

Correspondence

Problem-based learning and current textbooks: Trains on motorways?

Dear Sir,

The focus in medical education has shifted from teaching to learning, largely because of a shift from didactic teaching to problem-based learning (PBL). The review article published in the recent edition of Saudi Journal of Medicine was relevant and highlights various advantages of the PBL.¹ In our institution we are passing through this transition phase of adoption of the new system. During the early transition phase it has felt as though we are trying to run a train on a motorway. Birregard et al described a similar experience of students disliking the PBL.² This feeling is possibly due to "mal-alignment" between the objectives and current learning tools utilized by the students. Most students are groomed and selected for success in a traditional curriculum.³ They still read the standard textbooks for preparation of PBL sessions. These books are still in use simply because they have been used by the previous generations of physicians. The quality and content of most of these textbooks is very good. However, they are not targeted to deliver the information in the way required by problem-oriented learning sessions. Most textbooks have a small section in the beginning of a chapter on symptoms and signs related to that particular system. However, in most cases, this small section fails to adequately cover the differential diagnosis. Sole use of such books for preparation of problem-oriented sessions is likely to leave gaps in the knowledge of students. Books with contents emphasizing more on symptoms, signs and differential diagnosis have a more PBL-friendly organization of information than the current standard textbooks used by the majority of undergraduate students. Alignment of the objectives and learning tools for PBL will require development of new, specially designed textbooks (or electronic teaching aids) to fulfill the needs of present day's medical students. On the other hand it must be remembered that PBL requires the students to obtain knowledge from more than one source of information (traditionally the textbook), hence inducing a learning behavior and a capability to integrate knowledge obtained from different sources. Could designing books to aid in PBL adversely affect the learning behavior and therefore their capability to integrate knowledge, will remain to be answered.

*Mahfooz A. Farooqui, Omar A. Al-Rawas
Department of Medicine
Sultan Qaboos University
PO Box 35, Al-Khod
Sultanate of Oman*

Reply from the Author

Dear Sir,

I would like to thank Dr. Farooqui and Dr. Al-Rawas for their comments and their interest in my review paper on PBL.¹ The question they raised in their letter regarding the suitability of available textbooks for PBL programs is of interest and frequently asked by those planning to introduce a PBL curriculum. But let me first remind Dr. Farooqi and Dr. Al-Rawas that the resources we recommend in a PBL course are not entirely textbooks as in the old curriculum. At the University of Melbourne our PBL resources include, in addition to textbooks, e-books, journal articles, educational web sites, computer aided programs (CAL), lecture notes and synopsis, power points, governmental documents, videos, patient educational materials such as booklets, pamphlets and slides. It might be of interest to note that students in PBL programs borrowed more material during the course than did students from conventional curriculum (67 books/student/year versus 43) and that the difference was amplified in clerkship (40 for students from PBL curriculum versus 11 for those on the conventional track).⁴ I agree with Dr. Farooqi and Dr. Al-Rawas that most current textbooks are not designed for PBL programs, are discipline based and lack integration of information across disciplines, full of details and redundant information and do not address application of information in clinical situations (for example physiology, biochemistry, pharmacology, microbiology, immunology, anatomy and histology textbooks). However, this challenge should not inhibit us from moving to a PBL reformation. I have been involved in the process of revision of several textbooks and I am sure that over the next 2 years there will be a move to produce textbooks that suit the needs of PBL programs. Many publishers in Australia, the United States of America and United Kingdom are aware of this problem and are working on it. I still believe that using the currently available textbooks together with the other resources I have mentioned will provide students with a wide range of information to prepare their learning issues. One of the important learning objectives of a PBL curriculum is to prepare students to become independent, self-directed, lifelong learners.⁵ Students should decide for themselves what is relevant for their learning. They should be able to conduct literature searches themselves and learn to find the necessary material independently.

*Samy A. Azer
Faculty of Medicine, Dentistry and Health
Sciences
University of Melbourne, Victoria 3010
Australia*

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Current evaluation and management of renal and ureteral stones

Dear Sir,

I read with interest Dr. Gettman and Dr. Segura's excellent and comprehensive review on renal and ureteral stones.¹ The accuracy of the given scientific facts and figures is most impressive. The reported line of management, undoubtedly, represents the

optimum of standard for stone management that is most suited for American patients and adopted at their highly specialised centre of excellence. One observes a different line of management at most general hospitals. The objectives and standard of therapy remain the same: to preserve the patient and his kidney and leave him stone free. In addition to the urologist's experience, availability of technology, equipment and variables related to the patient and his stone that determine the best line of management, there are other factors that affect the choice of therapy particularly in our region: socio-economics and patient's compliance. The ironic fact is that most patients in Western countries get their expensive therapy free on Ministry of Health (MOH) or financed by the insurance while the poor and middle class patients in other world countries may have to pay from their own pockets. So an ideal therapy for an American patient, treated at a high tech centre with well-trained staff and a full range of high tech equipment regularly updated and fed with continuous supplies, may not be applicable elsewhere. Updating to the latest Lithotripters, spiral computerized tomography (CT) and laser machines may be impossible when it is outdated or its limitations, drawbacks and serious complications were discovered before it recovered its basic cost or value

