



# causes of disease. Fever, abdominal pain Case discussion and Illness Scripts

- 1, fever ,origin unknown
2. endophthalmitis--PLA
3. Amebiasis
4. Fish bone induced liver abscess

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# Case 1, FUO

- **Multidisciplinary approach to diagnosis and management of fever of unknown origin: A case report** Kai Chen et al (China): Medicine : 2023 Dec 15;102(50):e36628.

FUO 的定義包括發熱  $38.3^{\circ}\text{C}$  或更高，持續 3 周以上，住院調查 1 周或 3 次門診就診后仍未明確診.

不明燒可歸因於多種原因，<sup>[2]</sup> 包括細菌、病毒、真菌或寄生蟲等感染；自身免疫性疾病等炎症性疾病；淋巴瘤和白血病等惡性腫瘤；對藥物的不良反應；涉及甲狀腺或腎上腺的內分泌功能中斷；血液系統疾病；影響溫度調節和暴露於環境毒素的神經系統疾病。

# Pyogenic liver abscess complicated with endogenous endophthalmitis caused by *Klebsiella pneumoniae*: A case report and Literature Review

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Affiliations — collapse

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- 1. 本病例報告描述了一名 37 歲男性，他連續 10 天高燒至  $39^{\circ}\text{C}$ ，出現視力模糊
- 2. 糖尿病病史，不規則服用口服藥物和胰島素治療
- 3. 左眼手術后 1 天，發熱超過 10 天入院。他報告說 10 多天前發燒，伴有發冷和顫抖，最高體溫為  $39^{\circ}\text{C}$ 。他從藥房購買了退燒藥，但眼，並將矽油注射到眼球內。手術成功，手術過程中觀察到大面積視網膜壞死、黃斑區大顓部裂孔和廣泛的血管阻塞。手術期間膿性分泌物的細菌塗片提示革蘭氏陽性菌，未發現真菌。患者術后立即給予 Rocephin 進行抗感染治療。

- 2020 年 9 月 29 日(術后第二天)--他的體溫為  $39.3^{\circ}\text{C}$ ，沒有發冷。他食慾好，但睡眠不佳，腸道和排尿習慣正常，過去一個月體重減輕了 5 kg。
  -
- -→他住到醫院

既往病史

患者有 3 年以上糖尿病病史，不規律地服用口服藥物和胰島素治療。他否認有高血壓和慢性病史。他有痔病史，發熱前 1 周有痔出血。

為何糖尿病沒有規則服藥?  
病情如何AC sugar, and HBA1c...人答不出來

得不到答案

# Physical findings

- 檢查時，患者體溫  $39.3^{\circ}\text{C}$ ，R: 22 次/min，血壓  $124/85 \text{ mmHg}$ ，HR96 次/min，左眼被紗布覆蓋。心肺未見異常，腹部柔軟平坦。肝臟在肋骨下方 1 指寬處可觸及，輕輕按壓時有輕微壓痛。

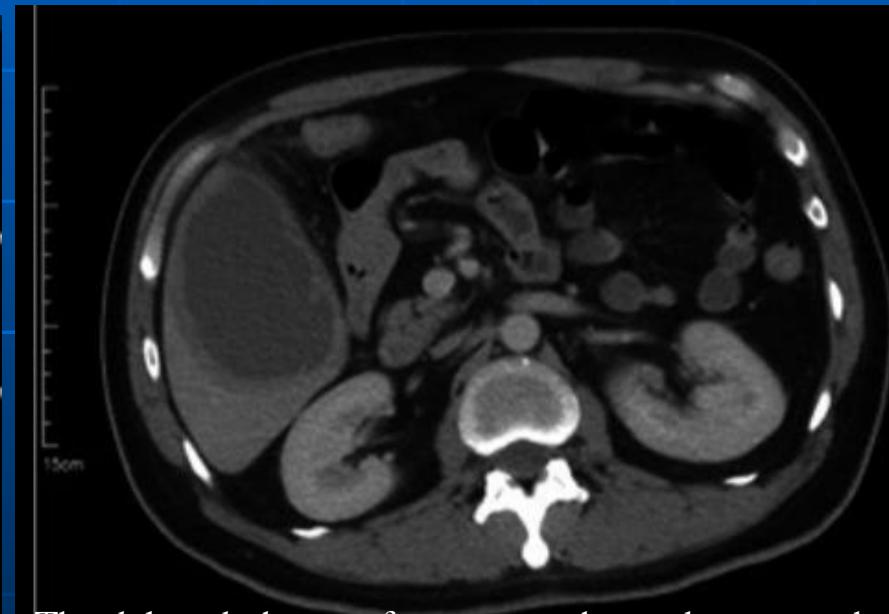
# Laboratory findings:

- 入院時，採集血培養標本，結果如下：
- 白細胞計數（WBC） $13.3 \times 10^9/L$
- 中性粒細胞佔 86.2%；
- 降鈣素原 **procalcitonin** 1.06 ng/mL; (<0.5)
- 餐后 2 小時血糖 16.13 mmol/L; (290 mg/dl)
- 糖化血紅蛋白（**HbA1c**）為 **10.2%**。
- 在收集血培養標本后，患者開始接受抗生素治療，

@@@所有沒有努力控制糖尿病的病人,一定要查Ac sugar, pc sugar and HbA1c.

# 影像學檢查

- 壁厚，內部隔板，大小約為  $95 \times 80 \text{ mm}$ ，邊界不清晰，後回波信號略增



The delayed phases of contrast-enhanced computed tomography show a low-density lesion in the right lobe of the liver, measuring approximately  $9.3 \times 6.1 \text{ cm}$ , with thickening of the cyst wall (white arrow).



