International Symposium on recent advances in surgery

Sir,

In his letter to the editor, Dr. Al-Awami raised a very important issue regarding training of surgical residents in the wave of laparoscopic surgery. The problem in my opinion is 2 fold. First is to teach surgical residents the new laparoscopic procedures to catch up with the most recent advances in minimally invasive surgery, so they are not left behind the rest of the surgical community. Second is to train them in conventional open surgical procedures. This is of vital importance especially if conversion from laparoscopic to open method is deemed necessary and in the event that a trainee is placed in a hospital (rural or otherwise) where no laparoscopic facilities exist. Although laparoscopic procedures are now well described for a large number of surgical operations such as cholecystectomy, appendectomy, hernia repair, reflux, splenectomy, various colonic resections and many others, some of these have failed to gain overwhelming support and acceptance among the surgical profession. Heated debates still exist as to whether it is justifiable to conduct some of these procedures laparoscopically. One generally accepted laparoscopic procedure is laparoscopic cholecystectomy (LC). It is the most common elective operation worldwide and there is no doubt that the general acceptance of LC has, to some extent, adversely affected surgical training in cholecystectomy. The trainee hardly sees or assists in open cholecystectomy nowadays and the converted cases are usually very difficult ones to do and often more senior members of the team elect to do the converted cases themselves. In Dammam Central Hospital, we conduct up to 300 procedures per year; a good number of these are performed by trainee residents of the Saudi Board in General Surgery (R4 and R5), first under supervision and later independently.

I personally believe that LC is the operation of choice to teach surgical trainees the basics of laparoscopic surgery. They are introduced to the procedure very slowly and in stages. In their early years of training (R1), they are taught to introduce pneumoperitoneum and insert various trocars safely. Later at R4 level, they are allowed to dissect the gall bladder off its hepatic bed using hook diathermy. Dissection of Callots triangle is usually the most difficult and therefore, is left towards the end of one's surgical training years when enough laparoscopic experience has been gained. During these various steps, care and caution are exercised to avoid bile duct injury. Most important, is that our trainees are taught to have a very low threshold for conversion in the event of difficult anatomy and not to race against time and not to complete with peers for faster LC. In the event of conversion, though difficult, the trainee himself is left to conduct the conventional open operation assisted by his senior colleague. This will teach the trainee the laparoscopic approach with minimal loss on conventional open surgery. Since the introduction of LC to our department on the 25th June 1992, adopting such a policy has resulted in an estimated common bile duct injury rate of 0.8% and only a small number were inflicted by trainees. This is well within the international reported range reflecting the safety of our policy.

To learn other laparoscopic procedures, especially those that are controversial, it is advisable to attend advanced laparoscopic courses with live demonstration and hands-on training. Use of simulators and animal models is one way of teaching the trainees the safe way of performing these procedures. However, training on animal models is no match to performing the laparoscopic procedure on humans under expert supervision. Therefore, our duty as trainers is to teach conventional, as well as laparoscopic surgical procedures. The procedures that we do not normally conduct laparoscopically, due to lack of expertise or resources should be brought to the trainee's attention by lectures, videos and journal clubs. More experience can be gained by attending advanced courses with hands-on experience using simulators or animal models. By doing so we can guarantee a generation of young surgeons who are competent in both laparoscopic and conventional surgery.

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Reply from Author

It is not strange to find Dr. Abdul-Wahed Meshikhes giving the issue of training in surgery serious thought, he is involved in it deeply. I agree with what he said about careful, gradual introduction of trainees to laparoscopic cholecystectomy, but his solution when their is a need to convert to the open method is less than ideal. He suggests a more senior person needs to carry out the operation in the open method because the trainee is not trained to do so. In the pre-laparoscopic era, a 4th year general surgery resident

Saudi Medical Journal 1999; Vol. 20(12) 987
Correspondence

is adequately trained to carry out cholecystectomy; it is a part of his/her training. I wonder what would happen to a senior resident in a few years time, and his only experience in the open method is that he only assisted one of his seniors years earlier. I suggest, at least for training programs in surgery, to devote a certain percentage of their cholecystectomy procedures to the open method. We owe it to the trainees and to the safety of our patients.

For the same reason, I would train residents to use staplers in gastrointestinal anastomosis etc., only after they are adequately trained in the anastomosis by hand using needles and threads. The same applies for fascia and skin staplers for junior residents and interns. As for modular trainers, animal modules, bench training, and computer simulation, these are but few recognized, well-tested modalities in training.

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References


Role of Nucleated red blood cell count in cases of birth asphyxia

Sir,

I was concerned to see the publication in the September 1999 issue of the article 'Role of nucleated red blood cell count in cases of birth asphyxia' An 'audit' (rather than a study) of reticulocyte counts in babies born with 'asphyxia' is presented. But no clear evidence is given that these babies had 'asphyxia'. We know full well how notoriously inaccurate the Apgar scores can be in determining birth asphyxia. We are also not told how the reticulocyte count was determined. Thus the 2 basic parameters on which this whole article is based have not been clearly or accurately defined. At birth, reticulocyte count averages around 5% (range 3-7%) reflecting active erythropoiesis. This persists for the first 3 days and then falls sharply. In this audit we are not told when the reticulocyte count were measured. Persistently raised reticulocyte count's usually represents blood loss, hemolytic process or hypoxia. Thus, it is important to have excluded these conditions and the author should have told us how this was carried out. Whilst it is common practice to express these counts as a percentage of white cells - this is very inaccurate because of the variability of the white cell count itself in the newborn period. In the pre-electronic era the term infant averaged 7.3 nucleated red cells/100 WBC (range 0 to 24). Since the electronic counter measures all nucleated cells, a correction is made after examination of the stained blood film. Was this carried out? How and by whom? Absolute counts should thus be reported (not carried out in this paper) and they range from 500/mm³ in term infants with higher counts in pre-term infants. High reticulocyte counts are most frequently seen in extreme prematurity, hemolytic disease of the newborn, maternal diabetes mellitus and intra-uterine growth retardation (IUGR) - no information whatsoever is given about these variables. More recently, nucleated red cells have been suggested as a marker of fetal asphyxia. Some have reported high nucleated red cell counts in babies born by Cesarian section or babies born with fetal acidemia due to any cause, while others have reported low nucleated red cell counts (NRBC) in fetal anoxia. With so many variables affecting reticulocyte counts, publication of an audit of 16 cases does great injustice to this complicated subject.

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Reply from Author

I would like to thank Dr. Haque for his expert views on the article. I am happy that the article had stimulated him. I will try to answer his queries one by one. 1. Apgar score: In our hospital we do not have the facilities for cord pH, fetal pulse oximetry, or scalp pH, that is why we have to rely on Apgar