Family Practice Grand Rounds

The Clinical Conference in Family Practice Training

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A major problem in the implementation of family practice training programs is that much of the teaching is delegated to other specialists who have not participated in program planning and are unfamiliar with the goals of family practice training. The dilemma is how to adapt the knowledge and skills of the consulting specialist into a family practice educational program. The knowledge of the consultant needs to be evaluated critically as it relates to family practice problems, and the technology used by the consultant needs to be questioned in regard to the cost-benefit ratio when applied to the broad population seen by the family physician. How is this critical evaluation to be done in the context of current training programs?

This paper will present a model which has been used at the University of Iowa Family Practice Residency Program for the weekly clinical conference. The format for the conference has allowed us to use the expertise of the consulting specialist in a way that is relevant to the problems of family practice.

In the past, clinical conferences were often designed to fill gaps in the curriculum: Residents do not know enough about diabetes mellitus—therefore a local expert is invited to give a lecture on the subject. He comes with slide box in hand; the lights go out; and the audience is dazzled by a series of complex metabolic pathways. The final five minutes of the lecture left for questioning are too short a time to move from the molecular viewpoint to the more human dimensions of the problem, thus the questions relevant to family practice

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are left unanswered and critical assessment of the speaker's position does not take place. Presented in this manner, the expertise of the specialist was often either accepted as dogma or totally ignored as irrelevant, depending on the expert's skill as a showman.

Planning the Conference

In an attempt to change this pattern, the faculty developed specific goals for the weekly clinical conference. The conferences were to:

1. Provide the residents with information regarding evaluation and management of common ambulatory care problems;
2. Impart an appreciation for what is unknown as well as what is known about the medical subject;
3. Emphasize the family medicine aspects of the medical topics discussed; and
4. Assist the residents in developing resources they can use for further study of the subject.

The format we developed for meeting these goals was that of the mini-case presentation. A specialist is invited to serve as a resource person and is asked to problem-solve with the family practice residents and faculty. Brief case histories are obtained from the model office practice and are presented to the group for discussion. A family practice faculty member serves as a moderator for the discussion and comes prepared with a number of relevant questions to ask the expert about the clinical problem. Emphasis is placed on management solutions which are practical and feasible for the family physician.

The cases for the conference are chosen with several criteria in mind: they should present problems which stimulate discussion of the more controversial aspects of diagnosis and management; they should be uncomplicated enough to lead into a more generalized discussion of the subject; they should be problems that a family physician would be expected to manage; or, they should illustrate the ways in which the consulting specialist and family physician can work collaboratively in the management of the problem.

The topics to be covered in the clinical conferences are rather general in nature, eg, prenatal care, otitis media, urinary tract infections in children. The faculty physician then considers the issues surrounding the topics that he or she would like emphasized in the conference. For example, the issues to be covered in the conference on urinary tract infections in children were defined as: what sort of evaluation should be done on a child with a first urinary tract infection; what is the long-term prognosis of a child with bacteriuria; what are the cost-benefit considerations in extensive urological workups in a child with a urinary tract infection; and, what is the value of mass screening for bacteriuria. The three cases selected for presentation from the model offices which seemed to best raise these questions were: (1) a four-year-old girl presenting with intermittent incontinence; (2) an acutely ill, one-year-old child whose febrile illness was diagnosed as due to an acute urinary tract infection; and (3) a preschool child whose routine screening culture had grown out 10^6 E coli. The case presentations were brief, with data being released in a sequential fashion as problem solving occurred. All the above issues were successfully addressed in the conference by this method of directed questioning of an expert.

A Model Conference

Certain controversial subjects have been well covered by having a panel of experts from different specialties serve as resource faculty. We chose to present the conference on otitis media using a panel of experts with a goal of emphasizing the controversy surrounding the use of ventilating tubes. A faculty member from otolaryngology, a pediatrician from the University's Infectious Diseases Unit, and a practicing pediatrician from the community were members of the panel. A case was presented of a 15-month-old child with four episodes of otitis media in his first year of life, who subsequently had ventilating tubes placed in his ears.

A number of points were covered in this discussion, one being the appropriate treatment and follow-up of otitis media. The following exchange developed after the Infectious Diseases consultant noted that there is an increasing resistance of H influenzae to ampicillin.[1] He suggested that a child whose otitis media is being treated with ampicillin should be followed up in three days.

Family Practice Resident: With regard to the

check-up at three days, is it considered adequate to depend on the mother's judgment of whether the child is better or do you think every child treated with ampicillin should be seen at three days?