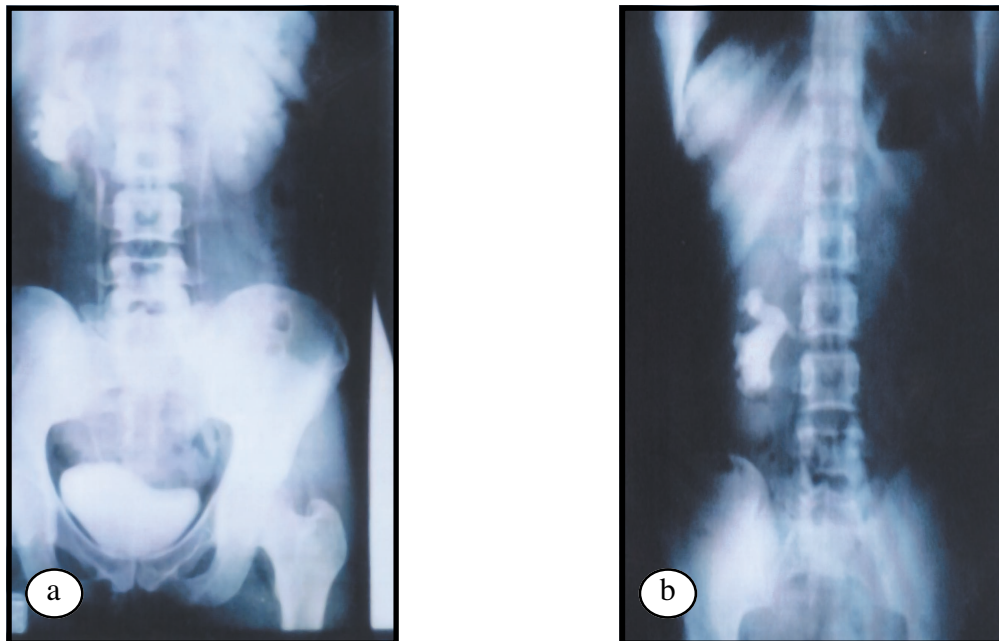


Figure 1 - Urography films of a 29-year old female with 1cm stone in the renal pelvis, demonstrates right renal drop of >2.5 vertebrae. Overlooking the demonstrated nephroptosis and its pelvi-ureteric kink may caused problems post extracorporeal shock wave lithotripsy and recurrent stone formation. Even successful stone therapy does not relieve the recurrent episodes of renal pain. (a) Supine. (b) Erect.

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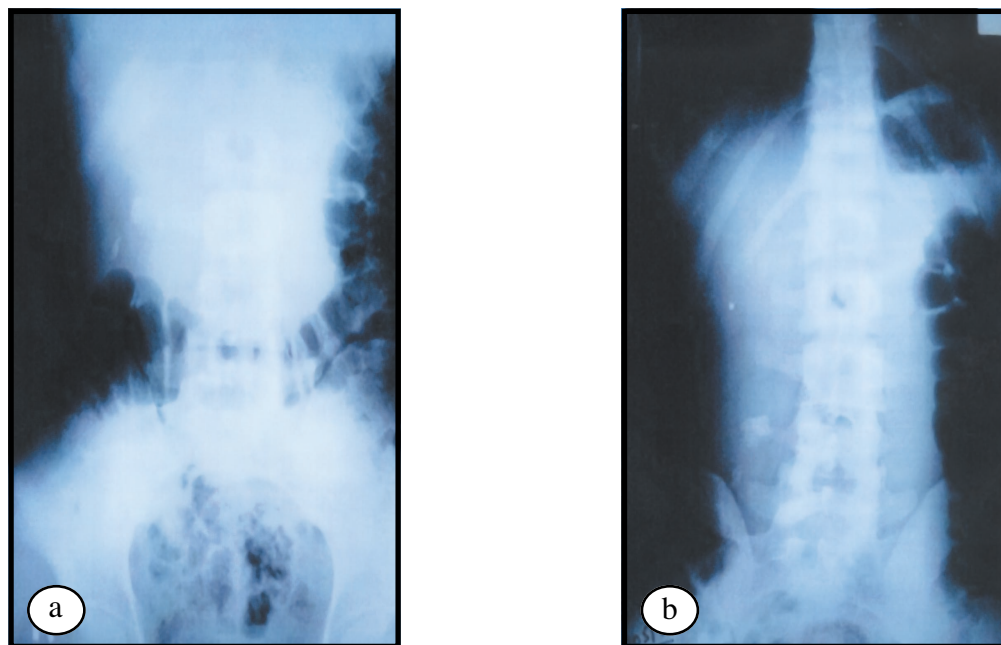


Figure 2 - Supine and erect plain x-ray of a 25-year old male, (a) showing stones at the renal pelvis. (b) Lower calyx of a right nephroptosed kidney.

