Cytology Histology Correlation confirms an unusual variant of a common malignancy

A potential pitfall to be aware of in head and neck FNAC practice when sampling is limited

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Clinical information

- 70-year-old man presents with a mass in left lateral zygoma.
- On U/S there was a hypoechoic lesion in the left parotid 1.3 x 0.9 cm, and a further probable lymph node 0.5 cm in the left zygomatic area.
- Following informed consent an FNA (Without ROSE) was taken from the left parotid lesion



Giemsa











Cytology findings

- Cellular, malignant aspirate
- Loosely cohesive groups of pleomorphic epithelioid cells
- The clusters have rounded borders with some cells showing vacuolated cytoplasm, which could be mistaken for glandular malignancy
- Malignant undifferentiated sample pending IHC
- Unfortunately, the clot preparation did not contain tumour cells



Important clinical correlation

- Excision of a lump on the ipsilateral forehead 1 year previous, histology reported as poorly differentiated squamous carcinoma (SCC)
- Review of histology revealed this was an unusual subtype of SCC, containing cells identical to those seen in the cytology preparation



Previous histology reviewed. Note gland-like spaces



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Previous histology reviewed. Note gland-like spaces



Previous histology reviewed. Note dyscohesive rounded tumour cells





Previous histology reviewed. Perineural invasion





CEA was negative (excluding true glandular differentiation); note sweat gland +ve control





CK5 (left) and p40 (right) both diffusely positive in keeping with SCC





E-cadherin aberrant loss; note sweat gland +ve control





Conclusion from histology review

- Similarity of the cells in the previous ipsilateral forehead SCC to the cells in the parotid FNA convinced us we were dealing with a cutaneous metastasis from this skin primary
- IHC showed the forehead SCC was positive for CK5 and p40 and lacked CEA showing the gland-like features were pseudoglandular spaces as are classically seen in the acantholytic subtype of SCC
- Loss of E-cadherin has been previously reported in poorly differentiated SCC particularly the acantholytic subtype and likely accounts for the poorly cohesive morphological features seen in histological and cytological preparations
- Acantholytic SCC can resemble adenocarcinoma (including signet ring carcinoma) or even angiosarcoma histologically and cytologically therefore awareness of this potential pitfall for the cytologist is encouraged



Clinical outcome

- At ENT MDT review confirmation of a skin primary was recorded
- Further imaging to investigate another primary was not necessary
- Follow up with the skin MDT with consideration of postoperative radiotherapy was decided



References

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