Postoperative local purulent discharge in the left eye, and bacterial smear from another hospital showed Gram-positive bacteria.

- The patient had a history of diabetes for more than 3 years, irregularly taking oral medications and insulin therapy. He denied a history of hypertension and chronic diseases.

糖尿病史是一個很麻煩的問題：意外有很多感染, **abscess, fungus diseases**

The blood culture was not positive. The culture of the drainage fluid from the liver puncture showed *Klebsiella pneumonia*, and the results of the drug sensitivity test showed that it was not sensitive to ampicillin but moderately sensitive to vancomycin, cephalothin, and meropenem. Blood and liver puncture drainage fluid were sent for microbial high-throughput gene detection, which confirmed the diagnosis of *K. pneumonia* induced-PLA with EE.

@@@血液培養很重要但是如果事先用抗生素可能就培養不出來.  
Pus 通常可以培養出來

# Endophthalmitis

## 先EE-→PLA or PLA→EE

- A survey of data from 1996 to 2015 in Taiwan found that there were 104 cases (120 eyes) of PLA with concomitant EE, with **unilateral** involvement accounting for the vast majority (84.6%), solitary PLA accounting for 74%, and right lobe abscess accounting for 60.6%.<sup>24</sup> The incidence of diabetes in these cases was 68.3%, similar to other studies,<sup>6</sup> and EE appeared before PLA in 52.1% of cases

Chen YH, Li YH, Lin YJ, et al. Prognostic factors and visual outcomes of pyogenic liver abscess-related endogenous *Klebsiella pneumoniae* endophthalmitis: a 20-year retrospective review. Sci Rep. 2019;9(1):1071

# 第二例

Case Reports > BMC Infect Dis. 2021 Nov 4;21(1):1134. doi: 10.1186/s12879-021-06819-9.

## Amoebic liver abscess in a COVID-19 patient: a case report

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# Covid 19 住院—7天后腹瀉

■ 一名 54 歲男性，作為 COVID-19 疑似病例收治，因呼吸困難、不適、發熱和低氧血症到我院就診。鼻咽拭子通過逆轉錄聚合酶鏈反應檢測嚴重急性呼吸系統綜合症冠狀病毒 2 (SARS-CoV-2) 陽性。7 天后，病人出現腹瀉、。腹部超聲顯示與肝膿腫相符的病變;糞便檢查顯示溶組織 *E. 吸血球菌滋養體*，其他溶組織 *E. 組織球曲球菌* 血清學陽性。用甲硝唑、頭孢他啶和硝唑尼特治療 12 天后，患者主訴急性腹痛，超聲檢查顯示腹腔內有遊離液體。進行了緊急剖腹探查術，發現 3000 mL 的粘稠液體，被描述為“鰻魚糊”。計算機體層成像掃描顯示第二個膿腫。他最終接受了 21 天的抗生素治療，並以令人滿意的改善出院。

# Covid→Fever入院→ 7d.later→diarrhea stool examination--amebiasis

- 54 歲男性因呼吸困難、不適和發熱 6 天到大學醫院傳染病科就診;他因低氧血症（氧飽和度  $< 90\%$ ）而被作為 COVID-19 疑似病例入院，無明顯病史。入院時，血液檢查顯示中性粒細胞增多 ( $8.05 \times 10^3/\mu\text{L}$ )、淋巴細胞減少 ( $0.88 \times 10^3/\mu\text{L}$ )、輕度轉氨酶升高（天冬氨酸轉氨酶：40 U/L;丙氨酸轉氨酶：69 U/L）、膽紅素水準在正常範圍內（總膽紅素：0.5 mg/dL;間接膽紅素：0.3 mg/dL;直接膽紅素：0.2 mg/dL）和炎症標誌物升高（乳酸脫氫酶：394 U/L）。
- C 反應蛋白：9.1 mg/L;紅細胞沉降率：55 mm/h）。根據傳染病科方案進行人類免疫缺陷病毒血清學檢查，結果無反應。鼻咽拭子通過逆轉錄聚合酶鏈反應檢測 SARS-CoV-2 陽性。7 天後，他出現腹瀉、膽尿，然後出現痢疾;隨後的肝功能檢查顯示轉氨酶限值（天冬氨酸轉氨酶：31.6 U/L;丙氨酸轉氨酶：45.8 U/L）和輕度間接膽紅素升高（總膽紅素：1.16 mg/dL;間接膽紅素：0.74 mg/dL;直接膽紅素：0.42 mg/dL）。腹部超聲顯示與 ALA 相符的圖像;
- 粪便檢查顯示溶組織埃克薩斯 *E. histolytica* 滋養體。立即開始用 metronidazole, ceftazidime and nitazoxanide 治療。

@@臨床上出現兩種病的癥狀時要小心是一個病還是2個病.

# 病從哪裡來？你需要思考的問題

- 1. 個病比較簡單，2個病的話就要思考病從哪裡來？
- 1. 一個來源，一種病有2個器官系統的癥狀
- 2. 2個病，不同原因引起，  
如果在醫療過程中得到的病這就更麻煩了。

