgeon, to start with, but sadly this does not always lead to cure of the pathology and hence the good outcome.

The cutting part should be supported primarily by a good theoretical background understanding, and active thinking. The surgeon differs from the technician primarily in the way he works with the premises and basic axioms that form the basis of his understanding of the phenomena. The surgeon treat these axioms or assumptions as mere hypotheses, whose trust is yet to be determined. The technician on the other hand, moves from the axioms as if they were true descriptions of the world and builds proof upon them deductively. Whereas the technician structures a system by moving logically and methodically from the axioms, the surgeons moves inductively towards the axioms, testing or questioning their truth.



So surgical practice should stimulate thinking rather than reading. We have to sit aside and ask ourselves about the correct answer before we get it from our reference books.

The outcome of surgery is related to so many factors usually it carries enjoyment for the surgeon and his patient alike, but sometimes it leads to surprise or even disappointment.

Certainly better understanding will produce better decisions, and that better decisions will produce better treatments, inevitably, these improvements will be linked to better outcome.

Outcomes are not always the final measure of our success, although they ought to be.

Good outcome produce happy patient. They also produce happy doctors; because good outcome validate the decision process and therefore our excellence as physicians. Bad outcome produce unhappy patients, but sadly not always unhappy doctors. Why is it that good outcomes indicate good process but bad outcome do not suggest to most surgeon that the process needs improvement?

However, some outcomes are systematic or occur with sufficiently high probability as to suggest a need to change the process. If these bad outcomes result from bad selection, process error, or defect in the follow up, the errors should be discovered analyzed and changed. So identified errors should be avoided as much as possible and to achieve this, you need rumination and active thinking which leads to rational and objective decision.

We should remember that surgeons differs in their ability which is either inherit or acquired.

Surgery is a science and art which depends on the handcraft and braincraft. If both are good then the incidence of surgical turbulence will be very low; but can not be abolished.

So we have to think about so many points before using the knife which includes, proper selection, proper dissection, satisfactory follow up, and honest analysis of our results.

The diseased part is not detached from the human body so analysis should include both in the same time. We have to think and analyze our capabilities and our facilities.

The process of thinking will certainly improve our dear patient's care. It is the hope of major improvements in the medical practice of the future, and it is to instill surgery with greater prospect for the pleasure and challenge than can be in just treating patients as case.

Finally, we have to look for the principle behind the rule, and move beyond the clinical routine, we have to accurately interpret the sign of unusual disease course before we setup a treatment line. A good memory should always be opened for the expected and unexpected complications. And in mind the greater depth about the treatment decision. We have to be wise and to think before the events, because it is not easy to think at the time of events but it is always easy to be wise after the events.

### **Appreciation**

Special gratitude is addressed to Bunch and Pat Wardhon (1989) for their emphasis on active thinking in their book *Scoliosis, Making Clinical Decision*.

### **References**

1. Bunch WA, Patwardhon AG. *Scoliosis making clinical decision*. Chap 14, Page 256, The C.V. Mosby Co. 1989