

Case 344

微小髄膜結節

Septic emboli(敗血症性細菌塞栓)

或いは

Minute meningothelial nodule

微小髄膜結節

20代 男性

【主訴】発熱、咽頭痛、嘔気

【現病歴】

発熱、咽頭痛、悪寒、倦怠感出現 手持ちのロキソニン、ペラックで経過を観ていた

最高体温**39.9°C**となる 症状のピークは昨日と
食欲ない 排尿は出ている

【既往歴】特記なし

【内服薬】なし

【現症】

意識清明 受け答えはしっかりできる

BT : 37.5°C

BP : 66/32mmHg、HR : 90/min台

BS : clear、no rale

【検査所見】

血液検査：

アルブミン 3.2 g/dl L AST 90 U/l H ALT 75 U/l H γ -GT 128 U/l H

ナトリウム 137 mEq/l L カリウム 3.2 mEq/l L クレアチニン 2.10 mg/dl H

CRP(定量) **11.01 mg/dl H** プロカルシトニン **96.60 ng/ml H**

白血球数 $8.56 \times 10^3/\mu\text{l}$ 血小板数 $119 \times 10^3/\mu\text{l L}$

好中球 92.1 % H Dダイマー **41.1 $\mu\text{g/ml H}$**

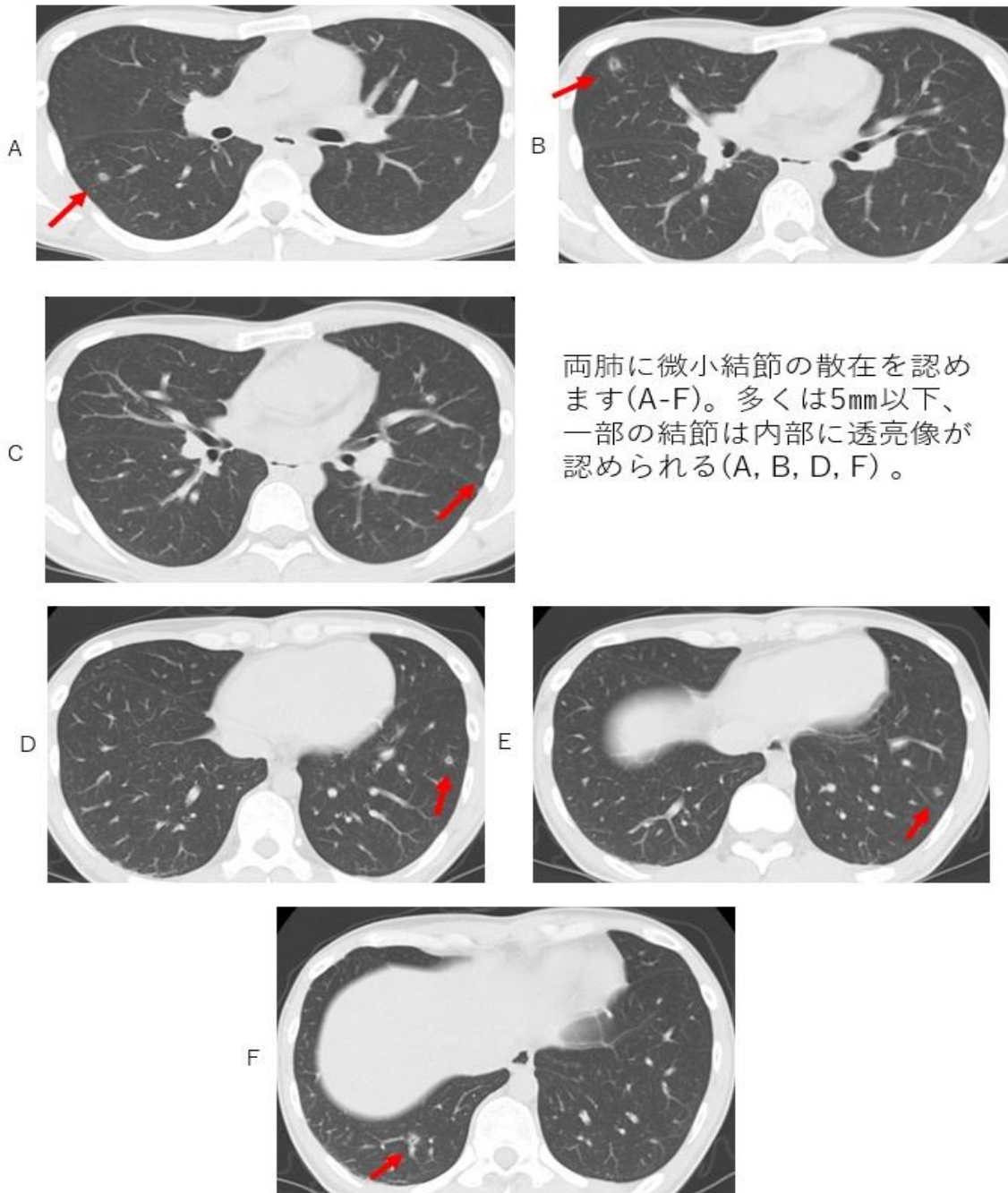
血培 PMに2本発育 (2/2) **グラム陽性球菌 (連鎖状)** ⇒ 遺伝子同定実施