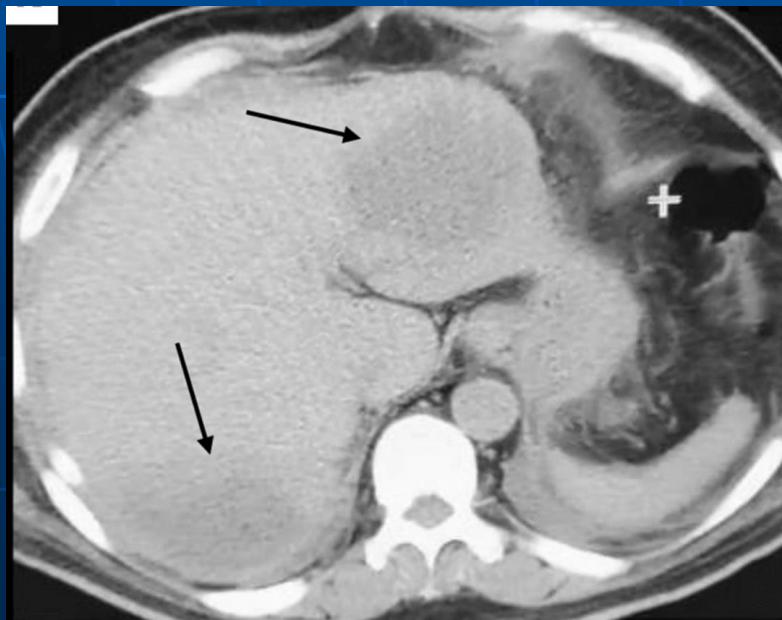
- After 12 days of treatment with metronidazole, ceftazidime and nitazoxanide, the patient reported acute abdominal pain, and an ultrasound examination revealed free liquid in the abdominal cavity. An emergency exploratory laparotomy was performed, finding 3000 mL of a thick fluid described as "anchovy paste". Computed tomography scan revealed a second abscess. He ended up receiving 21 days of antibiotic treatment and was discharged with satisfactory improvement.

# AMEBIASIS從哪裡來？

- 該病例與發現由醫院廚房工作人員感染這種寄生蟲引起的院內阿米巴病發作同時發生，其中評估了 37 名直接參與食物製備的人，其中 4 人（10.8%）記錄了腸道阿米巴病（未發表的數據）。考慮到這種寄生蟲病的糞口傳播及其潛伏期，患者在入院前可能通過食用受污染的水或食物而感染該疾病。

# 小心看CT, 是有變化的

- 阿米巴感染可無癥狀或有癥狀，可導致組織浸潤。最常見的侵襲性腸外表現是 ALA：寄生蟲通過門靜脈迴圈到達肝臟。通常，在這種表現中，沒有既往結腸炎的證據，提示無癥狀感染或局限於結腸右側[16]。感染的持續性、建立和隨後的臨床表現取決於原生動物的病理特徵，但也受宿主免疫反應的影響。ALA 發生在少數阿米巴病患者中（3-9%）[16]，並且可能會出現膿腫破裂（2.5-22%）[17, 18] 和腹膜炎（2.4-13%）



Low density lesions, two,  
仔細看, early lesion. 就是這樣

# 從前也有這樣的經驗.

- 404, 頭等病房的病人 得到了amebiasis
- 他家裡的人都說都是吃醫院的餐.

- 1.我是醫院的醫務秘書
- 2.我是醫院的腸胃科教授.
- 3.我告知院長要去營養部調查調查—O.K.
- 4.結果發現一名廚師有阿米巴
- 5.當然沒有正式報告---容易就解決了
6. 阿米巴最容易治了,
- 7.不必開除他—休息一星期好好吃藥, 病就好了
8. 大家圓滿

# 恐怖的事情是來自遊樂園噴水塹

- Splashing pad: (供兒童玩的) 嬉水樂園，嬉水區/



The Brief Case: A Case of Primary Amebic Meningoencephalitis (PAM) after Exposure at a Splash Pad

Lynne Eger <sup>a</sup>, Morgan A Pence <sup>b</sup>J Clin Microb 2023 Jul 20;61(7):e01269-22.

3歲幼童，住院前3次玩噴水塹(2, 9, and 10 days prior to presentation.) Environmental testing of the splash pad was performed by the CDC and found to be positive for *N. fowleri*. The city where the exposure occurred subsequently released a report demonstrating that chlorine levels had not been documented on several days and were below acceptable limits the day following one of the child's visits to the splash pad (1).

