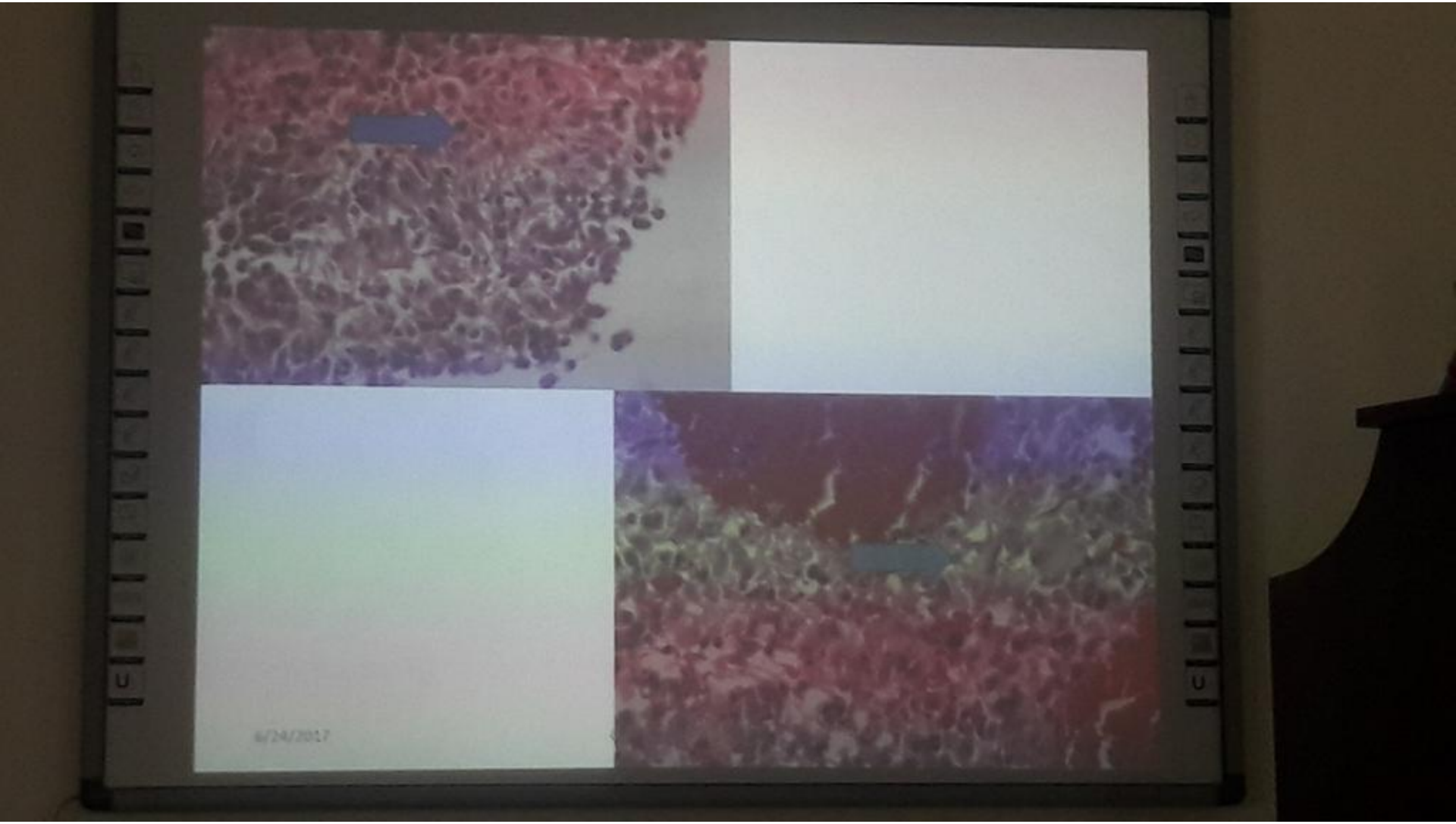
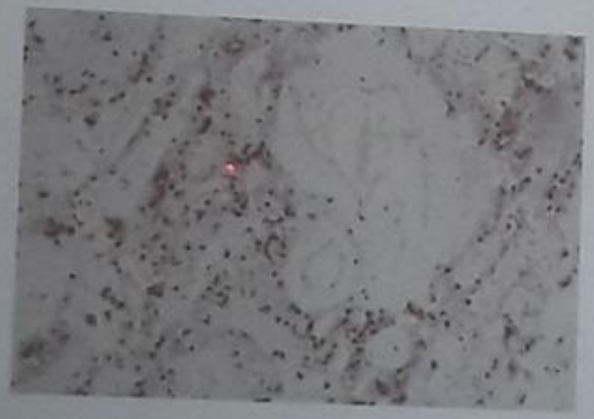
Photo Album

