

Diagnostic Sequence

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Embolism is the most common cause of pulmonary death among hospitalized patients; and when its secondary effects are also taken into account, it may well be the most common cause of all deaths in the hospital.

Untreated, pulmonary embolism is fatal in 25 to 35 per cent of cases. But the mortality rate plummets to between eight and ten percent with prompt diagnosis and effective treatment. Unfortunately, the diagnosis is not immediately apparent in many instances, because the clinical picture of pulmonary embolism is largely nonspecific.

A practical diagnostic sequence can be formulated to assess patients with suspected emboli, even in situations where definitive, sophisticated diagnostic techniques are not readily available.

It is a paradox that while medicine and surgery are taking great, if not giant steps forward, the incidence of thromboembolism is on the rise. Undoubtedly, the increase is related to that progress, in

that older and sicker patients are undergoing more complex operations and are confined to bed for longer periods. Thus, the stage is set for the formation of thrombi and their release as emboli.

Embolism is certainly regarded as the most common cause of pulmonary deaths among hospital inpatients. In fact, if its secondary effects are taken into account, embolism may well be the most frequent cause of all in-hospital deaths. Each year, about 142,000 patients (four to five per 1,000 inpatients) die of pulmonary embolism in American hospitals. And another 568,000 (20 per 1,000 inpatients) suffer nonfatal embolic episodes.

To some extent, the grim mortality figures are the result of slow or missed diagnosis. Without treatment, pulmonary embolism is fatal in 25 to 35 per cent of cases. But with prompt diagnosis and effective treatment, the mortality is considerably lower—eight to ten per cent.

The obvious implication is that early diagnosis and immediate treatment greatly improve the prognosis. Early recognition is not always easy, however. Even in patients with segmental and larger vessel occlusion, pulmonary embolism is diagnosed infrequently.

One reason is that the symptoms and signs are usually nonspecific—attributable to any other cardiopulmonary problem. Another is that laboratory tests contribute little to diagnosis because they, too, are nonspecific for pulmonary embolism. Determinations that once seemed promising—serum LDH, GOT, and bilirubin—have been found to be of little use in diagnosing pulmonary embolism. Since neither clinical nor laboratory evidence points specifically to thromboembolic disease, appropriate diagnostic studies often may be delayed until after another embolism occurs.

As in so many clinical situations, the essential first

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