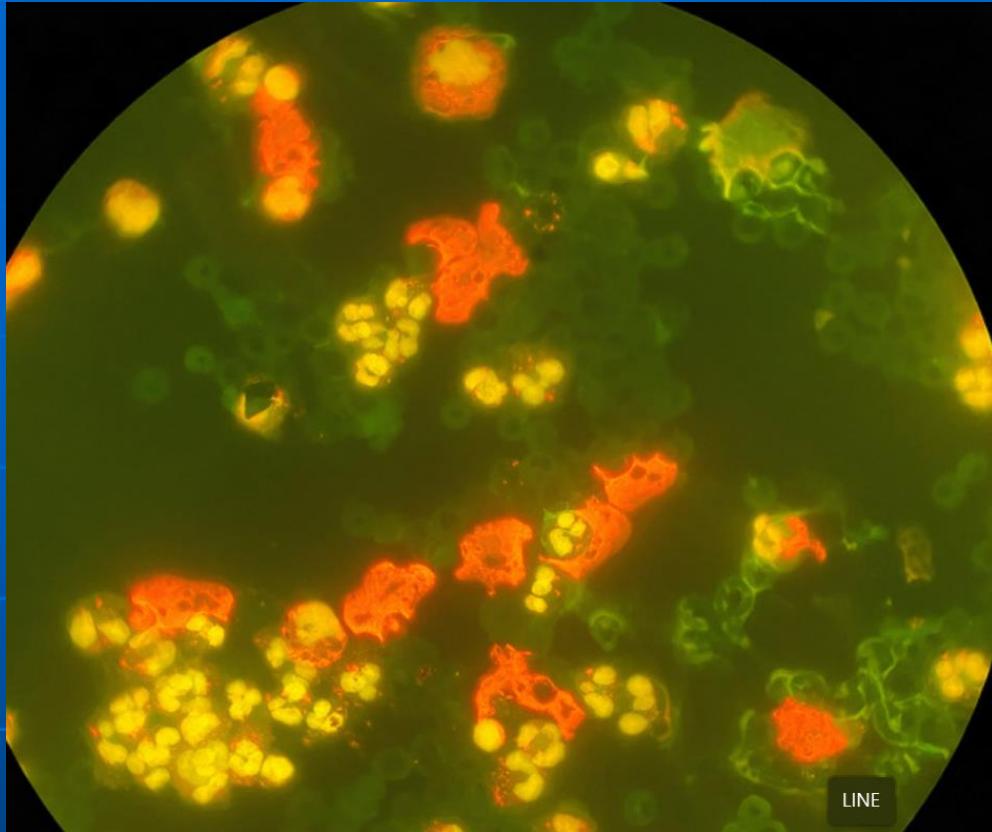
# Case 3

- 一名 3 歲男性於 2021 年 9 月到北德克薩斯州的緊急護理中心（UCC）就診，癥狀為 1 天發熱、經口攝入不良、1 次嘔吐發作、大部分時間睡眠和鼻塞。經檢查，他很警覺。他有扁桃體紅斑。分子即時檢測顯示流感、SARS-CoV-2 和 A 組鏈球菌呈陰性，他被診斷出患有病毒性疾病。
- 第二天，患者因持續發熱、頭痛、嗜睡、無經口攝入、尿量減少和眼球運動而就診。他不像平時那樣說話，而且根據他父親的說法，他走路很困難。在 UCC 中，他很警覺，但被發現有水準眼球震顫。他被轉移到庫克兒童急診科（ED）進行進一步檢查。
- 患者的母親否認有額外的嘔吐和腹瀉，但提到患者曾抱怨頭暈和頸部疼痛（小兒病人，母親的敘述觀察發現很重要）

# PE and major lab findings

- 體格檢查顯示水準和垂直眼球震顫、心動過速和頸部僵硬。
- 初步實驗室檢查顯示 CBC 正常，
- 鈉 129 mmol/L (參考範圍：135 至 145 mmol/L) ，
- CRP 升高 13.94 ng/mL (參考範圍：0.47 至 2.53 ng/mL)
- 降鈣素原 (Procalcitonin) 升高 2.15 mg/dL (參考範圍： $\leq 0.05$  mg/dL) 。
- 頭部 CT 掃描正常。

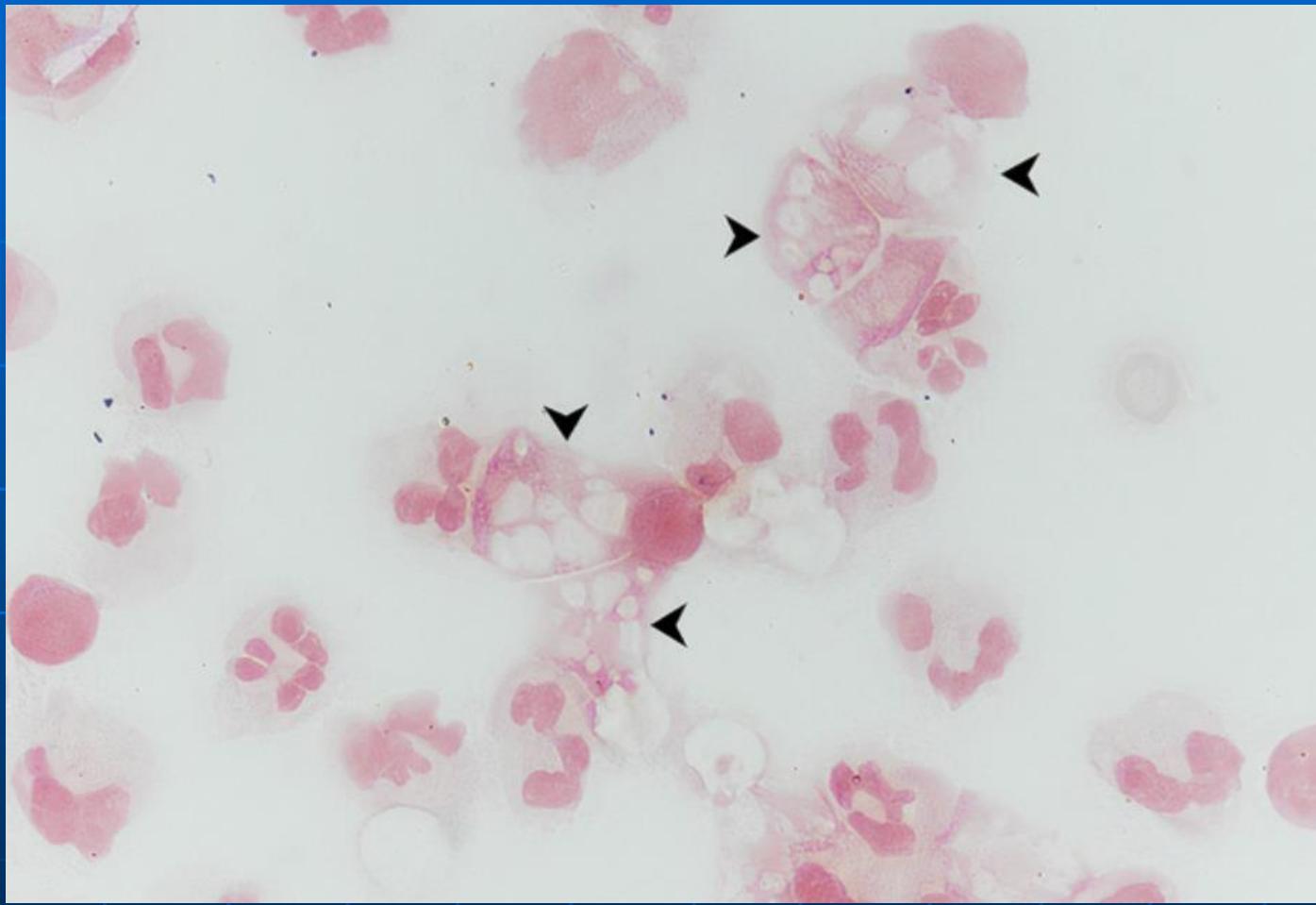
- A lumbar puncture was performed, and cerebrospinal fluid was sent to the laboratory for cell count, glucose, protein, bacterial culture, and Gram stain.
- A cell count revealed **1,666 white blood cells** per microliter (reference range: 1 to 5 cells/ $\mu$ L) with **85% neutrophils** (reference range: 2 to 6%) and **2,000 red blood cells** per microliter (reference range: 0 cells/ $\mu$ L).
- The glucose was decreased at 16 mg/dL (reference range: 60 to 80 mg/dL) and protein was elevated at 365.4 mg/dL (reference range: 15 to 40 mg/dL).
- The Gram stain appeared negative for organisms. However, the microbiology laboratory scientist questioned the negative Gram stain due to the high number of white blood cells present and subsequently performed an acridine orange (AO) stain to better visualize potential organisms. The AO stain revealed abundant ameboid forms (Fig. 1).