by Valarmathi Kadhirvel


6/24/2017

Ki 67



Negative stains

- EMA
- CK-AE
- CD34
- C KIT
- CD 45

Mixed Glioneuronal Tumors

Recently Described Entities

Mark A. Edgar, MD; Marc K. Rosenblum, MD

• *Context.*—Several distinctive mixed glioneuronal tumors that warrant recognition as clinicopathologic entities have been recently described by neuropathologists.

Objective.—To summarize important clinical, radiologic, and pathologic findings for 3 novel glioneuronal tumors (papillary glioneuronal tumor, rosetted glioneuronal tumor, and rosette-forming glioneuronal tumor of the fourth ventricle).

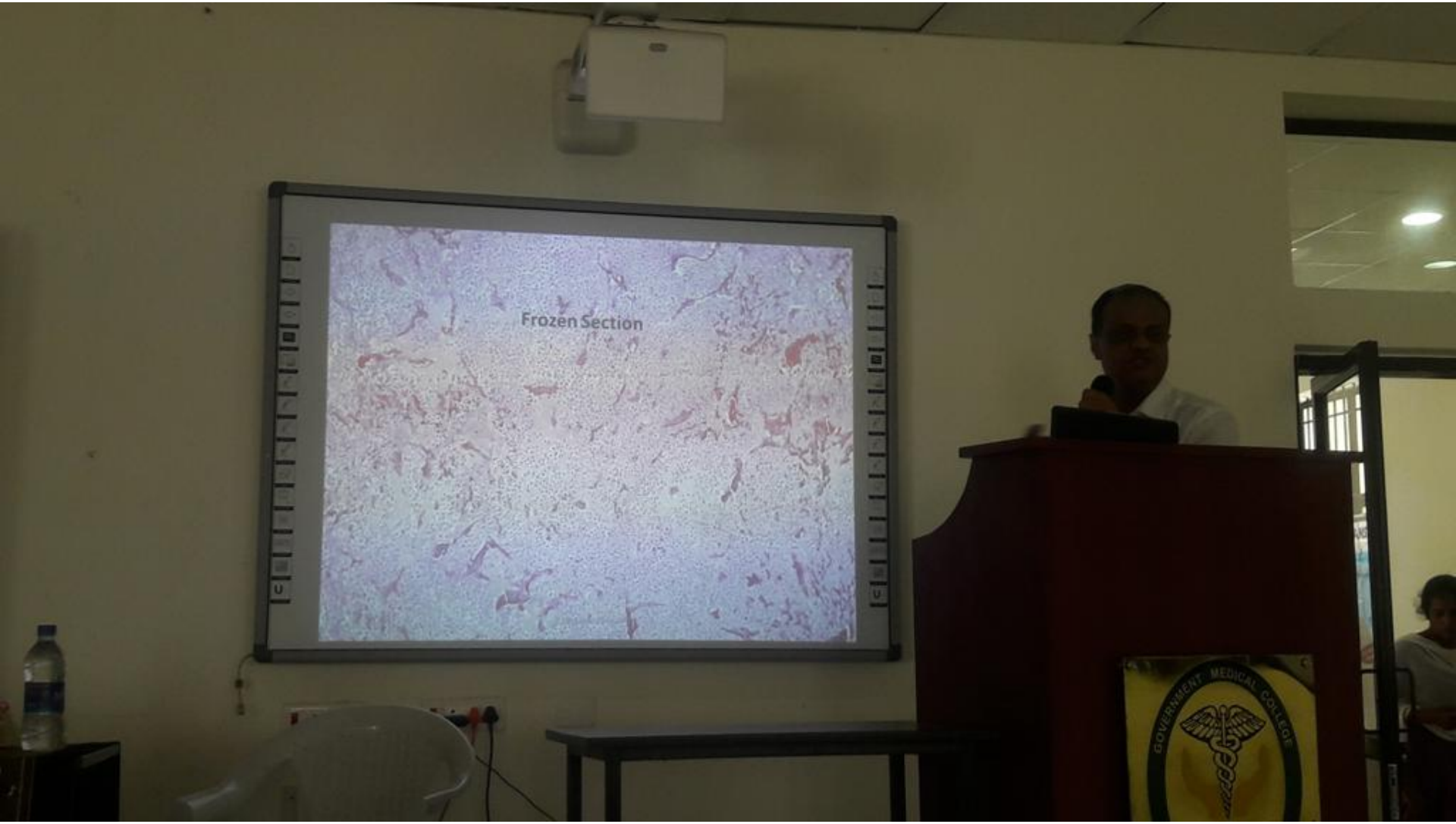
Data Sources.—Recent reports in the pathology literature and the authors' experience with mixed glioneuronal tumors at a major cancer center.

