The Daily Dose: Study Tips for Exam and Board Preparation

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The Daily Dose: physalliferous and xanthoma cells FEEDBACK

Regarding the cases:

- chordoma
- xanthoma, intraosseous

The respondent(s) provided the following diagnoses:

"typical lesion with chondromyxoid features"
rule out:
extraskeletal chondrosarcoma, low-grade -- S100
chordoma -- S100, EMA, CAM5.2 and brachyury
mucinous adenocarcinoma, metastatic
myoepithelioma -- cytokeratin, S100

"intraosseous lesion with fibrous tissue and xanthoma cells"
rule out :
Langerhans cell histiocytosis: IHC CDa1, S100
Rosai Dorfman disease: CD68 clinical correlation
Erdheim Chester disease: CD68 clinical correlation

The following feedback was provided:

CASE 5A (chordoma)

I would encourage a move toward a definitive diagnosis; a reasonable diagnosis (given that there were many physalliferous or foamy cells in the specimen, in this location) might be:

"atypical lesion with chondromyxoid features, favor chordoma"

CASE 5B (xanthoma, intraosseous)

"intraosseous lesion with fibrous tissue and xanthoma cells" may be too nonspecific, consider "histiocytic proliferation" or "histiocytic process" (better, in my opinion, than the term xanthoma cells)

I have the following additional questions, just to stimulate the thought process:

- if there is suspicion for metastatic adenocarcinoma, what types of IHC stains might be considered?
- would a cytokeratin and S100 alone be enough to characterize a myoepithelial lesion in this area (it's an unusual site for this tumor)
- which cytokeratins would be most useful for defining a basal or myoepithelial cell origin

For any histiocytic lesion, I would suggest familiarity with CD163 as an additional potential marker for histiocytes; there's literature to suggest that CD163 is more specific and awareness of both CD68 and CD163 as histiocyte markers broadens the panel.

Similarly, familiarity with CD207 (Langerin) as a more specific marker for Langerhans cells (versus CD1a) is useful; either is acceptable as a marker for Langerhans cells, but there's value in having the broader panel of stains in the toolkit.

Feedback on the list of lesions with xanthoma cells provided:

1. LCH
2. RDD
3. Benign fibrous histiocytosis (soft tissue)
4. Juvenile xanthogranuloma (soft tissue)
5. odontogenic cyst (cystic lining)

First, spell all names out; presume that the reader is unfamiliar with the abbreviations.

Second, take care with spelling and nomenclature; the lesion is "benign fibrous histiocytoma" and not "benign fibrous histiocytosis"

OPINION: I would discount suggestion #5 (odontogenic cyst); it's true that odontogenic cysts and tumors may have reactive histiocytes, but in this context and with the histology, the focus (for this exercise) was on true lesions of histiocytic origin, which could include the first four lesions mentioned, as well as lipid storage diseases and reticuloendothelioses (like Gaucher Disease, Tay Sachs et.al.) so a brief read on those in one of the texts would be worthwhile.