

The combination of personalized medicine and evidence-based medicine: What benefits for patients?



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Introduction: Personalized medicine is one of the most promising approaches in health care. It is a concept to treat each patient in an individualized way in terms of genetic and biological characteristics of the disease and on the patient's environment, lifestyle, etc. The evidence-based medicine (EBM) is defined as the conscientious, explicit and judicious use of the best available data for making decisions about the care of each patient, practical integration of each clinical expertise with the best available external clinical evidence from systematic research. This paradigm does not apply to all patients, given the personal characteristics of each. The combination of EBM with personalized medicine could be an added value especially in surgery.

Materials & Methods: Our study was based on management of two groups of 50 patients operated for gall bladder stones. The first group was supported according to the principles of personalized medicine and EBM while the second group was supported only according to EBM. The parameters of EBM are best external evidence, individual clinical expertise and patients values & expectations. The adequacy between these parameters gives EBM. Our method combine EBM with patients values & expectations (personalized medicine) (fig. 1). For example let us take two patients with gall stones bladder, according to EBM the treatment must be laparoscopic cholecystectomy for both patients. Now suppose that first patient refuses laparoscopy (cultural reason). So EBM can't be applied at 100%. However the second patient take all advantages of laparoscopy. In this case, to achieve the combination of EBM and personalized medicine, it is enough to convince the first patient about the advantages of laparoscopy. The same approach is carried out on the PICO criteria, for example: diagnosis with ultrasonography; research of lithiasis of common bile ducts; postoperative complications; hospitalization and convalescence.

Discussion: The improved results obtained with the combination of EBM and personalized medicine is not a coincidence. Indeed this combination potentiates the effect of the results for two reasons: The medicine based on evidence brings the latest data from clinical research with given levels of evidence and the application of personalized medicine will add a big benefit in patient management.

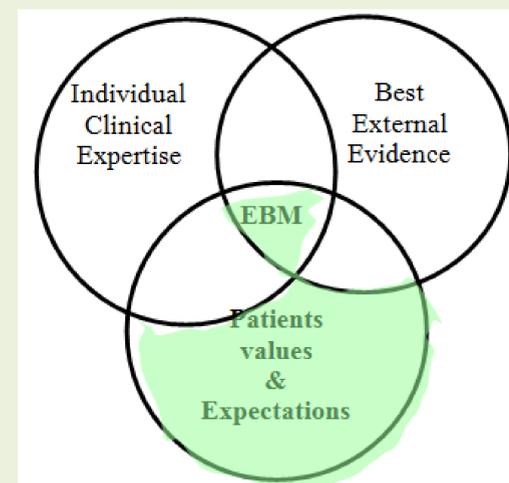


Fig. 1: Tripod of EBM and combination between personalized medicine and EBM

Conclusion: The weighting between the three parameters of EBM makes it possible to apply EBM to all patients. In particular, "patient choice" in association with "personalized medicine" helped us to improve the results of our work. So the complementarity of the two paradigms of personalized medicine and EBM is inescapable for optimal care for gall stones patients. Personalized medicine is the missing link to the medicine based on evidence.

Results: Results obtained with the group of patients carried out both with personalized medicine and evidence based medicine were better compared with those obtained considering only EBM.