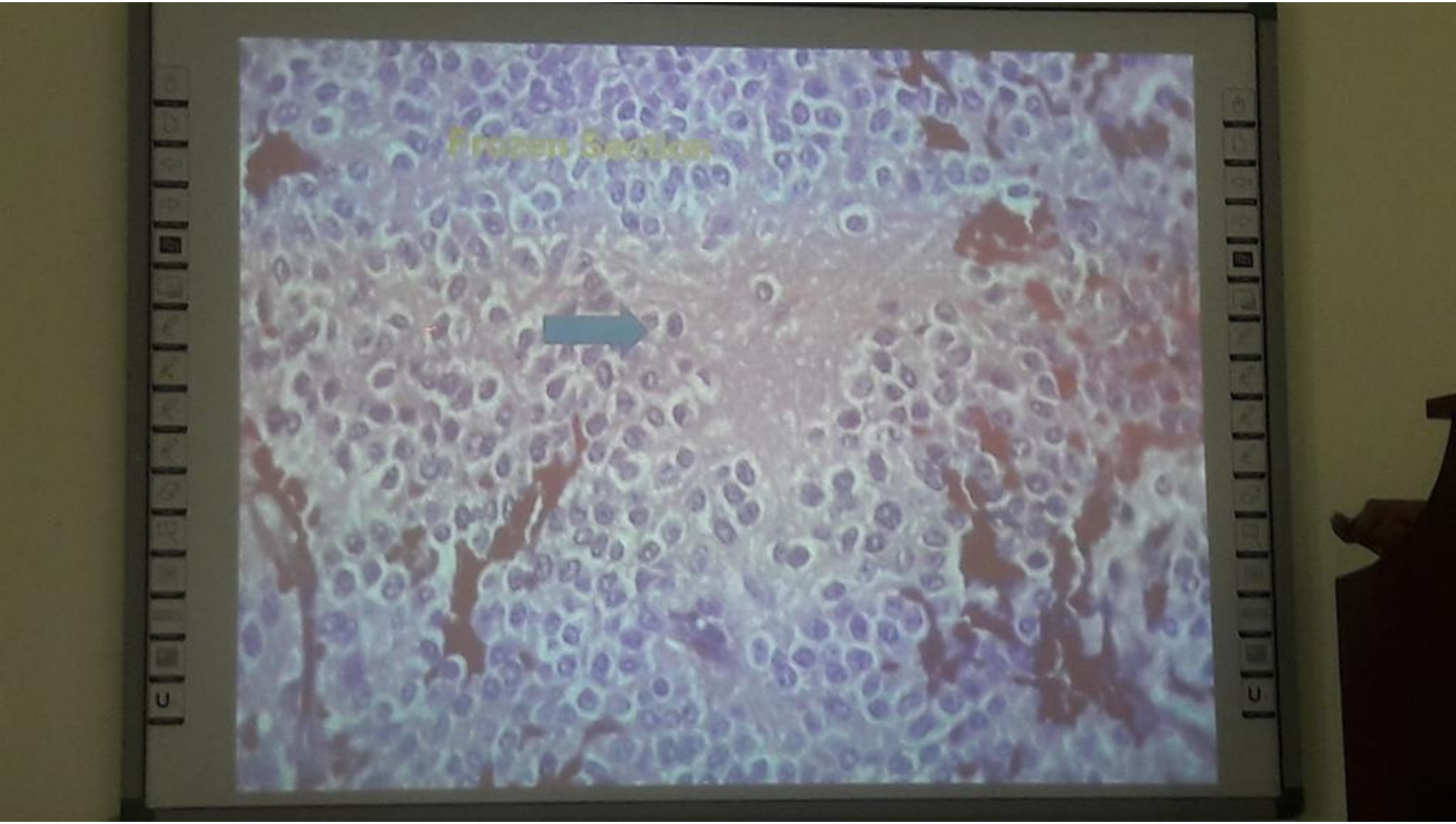
Conclusions.—Histologic features enabling recognition of these recently described glioneuronal tumors are presented along with remarks concerning the classification of mixed neuronal and glial tumors exhibiting unconventional appearances.

