A 60-year-old man presented to the emergency department owing to a 2-day history of frequent vomiting and diarrhea, and fever. He had not undergone abdominal surgery, did not have an immunocompromised status, and had not received vaccination against pneumococcus. Clinical examination revealed high-grade fever, tachycardia, low blood pressure and systemic purpura lesions on the skin (Figure 1A). Laboratory analysis results indicated leukocytosis (white cell count, 22 300 cells/l), severe thrombocytopenia (25 000/m\(^3\)l), elevated C-reactive protein level (160 nmol/l), liver and kidney failure and disseminated intravascular coagulation (DIC). Spleen hypoplasticity was confirmed on computed tomography during admission. Computed tomography, blood test analysis and urinalysis did not reveal any obvious infection. Gram-positive diplococci (Figure 1B) were observed on a Gram-stained peripheral blood smear taken from a blood culture bottle that was centrifuged, suggesting Streptococcus pneumoniae-induced purpura fulminans. The patient was treated in the intensive care unit; however, he died 21 h after admission. The following day, blood culture results were positive for penicillin-sensitive S. pneumoniae serotype 22F.

Purpura fulminans is an uncommon but fatal disorder characterized by rapidly progressive thrombosis with hemorrhagic infarction, DIC and multiorgan failure.\(^1\) The most common organisms in purpura fulminans are Streptococcus pneumoniae, Neisseria meningitides and Haemophilus influenzae, especially in patients with post-splenectomy and hyposplenic states. Other differential diagnosis include Streptococcus or Staphylococcus infections, as well as toxic shock syndrome, Rickettsia or Capnocytophaga infection caused by animal bites, Aeromonas or Vibrio infection related to seawater exposure, and non-infection-related hematological disorders such as thrombotic microangiopathy.\(^2\) Although accurate diagnosis is challenging, peripheral blood smears are easy, can be performed at an early
stage, and are useful to identify the causative microorganism of purpura fulminans; thus, appropriate empirical therapy is possible after excluding non-infectious causes. Peripheral blood smear should be performed to diagnose the cause of purpura fulminans.

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