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Editorial

Chondrosarcoma Treatment: A Clinical Approach

Aakshi Kainthola*

Department of Life Sciences, Graphic Era Deemed to be University, Dehradun, India

EDITORIAL NOTE

Chondrosarcomas are a diverse group of tumours that have one thing in common: the formation of cartilage matrix by tumour cells. After myeloma and osteosarcoma, chondrosarcoma is the third most frequent primary cancer of the bone. The majority of these tumours grow slowly and seldom spread, and after proper surgery, they have a good prognosis. They are thought to be relatively chemo and radiation-resistant due to their extracellular matrix, low percentage of proliferating cells, and limited vascularity. For intermediate- to high-grade cancers, wide surgical excision remains the best option. The clinical challenge for unresectable or metastatic disease is to prevent recurrence and discover better treatment alternatives. Treatment decisions should be decided by a team consisting of an experienced pathologist, radiologist, medical oncologist etc based on the radiological and histological classification in relation to clinical symptoms, medical history, and performance status.

Subtypes of Chondrosarcoma those are rare

Dedifferentiated chondrosarcoma is characterised by a strong junction between a high-grade noncartilaginous sarcoma and a (typically low-grade) malignant cartilage-forming tumour. The tumor's prognosis is bleak. Both components of dedifferentiated chondrosarcoma exhibit identical genetic aberrations, with additional genetic alterations in the anaplastic component, indicating a single progenitor cell with early diversion of the two components. Both components of dedifferentiated chondrosarcoma have the same genetic aberrations, with the anaplastic component having additional genetic abnormalities, indicating a single progenitor cell with early diversion of the two components.

Mesenchymal chondrosarcoma is a highly malignant lesion that can develop in the bone and soft tissue of relatively young people and is marked by varying quantities of developed cartilage mixed with undifferentiated tiny round cells. In two of the patients, a chromosomal aberration called der (13; 21) (q10; q10) was discovered. Expression of the antiapoptotic BCL2, Protein Kinase C (PKC), and Platelet-Derived Growth Factor Receptor (PDGFR) pathways were observed in three cases, pointing to potential therapeutic targets such as interferon and ciprofloxacin decreasing PKC activity or imatinib blocking PDGFR signalling.

Clear cell chondrosarcoma is a low-grade malignant tumour characterised by clear, empty cytoplasms in tumour cells. Metastases are uncommon; however, they can occur up to 24 years after the first diagnosis, necessitating long-term monitoring. Extra copies of chromosome 20 and deletion or rearrangements of 9p may be recurring, according to a cytogenetic investigation of four patients. PTHLH, PDGF, IHH, Runt related transcription factor 2, and matrix metalloproteinase were all found to be expressed, pointing to possible targets for future therapy.

Correspondence to: Aakshi Kainthola, Department of Life Sciences, Graphic Era Deemed to be University, Dehradun, India, E-mail: aakshi.kan7@gmail.com

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