(*Arch Pathol Lab Med.* 2007;131:228–233)

Histologically, the most characteristic and striking feature of this tumor is the presence of gliovascular papillae (more accurately, pseudopapillae) composed of a hyalinized blood vessel upon which one or more layers of astrocytic cells are anchored, usually without the formation of radial, tapering cytoplasmic processes of the type seen in ependymal pseudorosettes (Figure 1). These cells lack cytologic atypia and label with glial fibrillary acidic protein (GFAP) and S100 protein, but not neuronal antigens (Figure 2). In contrast, the interpapillary space contains variable numbers of cells with neuronal nuclear features (including speckled chromatin and small nucleoli) which range in size from small, round neurocytes with clear or palely eosinophilic cytoplasm, through intermediate size "ganglioid" cells, to mature ganglion cells (Figures 3 and

The practical problem of classifying mixed glioneuronal neoplasms extends beyond recognition of distinctive examples such as those described above. Pathologists may occasionally encounter cases of histologically typical glioblastoma which show limited immunostaining for a single neuronal marker, usually synaptophysin. In this setting, there is no convincing evidence to suggest that such tumors will behave differently from conventional glioblastoma, and designation of such lesions as mixed glioneuronal neoplasms is not justified in our view. However, there are occasional tumors which combine high-grade astrocytic elements with small cell components that label for neuronal antigens and which also show ultrastructural evidence of neuronal differentiation. Separation of such tumors from conventional glioblastoma may be worthwhile, especially given that some examples show clinical progression more akin to small cell embryonal tumors with