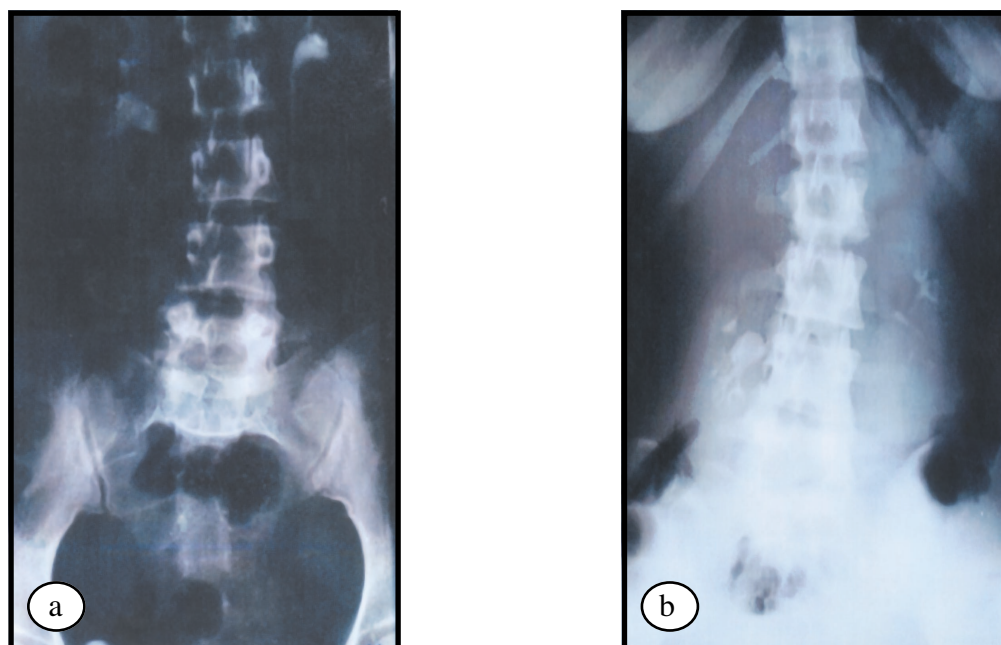


Figure 3 - Urography of a 25-year old female suffering from recurrent episodes of renal pain demonstrates bilateral nephroptosis of 3 vertebrae with right pelvi-ureteral kink obstruction and renal rotation. (a) Supine film misses the diagnosis. (b) Erect film. Agnosing pain is caused by protic renal pedicel stretch that may be depicted from but is not directly shown on upright film. Neuro-vascular ischaemic renal pain of pedicle stretch requires sophisticated methods for objective evaluation.

for money. Most hospitals do not have a spiral CT to make it the first line imaging for stones. Hence, intravenous urography (IVU) remains the "Gold Standard" investigation. Despite its shortcomings, IVU has an advantage that all modern ancillary machines, including Spiral CT, can not match. There is a condition not mentioned in the differential diagnosis list (Table 1) on loin pain, namely Symptomatic nephroptosis (SN) (Figure 1a and 1b). Symptomatic nephroptosis is related to the subject of stones on more than one account. It causes more severe pain and incapacitation than renal and ureteral stones and likewise may present with pain and hematuria episodes. Symptomatic nephroptosis is a more common cause of acute abdomen than stones among young females in Najran. It may predispose to stone formation (Figure 2a and 2b) and cause problems after extracorporeal shock wave lithotripsy (ESWL) therapy. Being unmentioned in most modern textbooks, it is a generally overlooked diagnosis (Figure 3a and 3b). It is missed on all supine imaging, including ancillary machines that are capable of supine imaging only. Intravenous urography with an erect film retains superiority for clinching the diagnosis of SN and its pelvicalyceal features and complications (Figures 1-3). A patient who is compliant, and capable of discussing therapy options and understanding its percentage of success is an important variable in the formula of optimum therapy. Most of our patients cut the discussion on therapy options short by saying: "You are the doctor who knows best". They reduce statistical figures to either 100 or 0% success rate. They view any staged or fractionated therapy as repeated failures. They refuse to acknowledge that any surgery or high tech

machines may have an acceptable complication rate. Being dazzled by the magic of advertising on high tech machines, they view any complication as the Urologist's failure, ignorance or neglect. Out of a dozen patients who were advised that their stones were too large for ESWL therapy and went for it elsewhere, 6 discovered the truth the most expensive and painful way. Four patients suffered for weeks while stone fragments were excreted or removed endoscopically, 2 were left with their stone unaltered after repeated ESWL sessions and 2 ended up with non-functioning kidneys. Operating on a renal stone after ESWL therapy has proved a dangerous procedure. The point here is that the Urologist remains the surgeon in charge with all equipment and tools at his disposal, from which to select the best line of management that achieves the main objectives of therapy at optimum safety, cost and time.

Ahmed N. Ghanem

Department of Urology

King Khalid Hospital, PO Box 1120

Najran

Kingdom of Saudi Arabia

Reply from Author

Author declined to reply

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