

Allocation of health resources

We agree with Dr. Gross's assessment (*Can J Surg* 2002; 45[1]:8) that administrative database information is limited in clinical detail and only partially describes how a patient receives health services. In essence we take licence to paraphrase Dr. Gross in saying that better information should lead to better decisions (spanning the spectrum from patient care to health system organization). The practical difficulty in implementing this improvement is that more complete data and the ability to translate data into information and intelligence is very expensive. Obtaining additional resources for infomatics competes with the need to provide actual patient care (to diminish waiting lists for example). In such a situation, administrative data, including physician claims have been increasingly employed by health care services researchers in studies of outcomes, effectiveness, appropriateness and utilization of health care services. The use of administrative data has been facilitated by improved understanding of their features and advantages, including their readiness to be analyzed, their low cost for obtaining a large volume of historical data, their wide geographic coverage and their relatively complete and accurate capture of episodes of patient contact with the health system.

We in the medical community can start by recognizing that clinicians make daily decisions based on partial and sometimes quite poor information. As such, both in daily practice and when reviewing studies such as ours about the health system, waiting for the perfect, complete set of data before making decisions is not practical. Making required decisions based on incomplete information, stating the limitations to the available information and promoting specific improvements required to make better decisions may be a preferable strategy

for improving medical information systems. This approach is neither novel nor revolutionary. The medical community has used this approach for decades in patient care and will continue its use in the future.

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Percutaneous drainage for liver hydatid cysts

We read with interest the article by Aygün and associates (*Can J Surg* 2001;44[3]:203-9) on the PAIR (puncture, aspiration, injection, reaspiration) method of treating liver hydatid cysts. Their data are consistent with those in other recent reports, showing that the use of PAIR is widespread and is increasing, especially in countries where hydatid disease is endemic. The technique is reported to be inexpensive and highly effective, relatively safe and associated with low complication, recurrence and death rates compared with surgery.¹

The safety and effectiveness of the PAIR technique, however, have not been fully established. Aygün and colleagues reported no recurrence or dissemination during a 14 to 36-month follow-up, but they did not comment on the development time of peritoneal cysts, a grim conse-

quence of spillage during needle puncture. The presentation of peritoneal echinococcosis typically occurs 4 to 15 years after the original treatment,² far beyond the relatively brief follow-up in their article. A significant proportion of hydatid cysts communicate with the biliary tree.³ Cyst injection of scolicedal agents, a key element of PAIR, may cause sclerosing cholangitis, a feared consequence of scolicedal entry into the bile ducts. In open surgery, unlike the PAIR method, there is an opportunity to identify and protect cyst-biliary communications before scolicedal agents are introduced.

Claims advocating PAIR as a safe and effective alternative to surgery for hydatid disease should be closely studied. Aygün and colleagues used serologic testing and ultrasonography for postoperative follow-up but did not provide details about the long-term diagnostic implications of these investigations. The most frequently used serologic tests are indirect hemagglutination, enzyme-linked immunosorbent assay, immunoelectrophoresis and co-electrosynthesis. Since antigen preparations are not well defined, results vary from one laboratory to another. A judicious association of methods confirms the diagnosis in 80% to 94% of hepatic and 65% of pulmonary cases of hydatidosis.⁴ Follow-up by ultrasonography can demonstrate recurrence in up to 22% of patients postoperatively.⁵ Without more detailed and extensive follow-up data from the series of Aygün and colleagues it is difficult to fully accept their conclusions, particularly the suggestion that PAIR be considered a first-line therapy in selected patients with liver hydatid cysts. PAIR may be the best available option in geographic areas where the quality of surgery and perioperative care are compromised by widespread social and economic distress. Conclusive comparison of PAIR with surgery (the only established treatment for

hydatid disease throughout the world) should await the outcome of careful long-term evaluation.

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(Drs. Sahin and Aksoy reply on behalf of their coauthors)

We share the objections of Jones and colleagues on the reliability and efficiency of PAIR.

We first started to apply the PAIR technique in 1992. Since then we have not experienced recurrence or new cysts in any of our patients; our prolonged prophylactic administration of albendazole may be the reason for this. It has been reported that in hydatid disease of the abdomen the recurrence rate ranges from 3% to 11% depending on the spread.¹ It is argued that such recurrence may appear within 3 to 4 years. However, in the early 1990s, we found widespread hydatidosis in the abdomen of one of our patients 2 years after spontaneous rupture of liver hydatid

cysts. On the basis of this experience we believe that recurrence may develop earlier than reported. We take utmost care to prevent peritoneal spread when the PAIR technique is used by giving albendazole prophylactically. Despite this, it is possible that recurrence may occur even earlier in our series.

It is true that a substantial proportion of liver hydatid cysts are connected with the biliary ducts. We generally used the PAIR method for types I and II cysts, according to the classification of Gharbi and associates² and did not use it in patients with cysts that connected with the biliary ducts. Some assert that 80% to 90% of all liver hydatid cysts connect with the biliary ducts.³ We took this into account and used as the scolical agent silver nitrate solution, which has proven to be the least harmful to biliary ducts.⁴ Serologic tests present problems for us. Initially we could use only skin tests. In our study we used the indirect hemagglutination test. We use mainly ultrasonography for follow-up, but in cases in which the diagnosis is complicated we use the enzyme-linked immunosorbent assay. We cannot use these tests exclusively because of the high cost and the varying results.

In our opinion, the most important treatment modality for cyst hydatid disease is surgery. However, PAIR is a method that can be used electively and applied in cases of recurrence in which abdominal "sticking" occurs, in cysts located near vital structures, in patients who cannot tolerate surgery and in appropriate (types I and II) cysts. PAIR is not suitable in the following: types III and IV cysts, and large cysts located peripherally in the liver. In the latter group, in which there is insufficient parenchyma around the cysts, the risk of spread is high and collapse of the cyst is inadequate.

We have not found any studies arguing that PAIR increases the rate of recurrence. In our opinion this method does not carry any greater

risks of spread and recurrence than surgery.

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Ecthyma gangrenosum

The case of ecthyma gangrenosum described in the October issue of the Surgical Images section (*Can J Surg* 2001;44[5]:233) by Kao and associates was both interesting and challenging.

I have adopted, as have most of us dealing with similar cases, a very aggressive approach to this problem, including repeat extensive surgical débridement and intravenous antibiotic and fluid challenge. I have also been using hyperbaric oxygen therapy, which is not part of the multidisciplinary approach to this very frustrating clinical problem.

Have the authors considered using hyperbaric oxygen therapy?

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(Dr. Gan replies on behalf of his coauthors)

Dr. Nasser's question is a good one, as our armamentarium in