

How to do it

How to conduct interactive case discussions

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ABSTRACT

Interactive case discussion (ICD) is a modified form of clinicopathological conference. ICD is a learning process and with active participation from the audience. The case is selected with specific pre-defined learning points and presented by a person who knows the full details. Differential diagnosis and approach to diagnosis, investigations and interpretation of data are discussed after each step using multiple-choice questions (MCQs). The audience participates in each step of the discussion by using an electronic voting system for MCQs. Each MCQ is discussed by the presenter. In the end, the diagnosis and management are briefly discussed. ICD is also used as an activity for continuing medical education.

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INTRODUCTION

Students usually learn more effectively when they are actively involved in the learning process.¹ They learn better from examples and inductive reasoning. Interactive case discussion (ICD) is one such active learning process. It allows the application of theoretical concepts and helps to bridge the gap between theory and practice.² It provides an opportunity for the development of skills such as communication, group working and problem-solving. It is expected to help increase the student's enjoyment of the topic and hence their desire to learn.² Lecturers also find the learning/teaching experience more enjoyable and challenging.² To present an ICD, one has to find information that is being used in real life to treat patients. In ICD, we actually apply what we learn.

ICD should make full use of history, physical examination, laboratory results and images from diagnostic tests. These should be presented in a chronological manner, interspersed with interactive questions in the form of multiple-choice questions (MCQs). After each question, answers should be discussed. With the given data, possible diagnosis and differential diagnoses should be discussed.³ The case presentation should conclude with a brief discussion of the case in question and the learning points.

STEPS IN CONSTRUCTING AN ICD

A case with specific learning points should be selected. Cases that have an unusual presentation of a common diagnosis or typical presentation of an unusual diagnosis, unusual combination of conditions leading to clinical dilemmas, a rare complication of a known disease, an unusual side-effect to a mode of treatment, or a new approach to a common medical condition are pertinent for an ICD, especially for postgraduate students. For undergraduate medical students, common or typical cases should be discussed.

The selected case should have relevance, solvability and discussability. Discriminating information should be presented to allow thoughtful, logical discussion and consideration of differential diagnoses by the audience.⁴ The selected case must be relevant to the audience and must contain sufficient information leading to an appropriate conclusion during the discussion. ICD is an effective tool for demonstrating clinical decision-making.⁵ This method is widely used in teaching diagnostic and management skills to medical students and in activities for continuing medical education (CME).

An ICD should have at least two or three learning points. These learning points should be important and evidence-based. References from the literature should be provided to the specific learning points. Wherever possible, learning points should reflect the current guidelines and appropriate references should be provided.⁶

Discussion of the case can include videos, audio clips, illustrations, clinical photographs, radiographs, histology and original documents wherever relevant. The case being presented should build up a picture of the clinical scenario. Confirmatory tests should be revealed at the end. MCQs should be asked after history and physical examination relating mainly to the differential diagnosis, investigations, steps in evaluation and interpretation of data. After presenting the complete data, possible diagnosis and differential diagnosis should be discussed in the form of MCQs. The audience should participate in each step of the discussion by way of an electronic voting system (if available) for the MCQs or by a show of hands. The options and distracters in the MCQ should be discussed by the presenter in detail.⁴ In the end, the diagnosis and management of the case should be briefly discussed by the presenter.

Each question (MCQ) asked should be aimed to illustrate a specific learning point that is identified at the beginning of the case. Relevant references should be provided wherever appropriate.

STRUCTURE OF THE PRESENTATION⁴

Symptoms

These should include a brief description of the patient's symptoms on the first visit. This can be accompanied by a video or with a picture of the patient, whenever relevant. In some neurological, endocrine and skin conditions, the appearance may be diagnostic or can give a clue to the diagnosis. This can be highlighted as a learning point.

History and examination

A proper description of the patient's history and findings on physical examination should be presented.

Clinical diagnosis

The most probable clinical diagnosis and differential diagnosis should be discussed with proper justification after history as well

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as after physical examination.

Investigations

Investigations done including X-rays, laboratory tests, ultrasound, CT scan, MRI, spirometry or any other test conducted to make the diagnosis, pictures, videos or sounds can be included. Each step in the evaluation, how to proceed with further diagnostic tests and interpretation of test results wherever relevant should be discussed.

Diagnosis

At the end, the diagnosis and differential diagnosis should be discussed with proper justification.

Treatment

A brief description of the treatment, response to treatment and course of the disease should be discussed.

Further reading

At the end of presentation, one or two in-depth articles on the topic should be mentioned. This will be useful to the audience to learn further finer details of the learning points.

Continuing medical education test

If ICD is used as an activity for CME, then at the end of the presentation a short CME test with 5–7 MCQs should be conducted to assess the user's knowledge on the topic presented. Those who score >75% may be awarded a certificate.

Conflicts of interest. None declared

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