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Short Communication

Solitary Fibrous Tissue in Tumors Pathology

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ABOUT THE STUDY

Solitary fibrous tissue is a rare growth of soft tissue cells that can form nearly anywhere in the body. The lining of the exterior of the lungs is where solitary fibrous tissue most frequently develops. There have also been reports of solitary fibrous tissue in the head and neck, breast, kidney, prostate, spinal cord, and other locations. The majority of solitary fibrous tissues are benign (non-cancerous), although cancerous solitary fibrous tissues do occasionally occur (malignant). Solitary fibrous tissue has a tendency to develop gradually, and symptoms may not appear until they are very large [1].

Diagnosis

Most solitary fibrous tissue is noncancerous, but in uncommon instances, solitary fibrous tissue may be cancerous. Solitary fibrous tissue generally tends to grow slowly and may not cause signs and symptoms until it becomes very large. A doctor can also take a small piece of tissue for examination beneath a microscope to confirm a suspected solitary fibrous tissue. An experienced pathologist can verify the analysis and determine whether the tumour is cancerous [2].

Treatment

In most cases, surgical treatment is the only remedy. Surgeons remove the tumour and a small margin of wholesome tissue that surrounds it. The kind of operation used to cast off a solitary fibrous tissue depends upon where the tissue occurs. Sometimes, radiation therapy is used before surgery to reduce the tumor. This will increase the possibility that the entire tumour may be removed. Chemotherapy is the other alternative treatment, especially if the tumour has spread to other parts.

SFT was classified as a fibroblast tumour by the WHO tumour classification criteria for soft and bone tissues in 2013. As an interstitial-derived tumor, the aetiology of the SFT is unclear. There are no known genetic, environmental, or predisposing risk factors, and it is not linked to asbestos exposure, perhaps because SFT is not mesothelioma. However, it is currently believed that SFT is a translocation related tumor, which is consistent with the fusion of the NAB2-STAT6 gene caused by repeated intrachromosomal rearrangement of the 12q chromosome, and this translocation may be the main factor of its pathogenesis. Most SFT originated from the pleura, especially the visceral pleura, a few of which occurred outside the pleura and rarely in the lung. The incidence of SFTP was less than 5% of all pleural tumors. SFT occurs in connective tissue, which is unrelated to age, so there is no age difference in the onset of SFT. Some scholars summarised 378 cases of SFTP reported in Chinese and English [3]. They found that 195 cases were male, 183 cases were female, and the age span of onset was 6–81 years. The disease usually occurs in middle age, with no significant gender difference. The functions of the pleura and endocrine systems are not fully independent. Occasionally, SFTP can induce paraneoplastic syndromes, such as hypertrophic osteoarthropathy and hypoinsulinemic hypoglycemia caused by ectopic secretion of insulin-like growth factor II, which is known as Dodge Potter syndrome (DPS).

Hypertrophic osteoarthropathy, known as Pierre-Marie-Bamberger syndrome, is characterised by clubbing of the fingers or toes caused by calcification of the bone surface and soft tissue. Also, the increase of human beta chorionic gonadotropin-releasing factor leads to gynecomastia, and cerebellar degeneration is also occasionally seen. Distant metastasis of SFTP is very rare, but it has been reported in the pancreas, lung, and thyroid. Similarly, malignant transformation occurs occasionally, hence the patient has no paraneoplastic syndrome. [4].

CONCLUSION

An uncommon type of spindle cell tumour called SFT is formed from mesenchymal cells. There are no known environmental, genetic, or inherent risk factors for it. The NAB2-STAT6 gene fusion brought on by repeated rearrangements of the 12q chromosome may be associated with SFT as a translocation-related malignancy. It occurs there the most frequently. Slow growth and a persistent, painless lump were the clinical signs of SFTP. As the tumour grows, compression symptoms including coughing, chest pain, chest discomfort, and dyspnea will also worsen. The pleural effusion is a rare condition, and the cytological results are negative. Rarely, SFTP can cause malignant transformation, distant metastases, and paraneoplastic disease.

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