



POSNA

The Core Curriculum

Osteochondroma

Objectives

1. Describe the pathology of osteochondroma (exostosis)
2. Describe the location and gross appearance of typical osteochondromata
3. Describe the radiographic appearance of osteochondromata
4. Discuss indications for removal of osteochondromata
5. Discuss the potential for malignant degeneration of solitary osteochondromata

Discussion

The most common bone tumor is an osteochondroma. Accounting for nearly half of all bone tumors. The origin is unclear, but they appear to result from some type of insult to the periphery of the growth plate, as a result of which the growth is directed more laterally than normally. There are two general categories of osteochondromata, sessile and pedunculated, depending on the size of the base. Both types are orientated away from the growth plate. The radiographic appearance is so characteristic of an osteochondroma that further imaging studies are unnecessary. The cortex of the underlying bone opens to join the cortex of the osteochondroma. The distal bony of the osteochondroma is capped by cartilage, which is felt to represent that part of the growth plate rendered asunder from the rest of the plate, microscopically the cartilage cap does resemble a growth plate. The cartilage cap is <1cm in thickness. The metaphyses of long bones, especially about the knee, are most often affected. A myriad of symptoms have been reported from osteochondromata appearing in unusual locations. Problems with osteochondromata about the knee are symptomatic (under the pes anserinus), vascular (popliteal fossa) or related to peroneal nerve pressure (posterolateral). Lesions in these parts of the knee probably warrant excision if they are large enough to impinge on either the vessels or the peroneal nerve. The process of excision is straightforward, recurrence is not a problem. The entire exostosis should be excised if possible, although near the peroneal nerve, this may not be feasible without unwise retraction of the nerve. The risk of malignancy for a solitary osteochondroma is very low. The entity of multiple hereditary exostosis is discussed under that topic. Radiation induced osteochondromata may very well be more inclined toward malignant degeneration than the usual solitary osteochondroma.

References

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