

IMSUT Hospital

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病理診断科

Department of Pathology

病理部

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Our mission

1. We provide an accurate and high-quality pathological diagnosis to the patient in this research hospital, The Institute of Medical Science, The University Of Tokyo.
2. Make diagnosis by morphological approach using microscope to the laboratory materials.

Overview

We study about the hematological malignancy and transplantation pathology. We emphasize many clinical cases and write case reports about human diseases. We also perform pathological and cytological diagnosis of many specimens submitted by various departments.

1. HHV8 negative effusion-based lymphoma has been adopted for the new WHO classification.

Effusion-based lymphoma is found in pleura or ascites and usually lack of evidence for nodular lesion. Conventional findings about EBL are bad clinical course and many patients are infected by HIV. However, some of Japanese patients were not infected HIV and good clinical course. We reported some case reports about EBL in Japan and are going to promote multi-institutional joint research in Japan. We therefore conducted a retrospective study of 95 patients with EBL, regardless of HHV8 status, in Japan. Of 69 patients with EBL tested for HHV8, a total of 64 were negative. The median age of patients with primary HHV8-negative EBL at diagnosis was 77 years (range, 57-98 years); all 58 tested patients were negative for HIV. Primary HHV8-negative EBL was most

commonly diagnosed in pleural effusion (77%). Expression of at least 1 pan B-cell antigen (CD19, CD20, or CD79a) was observed in all cases. According to the Hans algorithm, 30 of the 38 evaluated patients had nongerminal center B-cell (non-GCB) tumors. Epstein-Barr virus-encoded small RNA was positive in 6 of 45 patients. In 56 of 64 HHV8-negative patients, systemic therapy was initiated within 3 months after diagnosis. Cyclophosphamide, doxorubicin, vincristine, and prednisolone (CHOP) or CHOP-like regimens with or without rituximab (n = 48) were the most common primary treatments. The overall response and complete response rates were 95% and 73%, respectively. Three patients did not progress without systemic treatment for a median of 24 months. With a median 25-month follow-up, the 2-year overall survival and progression-free survival rates were 84.7% and 73.8%. Sixteen patients died; 12 were lym-

phoma-related deaths. Thus, most EBL cases in Japan are HHV8-negative and affect elderly patients. The non-GCB subtype is predominant. Overall, primary HHV8-negative EBL exhibits a favorable prognosis after anthracycline-based chemotherapy.

This disease concept has been adopted for the new WHO classification of hematolymphoid tumor.

2. Clear cell sarcoma can arise from Rosai Dorfman disease.

Histiocytic neoplasms (HNs) in adults have been reported to be associated with a high prevalence of coexisting haematological and solid malignancies. While a proportion of coexisting HNs and haematological malignancies share identical genetic alterations, the genetic association between HNs and solid malignancies has scarcely been reported. We report a case of Rosai-Dorfman disease (RDD) complicated by coexisting clear cell sarcoma (CCS). RDD is a rare HN. CCS is an ultra rare soft tissue sarcoma with a poor prognosis. Mutation analysis with whole-exome sequencing revealed six shared somatic alterations including NRAS p.G12S and TP53 c.559 + 1G>A in both the RDD and CCS tissue. This is the first evidence of a clonal relationship between RDD and solid malignancies using mutational analysis. We hypothesize that neural crest cells, which originate in CCS, are likely the common cells of origin for RDD and CCS. This

case helps to unravel the underlying clinicopathological mechanisms of increased association of solid malignancies in HNs.

3. Medical Activities

We have performed microscopic diagnosis of many pathological and cytological samples. We also provided immunohistochemical analysis and in situ hybridization in order to improve the diagnostic accuracy and decide the treatment.

Pathological diagnosis	n = 1678
Biopsy	n = 1045
Surgical resection	n = 317
Bone marrow aspiration	n = 205
Intraoperative diagnosis	n = 26
Consultation	n = 44
Other	n = 41
Immunohistochemistry	n = 392
Cytological diagnosis	n = 370
Autopsy	n = 2

4. Pathology Core Laboratory II

Pathology Core Laboratory II handles a large number of specimens, including mouse, cultured cells and human tissue samples collected at the IMSUT hospital. We have performed preparation of pathological specimen and pathological analysis (n = 150).

Publications

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7. Kiyoko Takane, Tingwei Cai, Rei Noguchi, Yoshimasa Gohda, Tsuneo Ikenoue, Kiyoshi Yamaguchi, **Yasunori Ota**, Tomomichi Kiyomatsu, Hideaki Yano, Masaki Fukuyo, Motoaki Seki, Rahmutulla Bahityar, Atsushi Kaneda, Yoichi Furukawa. Genome-wide analysis of DNA methylation in pseudomyxoma peritonei originated from appendiceal neoplasms. *Oncology*. 2024 Jan 23. doi: 10.1159/000536219. Online ahead of print. (2024)