Acridine orange (AO) stain of cytopsin-prepared CSF. Amebae appear orange while polymorphonuclear leukocytes (PMNs) appear yellow.

Human infections due to free-living amebae (FLA) are caused by *Acanthamoeba* spp., *Balamuthia mandrillaris*, *Naegleria fowleri*, and *Sappinia* spp. *Acanthamoeba* spp. cause keratitis among contact lens wearers, while *Acanthamoeba* spp., and *Balamuthia mandrillaris* cause cutaneous amebiasis and granulomatous amebic encephalitis (GAE), a subacute to chronic infection of the central nervous system (CNS) that typically occurs in immunocompromised hosts.

自然界有的有活存的阿米巴。  
不可以隨便喝溪水就是這個道理



細胞離心塗片製備的 CSF 的革蘭染色。箭頭表示阿米巴。總放大倍率：1,000 $\times$

# Miltefosine (Impavido) 50 mg 17,784 dollars/28 cap.

- 當診斷為自由生活的阿米巴感染時，或者正在考慮 PAM 的診斷時，應聯繫 CDC 緊急行動中心。CDC 緊急行動中心 24/7 全天候提供診斷幫助和治療建議。目前的治療建議包括兩性黴素 B、阿奇黴素、氟康唑、米替福新、利福平和地塞米松的組合以及誘導低體溫。
- Miltefosine 於 1980 年代開發為抗癌療法，被發現對利什曼原蟲屬具有活性。後來證明，它對棘阿米巴屬、曼氏芽孢桿菌和福氏芽孢桿菌具有體外活性（6）。2009年，米替福新首次用於治療自由生活的阿米巴感染，但在美國不可用，必須進口。2013年，CDC 開始分發 miltefosine，在 2013 年至 2016 年期間，miltefosine 只能通過 CDC 獲得。



Copilot ⓘ

2025.06.04 查詢

根據目前的查詢結果，臺灣是否有販售 Impavido (miltefosine) 這個藥品，並未在衛福部食品藥物管理署 (TFDA) 的公開許可證資料中直接顯示。這可能表示：

1. **Impavido 尚未在臺灣取得藥品許可證**，因此無法在一般藥局或醫療院所合法販售。
2. 若有特殊醫療需求，**可能需透過「專案進口」的方式**，由醫師提出申請，經 TFDA 核准後才能進口使用。
3. 若是個人自用，也可能透過**「個人輸入自用藥品」**的方式辦理，但仍需符合相關規定。

# Primary amebic encephalitis

- Primary amebic encephalitis (PAM) is caused by *N. fowleri*.

## Take-Home Points

- A presumptive diagnosis of PAM can be made based on patient presentation in conjunction with visualization of ameba in CSF. Molecular testing is required for a definitive diagnosis of the ameba species.
- Gram stain has low sensitivity for the diagnosis of PAM. Other stains, including Wright Giemsa, hematoxylin and eosin, periodic acid-Schiff, and trichrome, should be used.
- Although the majority of US PAM cases have occurred in southern states, geographic spread is increasing, and clinicians and laboratorians throughout the US should be aware of its presentation and diagnosis.
- The fatality rate for patients with PAM is > 97%, despite use of recommended treatment. The ideal treatment regimen is unknown.

# 室內親水場所感染源

- 新北市一名30多歲女性，只是在新北的室內親水場所戲水，想不到竟感染俗稱「食腦阿米巴」的福氏內格里阿米巴原蟲，僅短短7日就死亡。台大醫院急診醫學部主治醫師李建璋表示，感染食腦蟲致死率達97%，有五位倖存者還是提供寶貴的治療經驗，可早期使用特殊抗菌藥物「米替福新」。但該藥目前國內沒有，需專案進口。對此，疾管署副署長曾淑慧表示，目前仍需研議是否專案進口，因為也有其他藥可能有效，都還需評估實證資料。
- 美國文獻上記錄的157位患者，有153位死亡，從野溪游泳、野地溫泉戲水都有可能從鼻腔途徑感染該寄生蟲。
- 目前文獻僅有的五位倖存者還是提供寶貴的治療經驗。最重要經驗是早期使用特殊抗菌藥物米替福新 miltefosine (Impavido)，此藥早期用於研發對抗乳癌，後來發現對於熱帶疾病利什曼原蟲有效，2016年通過FDA，然而此藥屬於孤兒藥，初步搜尋台灣似乎沒有此藥

三立新聞網

2023年8月10日

記者黃仲丘／台北報導

# 第4例

Review

› Cir Cir. 2020;88(Suppl 2):1-4. doi: 10.24875/CIRU.20000030.