Infectious Diseases Consultant: One can go by symptoms, but then I don't treat with ampicillin any longer. We use penicillin and sulfa initially.[2]

Private Practice Pediatrician: I usually follow up by telephone. You can rely on the mother. You tell her as they leave the office, "In three days that baby should be responding. He should be somewhat better; he may not be cured, but he should be better. If his behavior is not back to normal, if he's still running some fever, if there's any reason you think he's not getting along well, let me look at that ear."

Family Practice Resident: I was surprised about two months ago to read an article in *JAMA*[3] concerning investigators looking at middle ear infections and doing myringotomies who found a much higher percentage of H influenzae than expected in children between ages five and ten. They did a review of the literature and found others had also reported it. Has this influenced your treatment at all?

Infectious Diseases Consultant: That article surprised me as well; and I suppose that when I get a child who is in the five-to-ten-year age group, I probably treat with ampicillin.

A discussion of the indications for and benefits of ventilating tubes was started off by the moderator, a family practice faculty member, but was then carried forward by the panel members themselves.

Family Practice Faculty Moderator: (referring back to the case presented): With the third or fourth episode of otitis media, this child was referred to the University ENT clinic and ventilating tubes were put in the ears. I would like the panel to discuss this management in terms of the indications for the use of tubes and the studies that support their use.

Infectious Diseases Consultant: They (children) usually get referred to my clinic for evaluation of recurrent infections, or they are sent to ENT for evaluation of recurrent otitis media, and sometimes. . .

Family Practice Faculty Moderator: I would like to know the difference between your two approaches.

Infectious Diseases Consultant: I would send the child home as a normal child. I don't believe that three or four episodes of otitis media under one year of age are very abnormal.

ENT Consultant: It is very difficult for me to say from a written protocol what I would have done and advised in this situation. I'd be happy to talk about my indications for putting ventilating tubes in ears, and it's a somewhat pragmatic approach. My indications are *repeated episodes* of acute suppurative otitis media in a child which have been appropriately treated.

(He then goes on to give his other three indications for the placement of ventilating tubes:) (2) persistent serous otitis which does not respond to treatment; (3) persistent conductive hearing loss of 35 decibels bilaterally in a previously infected ear; (4) progressive deformity of the tympanic membrane following an adequately treated infection.

Infectious Diseases Consultant: I agree with most of these indications for their use, but you began by saying *repeated* episodes of acute suppurative otitis media. I think that's always the hooker—what do you mean by repeated episodes?

ENT Consultant: I knew that would come up. My initial remark at the beginning referred to the fact that this child was 12 months old or so and had experienced four episodes of otitis media, which isn't necessarily abnormal. It certainly is the upper limits of normal, not necessarily the indication for ventilating tubes. Indeed . . .

(He goes on to elaborate more about indications for use of ventilating tubes.)

Infectious Diseases Consultant: In a child with frequent otitis media, I think you need to think about alternate causes of recurrent otitis media. At least as important is to establish that the child has otitis media. About one half of the children who are referred to me with recurrent otitis media, in actual fact, have recurrent urinary tract infections. And the reason for this is simple: A febrile child has a red ear. It moves all right, but it's red. The child is moving around on the table and it's difficult to really get a good look at the ear. It's easy to give him a label of otitis media.

Private Practice Pediatrician: (referring to a statement made about ventilating tubes reducing the number of episodes of suppurative otitis media which a child has): I wish I could find a study which would support your statement that you think we have fewer ear infections after tubes are

placed. I have that feeling, but I still see a lot of them coming back in with otorrhea. I'll admit the child is comfortable. His mother says, "Don't apologize, doctor. He's sleeping at night; he's not the crab he was. I know he's having recurrences; we're living with him a lot more easily." But I'm not fooling myself and I hope the ENT people aren't fooling themselves. There's a lot of otorrhea that goes on, sometimes as long as a year or two afterwards, in this type of a child with these tubes in place.

A discussion followed about the benefits of ventilating tubes in the area of hearing loss secondary to serous otitis media. It was also established that there were no definitive studies documenting the benefit of ventilating tubes in preventing recurrent infections. The moderator was able to raise the question of the complications of ventilatory tubes and this area was subsequently well covered. A discussion of alternative approaches to the management of recurrent otitis media was started off by the Infectious Diseases consultant.[4-7]

Infectious Diseases Consultant: . . . I hate not to ask the question because if I don't, Mary (the private practice pediatrician) will ask it in a way that I may not be able to answer. That is, what about prophylactic antibiotics in the child who has recurrent otitis media? Well, that is just about as gray an area as putting in ventilating tubes except there are some controlled studies. If your child is an Eskimo, or lives in Rochester, there are controlled studies which show . . .[8,9]

He goes on to critique the studies and gives his own indication for use of prophylactic antibiotics, which is to use them in selected children who have had more than seven or eight episodes of suppurative otitis media per year.

