



I NEED TO KNOW ABOUT TRALI: TIPS, TRICKS AND TRADEOFFS

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Clinical Tip: What is TRALI?

Patients with Transfusion-Related Acute Lung Injury (TRALI) have breathing difficulties, low blood oxygen and new chest X-ray changes during or within six hours of a transfusion. It is the leading cause of transfusion-related death in North America.

Lab Tip: What causes TRALI?

There are two theories: The main theory is that antibodies (immune molecules) in donor plasma attack white cells in the recipient (patient) which then lodge in the lungs causing breathing problems. The other theory is that the donor has active substances in their plasma. The patient, already sick, has some inflammation in the lung blood vessels and the new active substances worsen the lung problems.

Trick: How is TRALI treated?

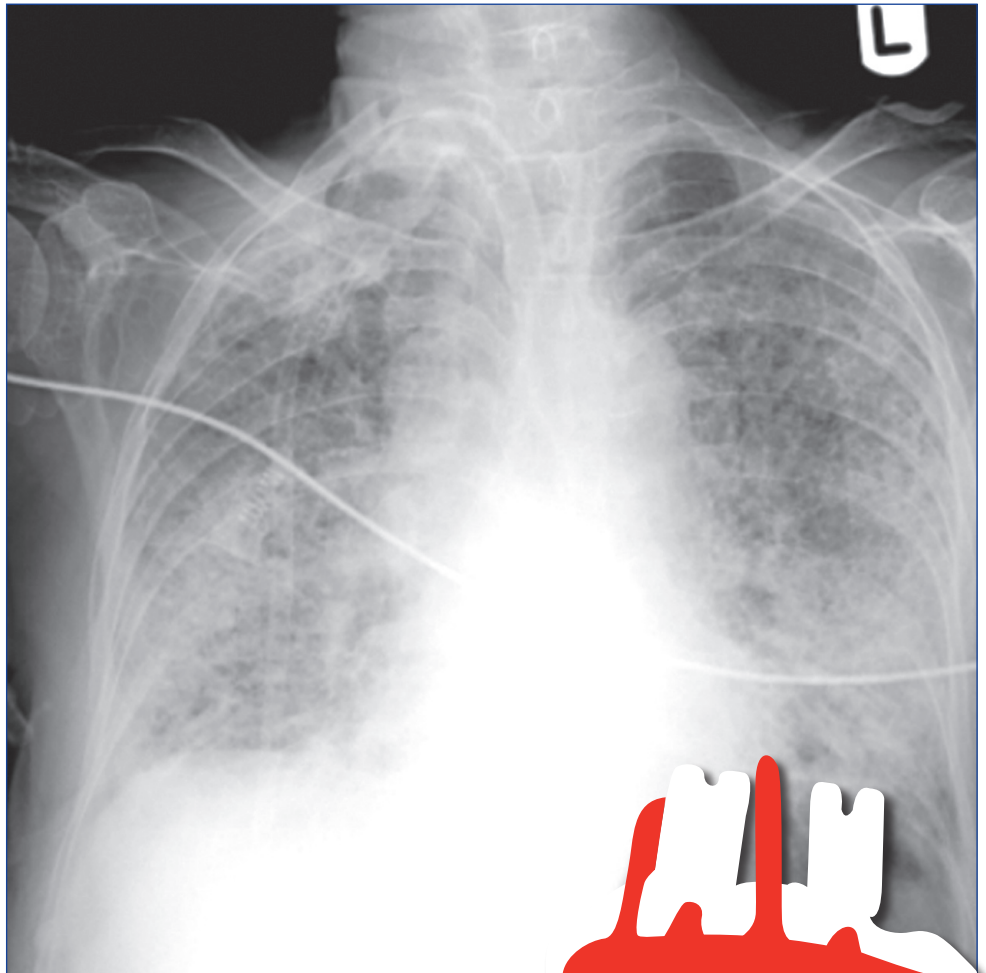
Oxygen. And plenty of it. Patients often need mechanical ventilation support.

Trick: Could it be something else?

TRALI can easily be confused with excessive fluid accumulation in the lung, which also causes breathing problems. Excessive fluid is usually treated with diuretics (fluid removal medication) which can actually worsen TRALI, so proper diagnosis and treatment is vital.

Tradeoff: Can it be prevented?

The antibodies thought to cause TRALI are more common in women, particularly after pregnancy. It is hoped that by reducing the amount of female plasma being given to patients, the number of cases of TRALI will reduce. Female plasma can be used for fractionation without any concerns about TRALI. ARCBS now has a policy to use predominantly male only plasma for fresh plasma products.



▲ Air is black in X-rays. Lungs should be pretty much black on X-rays. TRALI causes lungs to fill with fluid and inflammation making them whiter on an X-ray.