## Liver abscess due to a fish bone injury: A case report and review of the literature

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Affiliations — collapse

### Affiliations

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A 73-year-old woman with no medical history of relevance presented to the emergency department with a 2-week history of fever, asthenia, nausea, and intermittent diffuse abdominal pain. The abdominal examination did not show signs of peritoneal irritation. Elevation of acute-phase reactants and spontaneous coagulopathy was observed.

單純的病史,2個星期發燒還有肚子痛你怎麼樣去找病因這很重要

- 1. 最重要的事是好好詢問飲食的狀況.
- 有沒有稱生食
- 飲水是不是乾淨
- 有沒有吃魚---魚刺的問題
- 有沒有吃肉---骨頭的肉,有吃下去嗎
- 有沒有吃放太久的食物?
- 有沒有導致免疫力下降的疾病—DM
- 使用牙籤?

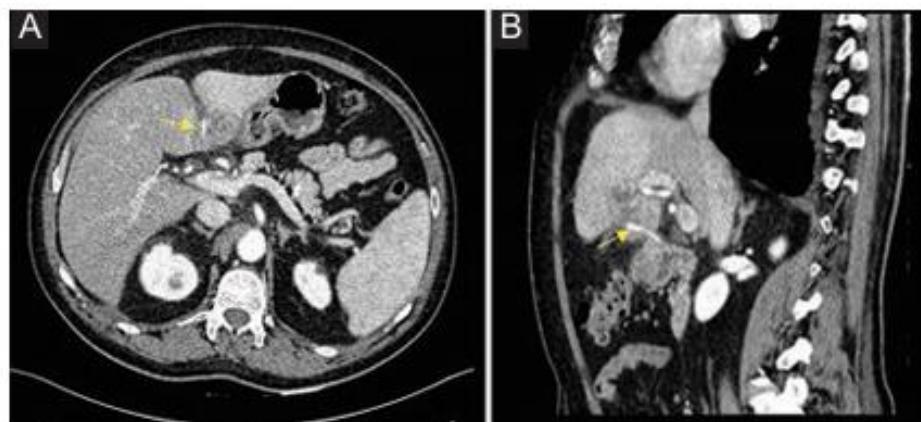
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# ：都沒有足夠的information

- 老人家對最近的事情很健忘.
- 靠進一步的檢查

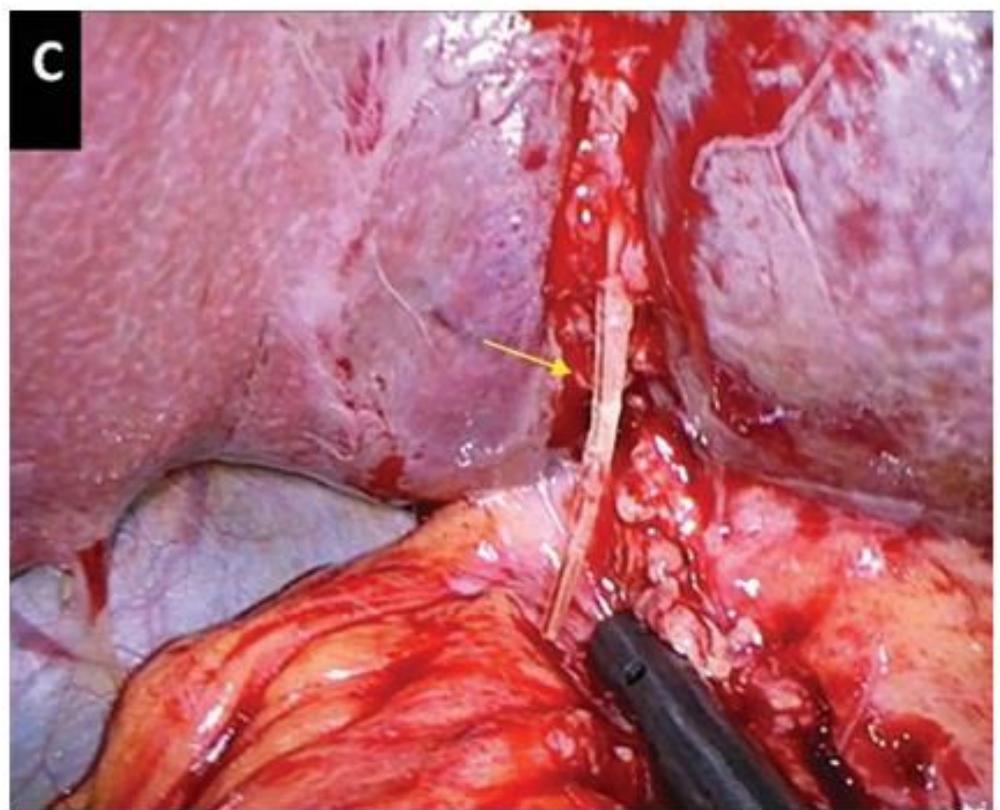
An exploratory abdominal ultrasound was performed showing a hypoechoic liver collection in the left hepatic lobe. The study was completed with a computed tomography (CT) scan that revealed a liver abscess with a hyperdense image into the parenchyma of the left hepatic lobe (Fig. 1). With the diagnosis of pyogenic liver abscess associated with foreign body, antibiotic treatment was initiated with piperacillin-tazobactam (4/0.5) every 8 h, during 5 days. Although the patient

Abd CT到答案了：  
Hyperdense foreign body



**Figure 1. A-B:** abdominopelvic CT, axial and sagittal section respectively. Marked with a yellow arrow an image of hyperdense foreign body.