Frozen Section
GOVERNMENT MEDICAL COLLEGE


Frozen Section


MEDICAL


GFAP
EMA

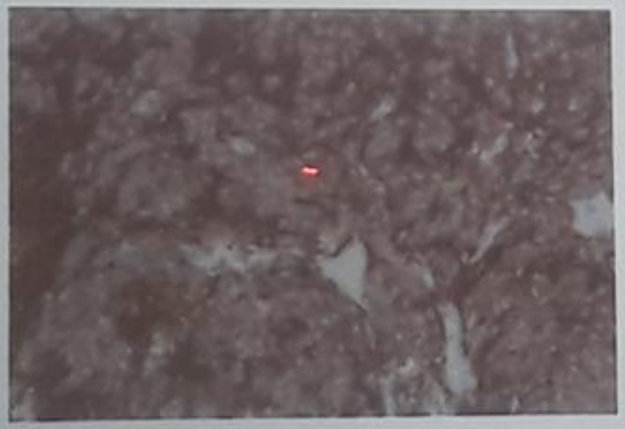
NSE

NSE

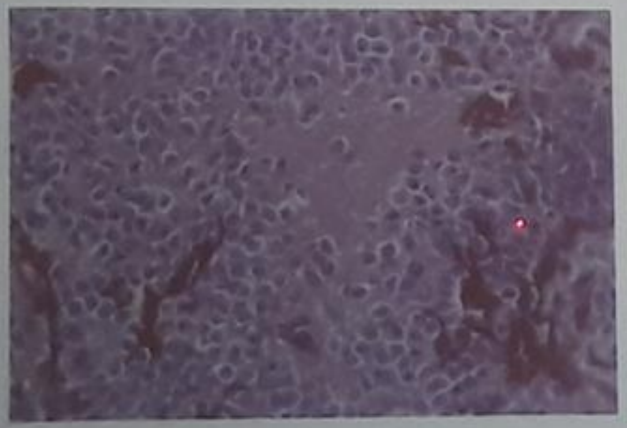
NSE

NSE

Synaptophysin

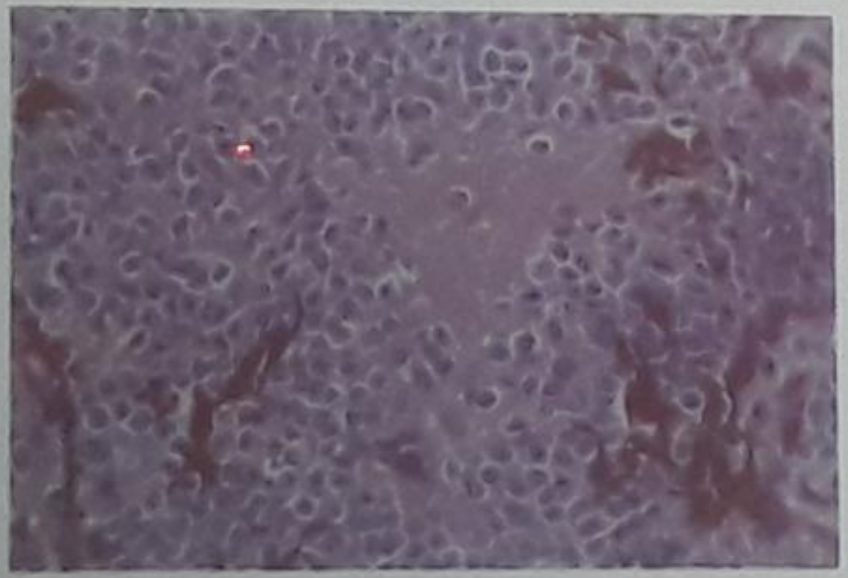


Chromogranin



Diagnosis???

- Oligodendroglioma
- Ependymoma,Clear Cell type
- Neurocytoma



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n and/or necrosis (with and without pseudopalisading) high-grade variants. Ultimately, none of these features ne is absolute, and the diagnosis as usual rests with cologic features, coupled with supplemental immunotochemical and electron microscopic verification.

Once the site of the biopsy is correctly identified (from combination of clinical and neuroimaging information, well as histologic features on the slide), *location* emerges one of the most important determinants for formulating differential diagnostic list. Tumors primary to the CNS/NS follow the "real estate principle"—what is important "location, location, location." For example, a spinal cord opsy specimen from an intramedullary mass that you entify as a nonmetastatic tumor is most likely ependyoma or astrocytoma. In contrast, a nonmetastatic extraedullary, intradural spinal cord mass is likely to be a eningioma or schwannoma.

The real estate principle holds so strongly that you ould make every effort to know the differential diagses for each site and exclude the common things (inuding unusual variants of common things) before dignosing tumors low on the differential list for that site.

Although GFAP is one of the more reliable, more spefic immunostains, even it should usually not be used in olation on difficult cases of high-grade tumors and without a "panel approach." *Stop*! Some pancytokeratin cocktails cross react with GFAP, but fortunately CAM 5.2 does ot. Very high-grade gliomas may show very little GFAP mmunostaining but usually will have S100 protein or vimentin immunostaining, as these are expressed early in

usually affect cerebral hemispheric white matter and pons in children and adults.

1. Nonpontine lesion in a person less than 18 years of age—consider pilocytic astrocytoma, medulloblastoma, ependymoma, ganglion cell tumor, craniopharyngioma.
2. Lesion in a child less than 2 years of age—consider atypical teratoid/rhabdoid tumor, large cell medulloblastoma, choroid plexus carcinoma, desmoplastic infantile ganglioglioma/astrocytoma.
3. Lesion in a person with long-standing seizures—consider ganglion cell tumor, dysembroplastic neuroepithelial tumor, pilocytic astrocytoma.
4. Lesion within certain anatomic sites
   a. Ventricles—ependymoma, choroid plexus papilloma or carcinoma, central neurocytoma, subependymoma, subependymal giant cell astrocytoma
   b. Mesial temporal lobe—as above for seizures
   c. Superficially located in cerebral hemisphere—pleomorphic xanthoastrocytoma, ganglion cell tumor, desmoplastic infantile ganglioglioma/astrocytoma, oligodendroglioma, as well as occasional meningiomas invading superficial cortex
   d. Cerebellum—medulloblastoma, ependymoma, pilocytic astrocytoma, hemangioblastoma, atypical teratoid/rhabdoid tumor
   e. Tectal plate/pineal gland—pilocytic astrocytoma; pineocytoma, pineoblastoma, germ cell tumor, pineal cyst

An Algorithmic Approach to the Brain Biopsy—Part I

B. K. Kleinschmidt-DeMasters, MD; Richard A. Prayson, MD

• *Context.*—The formulation of appropriate differential diagnoses for a slide is essential to the practice of surgical pathology but can be particularly challenging for residents and fellows. Algorithmic flow charts can help the less experienced pathologist to systematically consider all possible choices and eliminate incorrect diagnoses. They can assist pathologists-in-training in developing orderly, sequential, and logical thinking skills when confronting difficult cases.

