Case presentation as a teaching tool: Making a good thing better

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Formal lectures have generally replaced case presentations as teaching tools for group learning in internship and residency programs. This article discusses two forms of case presentations—"traditional" and "chunked." Best used to convey medical information, the traditional approach proves less than optimal as a tool in teaching problem-solving skills. The "chunked" method, on the other hand, is an excellent format for formal small- and large-group instruction. An overview and suggested approach for each type is outlined herein. Properly used, each type can be a more efficient, effective tool than lectures when it comes to teaching medical problem-solving skills.

(Key words: Osteopathic medical education, teaching tools, case presentation, residency training, internship)

Case presentations have been an integral part of internship and residency training for many generations of physicians. Variations of this method have included grand rounds, clinical pathologic conferences, and bedside case presentations. However, over the years, some of these formats have ceased to be popular.¹ In general, more formal lectures addressing isolated aspects of patient care (specific diseases, laboratory evaluations, and new treatment protocols, for example) have replaced case presentations as a teaching tool in group learning situations.

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A number of reasons may explain this trend. Formerly, case presentations were often conducted at the bedside. Many younger physicians, however, feel uncomfortable discussing a patient's case with the patient present. (This uneasiness occurs despite the patients' overwhelming preference for having their cases discussed at the bedside.)² With case presentations moved to the conference room, interns and residents have avoided attending those presentations perceived as dry and of limited educational value.

Participants, both house and attending staff, may worry that gaps in their knowledge will be exposed to their peers and superiors during case presentations. Although they provide an excellent learning exercise for the resident caring for that particular patient, cases presented in the traditional manner provide the listening audience with little opportunity to solve the case using their own cerebral skills. Similarly, when the case is laid out in its entirety, little opportunity exists for senior faculty to demonstrate how they might approach clinical problem-solving.

This article examines two distinct types of case presentations, the clinical situations in which they prove most beneficial, and a method for making formal cases more interesting and valuable.

'Traditional' approach

This format is used to convey information from physician to physician. It helps to organize

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thinking, and can assist the supervising physician in evaluating the interns' and residents' performances. This method can convey a large amount of information in a brief period. However, as a teaching tool for groups of interns and residents, the traditional case presentation has limitations, discussed herein.

Generally, this format features the following points^{3,4}:

- *General statement*: Patient's age, sex, and occupation;
- *Chief complaint*: What brought the patient to the hospital or physician's office, stated in one sentence;
- *History of present illness*: Positive and negative historical findings (character, duration of complaint, evolution of illness) presented in chronologic order;
- *Other medical history*: Previous medications, surgery, and psychiatric illnesses, as well as earlier occupations, travel, and lifestyle factors not mentioned in the present illness history;
- *Family history*: Important negative—and positive—findings;
- *Personal and social history*: Any information concerning lifestyle behaviors not previously mentioned;
- *Review of systems*: Short evaluation of any pertinent findings not involving the chief complaint; avoid long lists of negative findings; acceptable to say, "no other significant findings";
- *Physical examination*: Begins with patient's appearance and general assessment of severity of illness and vital signs, as well as pertinent positive and negative physical findings;
- *Summary findings*: Brief review of most significant historical and physical findings;
- *Laboratory, imaging, electrocardiogram, special tests*: Pertinent laboratory data given, without listing every test value, except in those formal presentations in which all laboratory data are presented;
- *Diagnostic impression*: Problems listed with the most important ones noted first;
- *Differential diagnosis*:

A group of possible diagnoses in order of most likely to least likely;

- *Management plan*: Therapies, medications, surgery, further investigations, consultations.

When students and interns use this approach, senior residents often enjoy interrupting the presentation during the history and physical points. They ask for laboratory or imaging data at this time, usually to impress the younger interns and residents with their ability to quickly derive a diagnosis from minimal information.

If such tactics occur, the presenter is likely to become confused and lose his or her place in the organized presentation. A good way to fend off such maneuvers is to say, "I will come to that point shortly."

Although the aforementioned traditional presentation method has some teaching benefits, it is not an ideal format for group learning. This approach does not permit interns and residents to work through the problem in the same way as the managing physician did. A great deal of pressure is placed on the presenting physician, who bears almost sole responsibility for interpreting the data. Little opportunity exists for experienced clinicians to demonstrate diagnostic reasoning in a sequential manner as bits and pieces of the case become available. There is little opportunity for the experienced clinician to "think out loud," as it were, which can be the most valuable feature of a case presentation.

'Chunked-format' approach

Whatever shortcomings are inherent in the traditional method are addressed in this second approach to case presentations. Termed the "chunked" format by Kassirer and Kopelman,^{5,6} this approach has been used extensively in various forms at the Ohio University College of Osteopathic Medicine since 1982, as well as at other teaching institutions. The chunked format proves equally effective in small group teaching situations (afternoon rounds) and in large group instruction (grand rounds).

Specifically, this approach involves one or two presenting physicians, one of whom acts as a facilitator and the other as the presenter. (One physician can assume the roles of both

the facilitator and the presenter, however.) In addition, an experienced physician acts as the "expert clinician."

Rather than presenting the total case, the presenting physician gives data in small collections—or chunks—of historical, physical, and laboratory findings. Each chunk is presented in the sequence in which it became available to the managing physician. Ideally, the physician stops the presentation after each piece of information is given. At this point, an experienced clinician—unacquainted with the case—orally "thinks through the problem," illustrating his or her clinical reasoning. The housestaff then have an opportunity to comment or question before further information is given.

The facilitator, who has all of the information about the case, leads, but does not participate in, the discussion until the end of the case. The facilitator encourages the senior clinician and others in the audience to explain their reasoning. He or she also keeps the discussion on track and diverts the discussion or discloses more information if the expert clinician has difficulty with the case. Such an approach minimizes the potential for embarrassing a discussant.

Cases using this method are chosen not for their rarity, but for their potential to demonstrate decision-making ability. Such a presentation is referred to as a "paradigm case." An attempt is made to use unexpected findings or unusual outcomes as teaching tools.

Progression of the case should be logical; important data should not be omitted to make the case more difficult to solve. The use of actual x-ray films, specimen pictures, microscopic slides, and pictures of the patient (if the patient is not available) add realism and interest to the case. The object of case presentations is to teach clinical problem-solving skills, not to "stump the expert."

The facilitator should be chosen primarily for his or her ability to lead and stimulate group discussion. The expert clinician should

be someone who can explain his or her clinical reasoning.

When medical students are present, the facilitator may role play the patient. Such role playing gives students an opportunity to extract data from the "patient" rather than having it presented to them.⁷ Appropriate dramatics during presentations increase both the enthusiasm and the audience's attention span.

Comment

Both types of case presentations discussed herein have an important place in medical education. The traditional method is an excellent teaching tool during rounds, telephone conversations, and in small-group discussions where participants can exchange information freely during the presentation.

From personal experience, I have found the chunked format to be much more enjoyable for both the presenting physician and the audience. This approach proves superior in group teaching situations in medical school and in internship and residency programs. When used in the presence of an enthusiastic, knowledgeable clinician, both approaches can teach medical problem-solving skills more effectively and efficiently than the lecture format.

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