# 不要以為吃下去不痛不癢沒關係 2 weeks出問題了



**Figure 2.** Intraoperative image of the fish bone in contact with the first duodenal portion and embedded in the liver parenchyma.



**Figure 3.** Full image of 3 cm long fishbone.

## Key Points:

- There are several cases of liver abscesses caused by the ingestion of a foreign body, especially in the elderly.
- The most frequent mechanism of origin is a gastric perforation by a fish bone that can migrate through the digestive tract to the liver parenchyma.
- In this context, the abscess is most often located in the left hepatic lobe.
- Definitive treatment includes drainage of the abscess and removal of the foreign body. If the foreign body is not removed, treatment failure is common.
- Minimally invasive surgery is the first alternative. An endoscopic approach is also possible in foreign bodies with intraluminal location.

# 第5例

Case Reports > Prague Med Rep. 2024;125(3):273-278. doi: 10.14712/23362936.2024.25.

## Ruptured Liver Abscess Post Severe COVID-19 Infection: A Case Report

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- A 54-year-old man developed sudden onset of the right hypochondriac and epigastric pain on day 22 post-COVID-19 infection. The nature of pain was described as colicky and radiated to the back, associated with vomiting and also loss of appetite. He did not have a history of liver disease or other systemic illnesses. He was not vaccinated with the COVID-19 vaccine prior to the infection. Initially, he was admitted to Covid Center Hospital before being transferred to our HOSPITAL for further management.

- During the transfer, the patient required respiratory support to maintain the oxygen requirement. He also completed the steroid regime for COVID-19 treatment for two weeks before the transfer.

# Physical and lab findings

- On examination, there was tenderness at the right hypochondriac and epigastric region. Complete blood count showed a high total white count ( $29.2 \times 10^9/l$ ).
- Hypoalbuminemia features which were albumin 22 g/l,
- total bilirubin 42 umol/l, alkaline phosphatase (ALP) 4.37 ukat/l, alanine transaminase (ALT) 2.76 ukat/l, and aspartate transaminase (AST) 0.65 ukat/l.
- The C-reactive protein (CRP) also was on the higher side (151.0 mg/l).

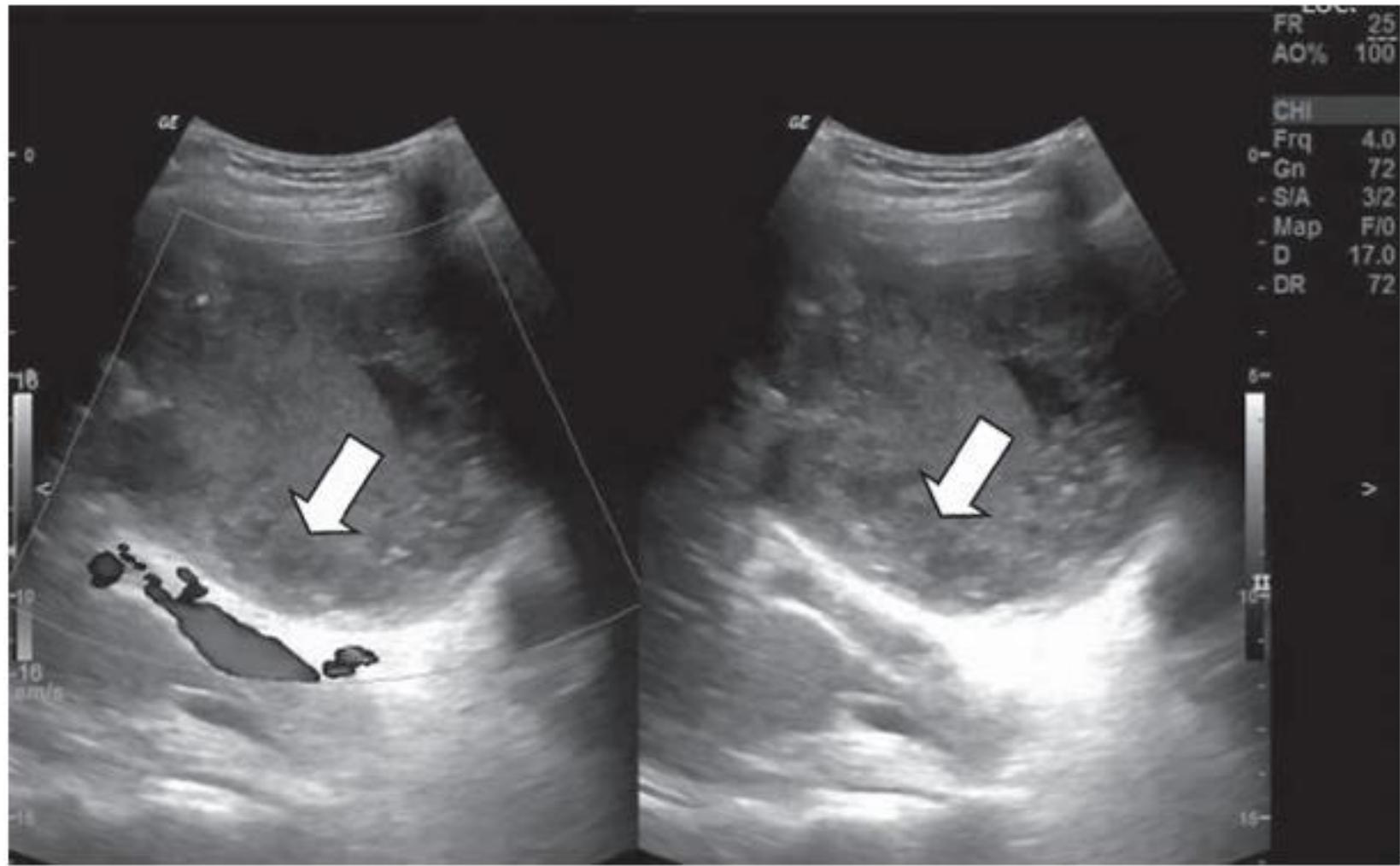


Figure 1 – Ultrasound hepatobiliary-hypoechoic lesion at segment V (arrows). Presence of echogenic and internal debris within with minimal peri splenic free fluid.

