

Letters to the Editor

Total parenteral nutrition by central venous catheter complicated by right atrial septic thrombus

Sir,

Infectious complications of central venous catheters are well recognized.^{1,2} Among them, right atrial septic thrombi, although rare, are usually fatal.^{3–5} We describe a patient with severe malabsorption due to alpha heavy chain disease, who began total parenteral nutrition by a silicone central venous catheter soon after admission. Two weeks later he developed pyrexia due to a right lower lobar pneumonia. Imipenem and amikacin were instituted. Three days later fever persisted. The blood cultures previously performed were negative. Vancomycin was added, the fever subsided and the X-ray, performed 10 days later, was clear.

In the fifth hospitalization week he was again febrile, again hyperthermic and chest X-ray revealed diffuse bilateral pulmonary infiltrates. Real-time two-dimensional echocardiography revealed a large right atrial mass (Figure 1). Blood cultures yielded *Candida lusitanae* and *Staphylococcus hominis*. The central venous catheter was removed. The culture of its tip yielded the same pathogens. Ciprofloxacin and vancomycin and liposomic amphotericin B were instituted, and the atrial mass was removed by cardiomy. Pathological examination revealed a septic thrombus, 4 × 3 × 2 cm, with numerous Gram-positive cocci. The antibiotics were stopped 6 weeks after surgery.

Our patient developed a large septic right atrial thrombus probably related to long-term central venous cannulation, and two sequential pneumonias, possibly the result of septic pulmonary emboli.

The recognition of this condition is essential, as it is potentially lethal. It should be suspected always if a patient with a central venous catheter develops persistent or recurrent fever. Real-time two-dimensional echocardiography allows an accurate diagnosis and should be performed in all suspected patients. Rapid institution of

treatment is crucial. This should include catheter removal, long-term specific anti-infectious therapy and thrombectomy.

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Non-fatal massive right atrial thrombus associated with Hickman catheter in an adult receiving chemotherapy for acute leukaemia

Sir,

Cases of right atrial thrombus related to central venous catheters occur mainly in infants receiving total parenteral nutrition (TPN). We describe the first such case in an adult receiving chemotherapy for malignancy who had successful surgical removal of a large thrombus attached to the tip of an infected Hickman line.

A 17 year old male began chemotherapy in April 1992 following a diagnosis of acute lymphatic leukaemia (common ALL). His initial Hickman catheter was removed after 3 months because of persistence of a streptococcal septicaemia despite appropriate antibiotics. Four weeks later, prior to the onset of late intensification, a second double-lumen Hickman catheter was inserted via the left external jugular vein with its tip located in the right atrium. Both Hickman catheters were surgically inserted under cover of a prophylactic dose of teicoplanin 400 mg intravenously.

After completion of late intensification chemotherapy, the Hickman line exit site became inflamed with a purulent discharge. Over the following 2 weeks, he had intermittent pyrexia despite therapy with various broad-spectrum antibiotics. Blood cultures from the Hickman line only grew a coagulase-negative *Staphylococcus albus*. Subsequently, the neutrophil count recovered to $3.0 \times 10^9/l$ and the patient became afebrile with no

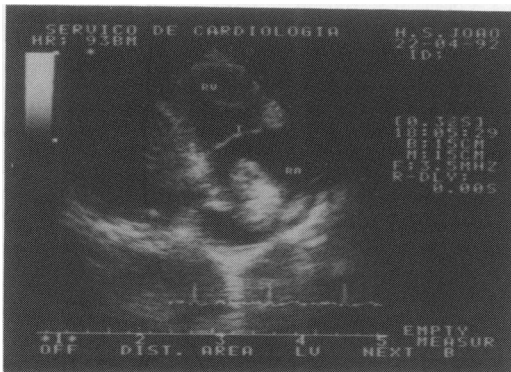


Figure 1 Parasternal long axis view – enlargement of the right atrium (RA) and mass attached to the RA. RV = right ventricle, TV = tricuspid valve.