胸腹部CT：

両側肺に厚壁性の空洞性病変が多発しています。

症状からは**septic emboli**や多発血管炎性肉芽腫症を疑います。

鑑別として、クリプトコッカスや転移性肺癌が上がります。



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所見の後にもしかして

Minute meningothelial nodule(微小髄膜結節) の可能性は

Minute meningothelial nodule 微小髄膜結節

- Minute meningothelial nodule (微小髄膜結節)
- World Health Organization (WHO) International Histological Classification of Tumor 第3版
- 文献的にPulmonary Meningotheliomatosis (髄膜様結節)と報告されていることが多い

Minute meningothelial nodule (微小髄膜結節)

- 肺の微小結節の多発
- 微小結節の一部の内部に透亮像(空洞様)
- 転移、粟粒結核、細菌塞栓(敗血症)との鑑別
- サルコイドーシス、真菌感染も鑑別に入る

Minute meningothelial nodule (微小髄膜結節) は髄膜腫からの転移？

- 4例中3例に脳に髄膜腫
- 偶然的に発見、組織診或いは外科切除で確定診断
- 過去文献で44例中4例に髄膜腫の報告

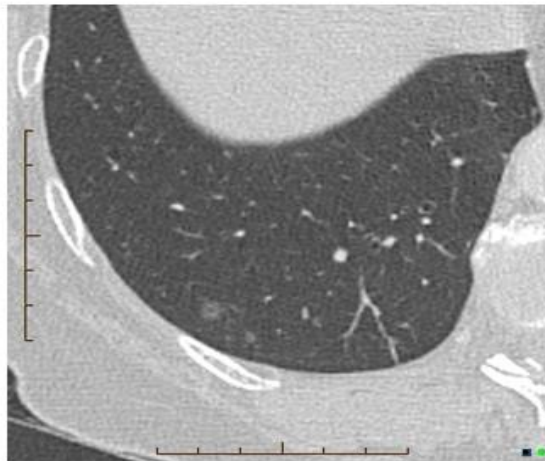
Melocchi L, et al. Diffuse Pulmonary Meningotheliomatosis: Clinic-Pathologic Entity or Indolent Metastasis from Meningioma (or Both)?

