

Category : **Liver disease**

A135 - Gas-producing liver abscess caused by *c. perfringens*: a case series review

M IWAHARA ¹; R ECHIGOYA ²

¹*Kurashiki Central Hospital, intensive care department, Okayama, Japan,* ²*Kurashiki Central Hospital, Okayama, Japan*

Introduction:

Clostridium perfringens (hereinafter *C. perfringens*) is known as the causative agent of gas gangrene resulting from trauma, but it can also be a causative agent of food poisoning and sepsis. The development of gas-producing liver abscess is often accompanied by intravascular hemolysis, leading to a rapid and frequently fatal course within a short period.

Methods:

From April 2010 to April 2023, patients admitted to our hospital were studied retrospectively for cases of gas-producing liver abscess with *C. perfringens* detected in blood cultures. Data including age, underlying conditions, presence of intravascular hemolysis, treatment, mortality rate, and time from admission to death were extracted from our medical chart.

Results:

The results are presented in Table 1. There were a total of 9 cases of gas-producing liver abscess caused by *C. perfringens*, with a median age of 77 years (range: 74-82). Malignant tumors were observed in 66.7% (6/9 cases), and diabetes was noted in 44.4% (4/9 cases). During examination at the emergency department, intravascular hemolysis was observed in 88.9% (8/9 cases), and 66.7% (6/9 cases) underwent drainage in addition to antibiotic treatment. A total of 55.6% (5/9 cases) resulted in mortality, with a median time from admission to death of 24 hours (range: 19-94). Several cases without underlying conditions such as malignant tumors or diabetes have been observed to have long-term survival.

Conclusion:

Gas-producing liver abscess caused by *C. perfringens* tends to occur in immunocompromised patients such as those with malignant tumors or diabetes. This condition is characterized by the rapid development of intravascular hemolysis, leading to a swift progression to death. In cases of gas-producing liver abscess with concurrent intravascular hemolysis, early initiation of drainage and antibiotic treatment with consideration for *C. perfringens* is desirable. However, even with prompt treatment, survival is often challenging in many cases.

Table:

variable	All n=9
Age median(IQR)	77(74-82)
Malignancy n%	66.7% (6/9)
Diabetes n%	44.4%(4/9)
Intravascular hemolysis n%	88.9% (8/9)
Drainage n%	66.7% (6/9)
Death n%	55.6%(5/9)
Hospitalization-death time median(IQR)	24(19-94)