Fate of Manuscripts Rejected for Publication in the AJR

Dr. Chew [1] did a follow-up on a cohort of scientific papers rejected by the AJR in 1986. He found that the majority of papers, more or less revised, appeared after some time in other journals. Dr. Chew’s conclusion that most scientific work, once submitted, will eventually be published is gratifying. It might suggest that publication bias is not a major problem. This bias occurs when certain papers, notably those with “negative” results, stand less chance of publication than papers that have “positive” results. As scientific consensus progresses on the basis of information from scientific journals, publication bias might be a seriously distorting factor.

I wonder, however, if a generalization based on AJR submissions is valid. As Dr. Chew points out, many papers are never submitted at all. In addition, scientists may perform some selection in choosing the journals they submit their papers to and usually will not submit a paper that they think stands little or no chance of being published in a particular journal. An author may wish to minimize the mental agony of too many rejections. Such a submission policy implies that the papers submitted to a prestigious journal such as the AJR are generally of high quality—perhaps not good enough for the AJR, but of sufficient quality to allow subsequent publication in another journal. However, papers submitted directly to less high ranking journals may not have a second chance after a first rejection and will indeed be lost.

In a study also cited by Dr. Chew, Dickersin et al. [2] found that a considerable publication bias exists. They wrote to authors of published papers on clinical trials about the authors’ participation in other trials. Of a total of 1312 completed trials, information on 21% had never been published. Of the trials for which no articles were published, 86% had a negative result, whereas only 45% of those for which articles were published had a negative result. The cause of nonpublication was nonsubmission rather than rejection. Still, the investigators may have anticipated the policy of editorial boards of nonpublication was nonsubmission rather than rejection. Moreover, the likelihood of publication of submitted articles that is based on whether the results reported in the manuscript are positive. That is, all other things being equal, a paper that reports a study with a positive result is more likely to be published than a paper that does not. It is an artifact of the scientific method that in observational studies it is easier to show the presence of an association between two factors (assuming an association is present) than it is to show the absence of one (assuming no association is present). The weaker the association, the more difficult it is to show the association scientifically (the larger the necessary sample size). Studies that do not show the presence of a strong association may not have enough statistical power (large enough sample size) to show the presence of a weak association or to show the absence of an association. It is probably because of this artifact that many observational studies are abandoned at the point where failure to show a strong positive result is evident but before enough data are collected to show conclusively a negative result. It should be realized that the lack of positive results includes both negative results and inconclusive results. Inconclusive studies are unlikely to be submitted or to be published. It is uncertain how many unpublished studies that did not have positive results had results that were actually inconclusive rather than negative. In the descriptive studies common to radiologic research, the problem of inconclusive results generally does not occur. However, if the description is of normal radiologic examinations associated with some disease process or clinical presentation, it will not be of much interest unless the prevailing paradigm is that there are abnormalities that should be evident on radiologic examination.

I did not have available to me the data necessary to show if manuscripts submitted to journals other than the AJR were as likely to be published, either in the journal of initial submission or in some other journal, as were submissions to AJR. It is certainly possible that journals of “lower prestige” than the AJR have higher initial rates.

REFERENCES

1. Chew FS. Fate of manuscripts rejected for publication in the AJR. AJR 1991;156:627-632

Letters

REFERENCE

1. Chew FS. Fate of manuscripts rejected for publication in the AJR. AJR 1991;156:627-632

A Simple Program for Rapid Retrieval of ACR Diagnosis Codes

Often a researcher wishes to find all the radiologic examinations of patients with a specific disease or condition. Unfortunately, although cases in teaching files are routinely coded with American College of Radiology (ACR) diagnosis codes, most routine examinations remain uncoded and are therefore unavailable for retrieval according to diagnoses. We estimate that providing ACR diagnosis codes manually by looking them up in the Index for Radiological Diagnosis, would occupy 10–20% of a radiologist’s total film-reading time. Thus, routine coding is impractical.

In an attempt to reduce the time required to find the desired code, my colleagues and I wrote a simple list management program that allows rapid access to the desired code by the use of a mouse and menu interface. The codes themselves are available in electronic form from the ACR. Basically, a code consists of two to four digits representing the anatomy code, a decimal point, and two to five digits specifying the pathology code. A short description follows each code. The program reads the data file and creates a tree structure containing six buttons and the short description appropriate for that button (Fig. 1). Selecting the list glyph (the small downward-pointing arrowhead) causes a list of the digits available for that decimal place to be specified. Each time a selection is made, the program updates the selections in the next lower list. A user thus starts with the 1 (anatomy) digit and progresses down through the list glyphs until or if she has reached the desired level of precision or until the fifth digit is reached.

The program also can be used to identify an unknown code, clicking the mouse on the numbered buttons, the user can display the given code, and the description of that code is displayed on the screen to the right. Last, a “pick” button allows the displayed code to be sent to the Unix standard output to be used by another program.

Having the user interface coded in variant of MIT X11 allows the program to be used from any workstation on the department network. Even suitably equipped personal computers can display X windows. We hope that this rapid method of coding will allow radiologists to code more of the daily film load and therefore make these cases available for retrieval according to diagnosis.

David S. Chan
The Pennsylvania State University College of Medicine
Hershey, PA 17033

Radiologic Findings in the Diagnosis of Hughes-Stovin Syndrome

Hughes-Stovin syndrome is the exceedingly rare combination of pulmonary arterial aneurysms and venous thrombosis [1–4]. Six and symptoms are cough, dyspnea, hemoptysis, headache, intermittent fever, and papillae tents as well as those due to peripheral phlebothrombosis. The most frequent cause of death is rupture of aneurysm within the pulmonary arteries. To our knowledge, fewer than 20 cases have been reported.

A 20-year-old male Romanian refugee with a history of two nodules of hemoptysis in Romania was admitted because of severe hemoptysis. A chest radiograph showed enlarged lower poles of the right lung (Fig. 1A). Phlebography showed partially thrombosed external and common iliac vein bilateral and an incompletely thrombosed distal infrarenal inferior vena cava. Suprarenal and lumbal collateral vessels eventually filled the proximal inferior vena cava. Pulmonary angiography showed one aneurysm in the right lung and two smaller aneurysms in the left lung (Figs. 1B and 1C). Aneurysms corresponded to the lesions seen on the chest radiograph. All laboratory data, including the results of coagulation studies tests for infectious and autoimmune diseases, were normal.

The obscure cause of the peripheral thrombotic events and cryptic genesis of the pulmonary aneurysms in Hughes-Stovin

Fig. 1.—Example of a window display in a simple system for retrieving radiologic examinations according to American College of Radiology diagnosis codes.