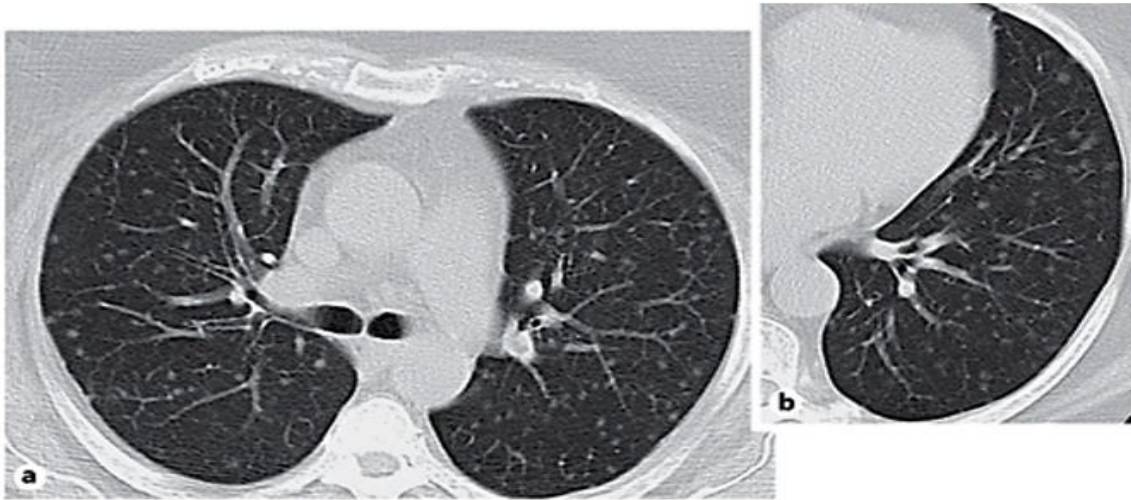
Diagnostics (Basel). 2023 Feb; 13(4): 802

Minute meningotheelial nodule (微小髄膜結節)

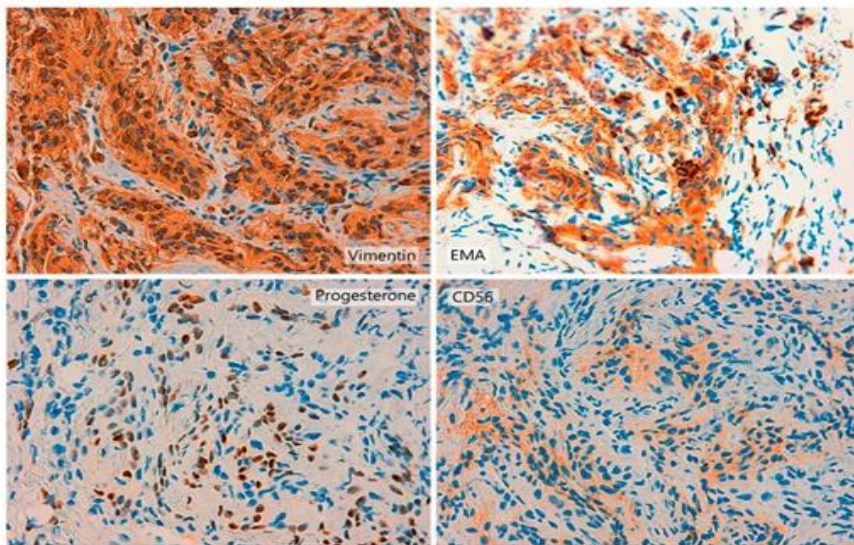
- 両肺に1~3mmの小結節の散在
- ガラス状の結節で5mmまで
- 肺小葉の構造にとらわれずアトランダムに存在
- 女性に多い

Cheerios sign



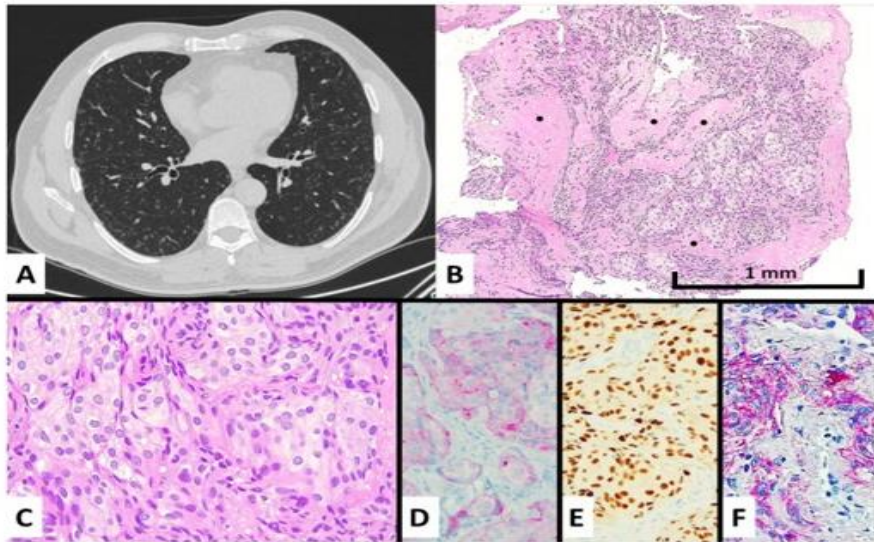


CT scan of the chest showing diffuse multiple minute nodules distributed randomly throughout both lungs. b Magnified transaxial image of the lower left lung showing a clearer image of central lucency in several of the micronodules.



