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2015 GIPAM RECOMMENDATIONS

REVIEW

Health Technology Assessment: introducing a vacuum-based preservation system for biological materials in the anatomic pathology workflow

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Introduction. The objective of this work is to assess the implementation of a newly introduced medical equipment technology for the vacuum-based preservation of biological materials within an Anatomic Pathology service.
Methods. The approach selected for the analysis is the Health Technology Assessment (HTA), a comprehensive evaluation method based on relevant scientific evidence and designed to support healthcare decision makers in purchasing, replacing or disposing of technologies. The analysis focused on specific domains such as Technology, Organization, Safety and Economy.
Results. The study proves that the use of such technology ensures the biological specimen to be suitably preserved (up to 72 hours), both reducing the amount of fixative being employed in the diagnostic process (30% to 55%) and resulting, in the particular context under examination, in savings of 93%.
Discussion. The HTA reported no significant drawbacks related to the use of the technology being examined. Nonetheless, the workflow for managing the transfer of biological materials from the Operating Room to the Anatomic Pathology department needs to be redefined – in terms of handling, processing, storage and disposal. Other elements concerned the monitoring of storage temperature, fresh tissue handling and especially fixative amount reduction, which positively impacts on the operators' safety with regard to chemical hazards.

ORIGINAL ARTICLE

Ependymoma with diffuse signet-ring features: report of a case and review of the literature

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Signet-ring cell ependymoma is a rare variant of ependymoma with only seven cases described in literature. Biological behavior and prognosis of this entity are not well-known until now. We present a case of a 49-year-old female with a history of headache and gait instability. Magnetic resonance imaging showed an upper cervical tumor with cystic component and mural nodule. The patient underwent surgery. Microscopically some cells displayed an eccentric nucleus compressed to the periphery by vacuolated cytoplasm. Perivascular pseudorosettes and ependymal rosettes were seen only focally. The cells were positive for glial fibrillary acidic protein and epithelial membrane antigen. The diagnosis was ependymoma with diffuse signet-ring features, grade II according to the World Health Organization. It may be difficult to diagnose this unusual variant of ependymoma especially on small biopsies or frozen sections. A complete examination of the specimen is recommended with immunohistochemical confirmation to rule out potential morphologic mimics, such as metastatic adenocarcinomas and gliomas in the differential diagnosis.

CASE REPORTS

Cellular fibroma in the Douglas cavity, mimicking a malignant neoplasia: fibroma, fibrosarcoma or mitotically active cellular fibroma?

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Introduction. Ovarian fibroma is a benign stromal tumour composed of spindle/ovoid fibroblastic cells producing collagen. Approximally 10% of fibromas are densely cellular with small amount of collagen. In these cases, if mild nuclear atypia is present, they are best addressed as cellular fibroma. However cellular fibroma may show a greater mitotic activity and therefore they should be referred as mitotically active cellular fibromas. Mostly benign, it is necessary to differentiate them from malignant tumours such as fibrosarcomas.
Methods. We report a case of an unusual presentation of mitotically active cellular fibroma, detected in the Douglas cavity of a young woman, with normal appearing ovaries and uterus, mimicking a malignant neoplasia clinically and on imaging. In fact abdominal mass may be associated with acute pain, resulting in clinical emergency, really difficult to distinguish from a frank malignancy, before surgical procedure.
Results. We described the clinical, radiological and pathological characteristics of our case and we make a comparison of what previously described in literature.
Discussion. The differential diagnosis among those entities is based on the microscopic features such as atypia and the number of mitoses. However, according to their dimensions, it may be necessary to generously sample these tumours and sometimes, to perform a panel of immunohistochemical markers, in order to make a correct diagnosis, establish the best treatment and the right follow-up. In fact, the prognosis is not certain, due to the possible recurrence, especially if not completely excised.

Type II congenital pulmonary airway malformation associated with intralobar pulmonary sequestration: report of a case and review of classification criteria

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Pulmonary congenital abnormalities are rare disorders including congenital pulmonary airway malformations (CPAM) and pulmonary sequestration (PS). CPAM is a lesion characterized by the presence of anomalous bronchiolar or acinar structures, variable in size, either cystic or not cystic. PS is generally

defined as nonfunctioning lung tissue that is not in normal continuity with the tracheobronchial tree and that derives its blood supply from systemic vessels. We describe a case of a baby girl with a very rare association between CPAM type 2 and intralobar pulmonary sequestration (IPS) focusing on the cystic lesions typical of CPAM and on the lymphatic and blood vessels. The cells lining the cysts often were positive for D2-40 (oncofetal protein M2A). Lymphatic endothelial cells, positive for D2-40, were widely present in the lung parenchyma and dilated lymphatic vessels were present also in the inter-alveolar septa. Moreover, we discuss the pathogenesis of CPAM and its classification criteria.

Neuroglial heterotopia of the scalp

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Heterotopic glial nodules of the scalp are non hereditary congenital malformations composed of mature brain tissue isolated from the cranial cavity. The majority of these lesions are found in the nasal region and occur rarely on the scalp. They are frequently diagnosed in newborn infants. However, they may rarely be found in adults. The pathogenesis of these lesions remains unknown. We describe the case of a temporal scalp nodule in a 50 year-old man. At the time of the excision, the mass was not associated with intracranial connection. Histological examination revealed neural tissue staining with S100-protein and the glial fibrillary acidic protein (GFAP).