ENT Consultant: I have one indication, too, where prophylactic antibiotics are a consideration for me. In children under one year of age, the tube is seemingly approximating the size of the external canal; and while the tympanic membrane is close to adult size, the canal leading down to it isn't.

Family Practice Resident: There's one thing that nobody has emphasized so far, the problem of patient compliance, even with white collar populations; and perhaps you can discuss methods of improving compliance.

Infectious Diseases Consultant: If I think I have a noncomplier, and that's usually the second or third episode of otitis I see, or the ear that's a lot better but not all the way better as it should be in 14 days or so, then I go to parenteral treatment for the major pathogen; in other words, I treat these patients with Bicillin and sulfa.

Private Practice Pediatrician: Today, unfortunately, it still leaves you with one medication that has to be given by mouth.

The general tone of this conference was controversial, the exchange between experts lively, and the major point made with the residents was that there is no single management approach for the difficult problem of recurrent otitis media.

Although the family practice faculty member is prepared to ask the crucial questions, the residents have been encouraged to present their own questions. As experience with this type of conference has increased, they have become leaders in the questioning of the expert, and the family practice faculty member has limited her activities to keeping the expert on the point and the conference to its proper time schedule.

The guest faculty who are invited to the conference are given very specific ground rules. They are told that they are not being requested to lecture but rather to participate in an informal problem solving session with the residents, and that we expect the residents to participate in the discussion both as problem solvers and as questioners. We also request the guest faculty to bring a short bibliography of basic works on the subject to hand out to the residents. Some faculty have requested that they have the cases sent to them in advance so they can prepare for the session, while others have preferred to come without knowing the case so as to enhance the feeling of mutual problem solving. Both ways have been quite effective and in all cases we have avoided the standard lecture.

Advantages of the Model

The major advantage of this format for our clinical conferences has been the ease with which the specialists' expertise has been applied to family practice problems. The information exchanged has

been extremely relevant and has not been presented as dogma but rather as proper material for critical evaluation. The conferences have stimulated active interchange between family practice residents/faculty and the other specialists, rather than a unidirectional interaction.

Unanticipated but positive benefits of this type of conference were several. The range of potential guest faculty expanded when the standard lecture format was abandoned. Specialists in the community who had been reluctant to prepare and deliver a lecture because of the time commitment or discomfiture with the role of "lecturer" have been quite willing to come to a noon hour, problem solving session. Many of these knowledgeable but nonflamboyant individuals have been excellent resource persons for our conferences. The highly specialized but well-informed university specialist has also been a valuable asset to the conferences when we have been able to selectively tap his /her expertise.

Another real advantage of the format is that observed deficiencies in resident performance can be addressed quite specifically in the conference. The issues to be covered in the conference on urinary tract infections in children were chosen because the faculty observed that many residents did not seem to have a systematic or logical approach to evaluation of children with a first urinary tract infection. The data necessary for problem solving were not being obtained by the resident and, consequently, the patient's management was often inappropriate. The resource person chosen for the conference was the chairman of the Department of Pediatrics, a pediatric nephrologist. The issues to be discussed were chosen by the family practice faculty. As a result, the problem areas were covered in a thorough, academic, but practical manner.

This method of holding a conference also lends itself well to evaluation. If one's goal is to change resident behavior in the area of evaluation and management of urinary tract infections in children, the conference is directed toward providing a logical and practical approach to the problem. Chart audit in the month or two following the conference can then be carried out to ascertain if there has been any significant change in resident behavior in this area. If change has not taken place, the faculty may decide that other educational methods should be applied to the teaching of the material.

In summary, the conference format using the mini-case presentation has proved to be a flexible and multifaceted educational tool. The control of the family practice members and residents over the direction and content of the conference has allowed it to assume many diverse purposes, from a forum to debate the appropriateness of consulting specialist vs family physician management of certain problems to a workshop to establish protocols of diagnosis and management. Possibly the most important but unstated purpose of this type of conference is to enable the resident to see the family practice faculty as role models engaged in a freewheeling discussion with other specialists from all fields and academic positions.

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