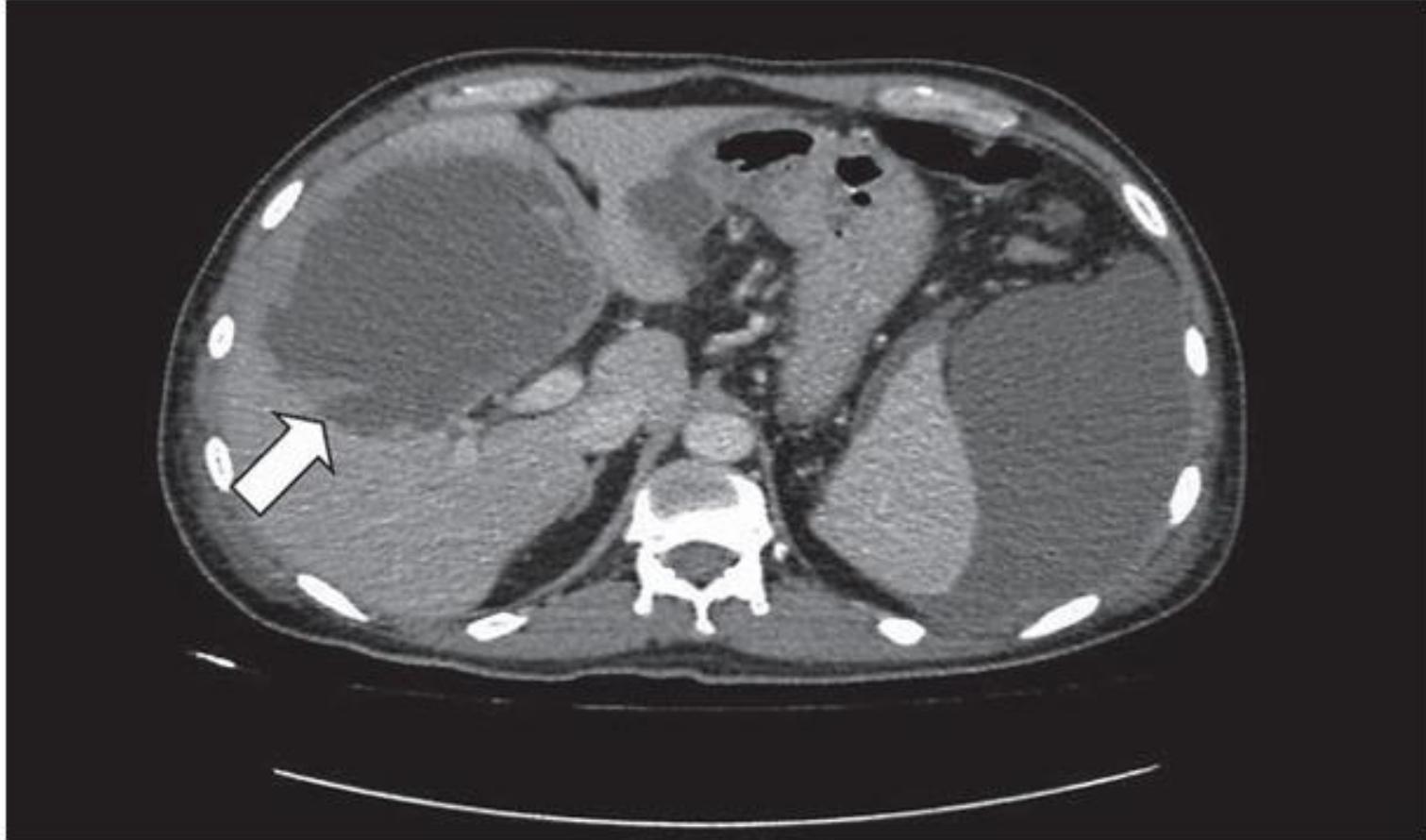


Figure 2 – Computed tomography liver 4 phases revealed a well-defined lobulated hypodense lesion with no significant enhancement in the right lobe of the liver measuring approximately  $11 \times 9 \times 10.4$  cm (arrow).

下一步呢

- A Continue medical treatment with antibiotics
- B.Surgical drainage
- C. Percutaneous drainage

- Given the patient's symptoms and ongoing infection in the setting of post COVID-19 infection, percutaneous drainage under ultrasound guidance was done. About 800 ml thick, exudative and yellowish pus was drained out during the procedure. An immediate start of intravenous meropenem during his stay in the ward was indicated. Neither pus nor blood cultures showed any growth. No acid-fast bacteria (AFB) were seen in direct smears. A serial hepatobiliary ultrasound done post-drainage showed improvement in terms of the reduced size of the collections and resolution of the left subphrenic collection. The patient was discharged after two weeks. He was well during the follow-up at the surgical outpatient clinic.

# 結論(2025..06.06)

- 1. 發生肝膿瘍的原因很多，最多見的是化膿性肝膿瘍pLA,由KP引起
- 2. 必須小心求證由哪個部位引起感染.
- 3. 小心飲水是否乾淨
- 4. 夏天到了噴水壘遊樂的地方最危險，如果沒有好好管理使用氯氣消毒，噴水壘非常非常危險千萬不要去
- 5. 魚骨頭也是另一個危險發生肝膿瘍的機會