No treatment exists as yet for osteoblastic bone metastases in prostate cancer.

Melatonin has shown antiproliferative and antimetastatic activities, but has not yet been shown to be active in osteoblastic bone lesions of prostate cancer. A study investigation reveal that melatonin concentration-dependently decreases the migratory and invasive abilities of two osteoblastic prostate cancer cell lines by inhibiting FAK, c-Src and NF-κB transcriptional activity via the melatonin MT1 receptor, which effectively inhibits integrin α2 β1 expression. Melatonin therapy appears to offer therapeutic possibilities for reducing osteoblastic bone lesions in prostate cancer [1)]

Future work should include building a predictive model that accurately determines survival in patients with metastatic disease, because this would guide the physician in devising the most appropriate treatment plan for each patient [2)]

Fifteen episodes of spinal cord compression were treated surgically. Other treatments included hormonal therapy (163 episodes), chemotherapy (70 episodes), and radiation therapy (103 episodes). Osteolytic lesions were observed alone and in combination with osteoblastic pattern in 18% and 26% of episodes, respectively. Bone scan was the most effective screening procedure of vertebral involvement, and MRI effectively showed epidural involvement. Overall treatment led to improvements in pain and motor impairment in 77% and 50% of patients, respectively. However, clinical episodes were recurrent (1.78 episodes per patient; range, 1-8). Median survival after vertebral metastasis episode was 14 months compared with only 4 months after surgery for spinal cord compression. Vertebral metastases strongly alter quality of life in patients with prostate cancer. Pain and neurologic complications are the major problems. Careful early screening with bone scan and MRI may help to define better treatment strategy. However, further prospective studies of clinical management are needed to determine the optimal timing of radiation therapy, medical treatments, and surgery [3)].

1)
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