[Am J Case Rep. 2020; 21: e926172-1–e926172-4.](#)

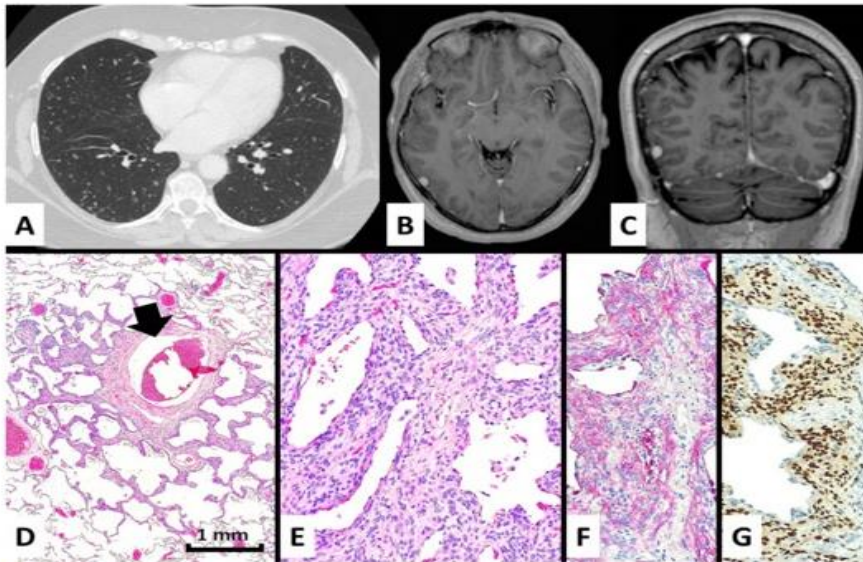
Proliferation of epithelioid cells with oval monomorphic nuclei, without atypia or mitosis, arranged in irregular clusters. Immunohistochemical staining was positive for vimentin, EMA, progesterone receptors, and CD56. These findings are consistent with a diagnosis of pulmonary meningotheliomatosis.



Melocchi L, et al. Diffuse Pulmonary Meningotheliomatosis: Clinic-Pathologic Entity or Indolent Metastasis from Meningioma (or Both)? *Diagnostics* (Basel). 2023 Feb; 13(4): 802

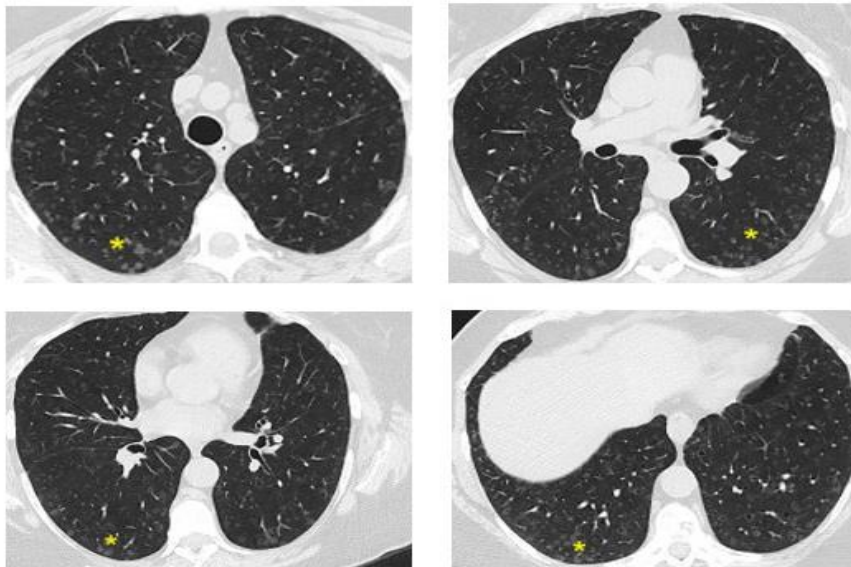
Case #1 manifested with an incidental discovery of diffuse bilateral micronodules also showing ground glass appearance and central cavitation at chest CT scan (A) and spindled-to-epithelioid cell proliferation with intermingled fibrosis (see black dots) at transbronchial biopsy (B), hematoxylin-eosin magnification $\times 100$, consisting of bland-looking cells with moderate cytoplasm lacking mitotic figures (C), hematoxylin-eosin stain magnification $\times 200$. These cells showed a meningotheelial cell differentiation by expressing EMA at cytoplasmic level (D), immunohistochemistry magnification $\times 200$, progesterone receptors in the nuclei (E), immunohistochemistry magnification $\times 200$, CD56 in cytoplasm and membrane (F), and immunohistochemistry magnification $\times 200$.





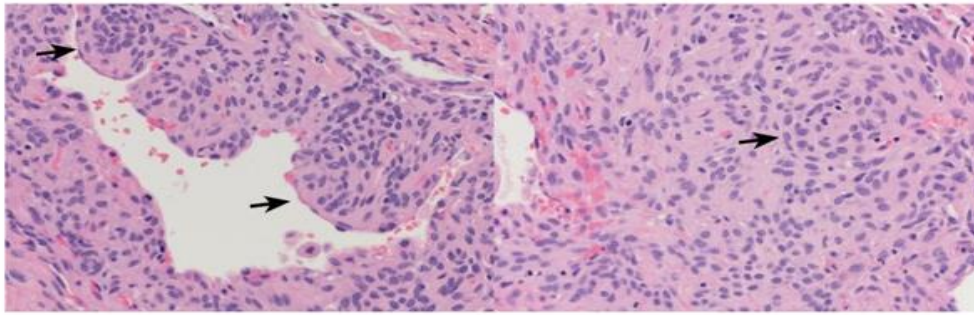
Melocchi L, et al. Diffuse Pulmonary Meningotheliomatosis: Clinic-Pathologic Entity or Indolent Metastasis from Meningioma (or Both)? *Diagnostics (Basel)*. 2023 Feb; 13(4): 802

In case #2, the patient presented with several bilateral micronodules with ground glass periphery and some cavitation at chest CT scan (A) and had a previous history of non-excised meningioma in the right frontal region (B,C). A surgical lung biopsy demonstrated a perivenular (black arrow) and irregular proliferation of meningothelial-like cells (D), hematoxylin-eosin magnification $\times 40$, growing and thickening the alveolar interstitium (E), hematoxylin-eosin stain magnification $\times 200$ and expressing EMA in the cytoplasm (F), immunohistochemistry magnification $\times 200$, and progesterone receptors in the nuclei (G), immunohistochemistry magnification $\times 200$.



High-resolution chest computed tomography showing innumerable diffuse small ground-glass nodules (asterisks), some of which demonstrate central cavitation.

Alkurashi AK, et al Diffuse Pulmonary Meningotheliomatosis: A Rare Lung Disease Presenting with Diffuse Ground-Glass Opacities and Cavitation. *Am J Case Rep*. 2020 Nov 9:21:e926172



Histologic sections showing multiple well-circumscribed interstitial meningothelial-like nodules (arrows) with the predominant perivenular distribution. The nodules are composed of oval-to-spindle cells with indistinct cellular borders and uniform oval nuclei. Whirling of the tumor cells can also be appreciated. Overall, the morphologic features are consistent with diffuse pulmonary meningotheliomatosis. Alkurashi AK, et al Diffuse Pulmonary Meningotheliomatosis: A Rare Lung Disease Presenting with Diffuse Ground-Glass Opacities and Cavitation. Am J Case Rep. 2020 Nov 9:21:e926172

Minute meningothelial nodule (微小髄膜結節) 病理所見

- 類上皮細胞の増殖：組織学的に脳の髄膜腫と同一
- 肺胞隔壁の肥厚
類上皮細胞の増殖は反応性
- 内部の透亮像は肺胞腔の可能性