Objective.—To present an algorithmic flow chart as an approach to formulating differential diagnoses for lesions seen in surgical neuropathology.

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Conclusions.—In Part I, we assist the resident in learning how to handle brain biopsies in general and how to distin-

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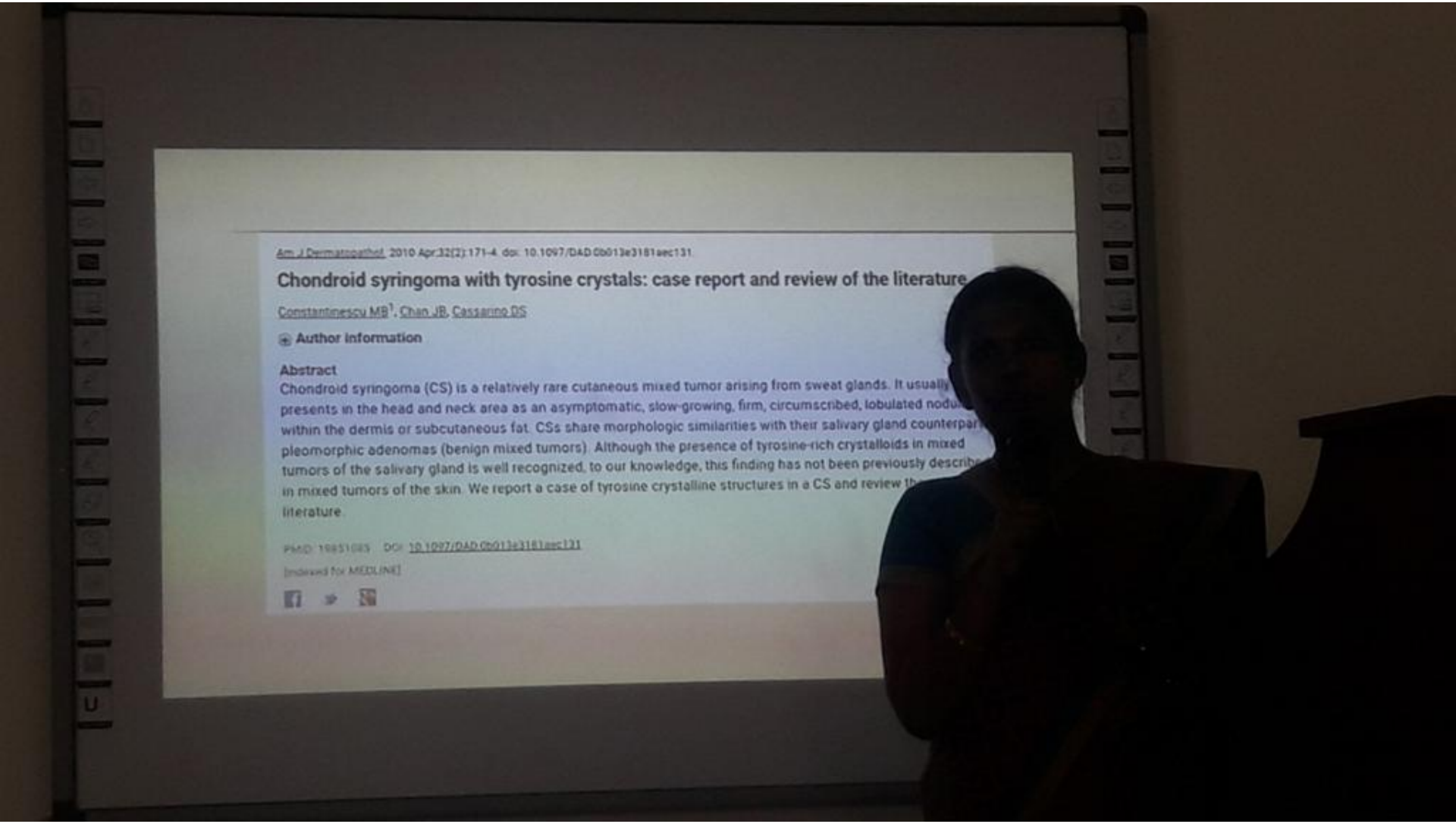
CASE HISTORY
× A 70 YEAR OLD FEMALE
× SWELLING IN THE EXTERNAL EAR
× EXCISION BIOPSY DONE
GOVERNMENT MEDICAL COLLEGE
REVERENT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Chondroid syringoma with tyrosine crystals: case report and review of the literature.
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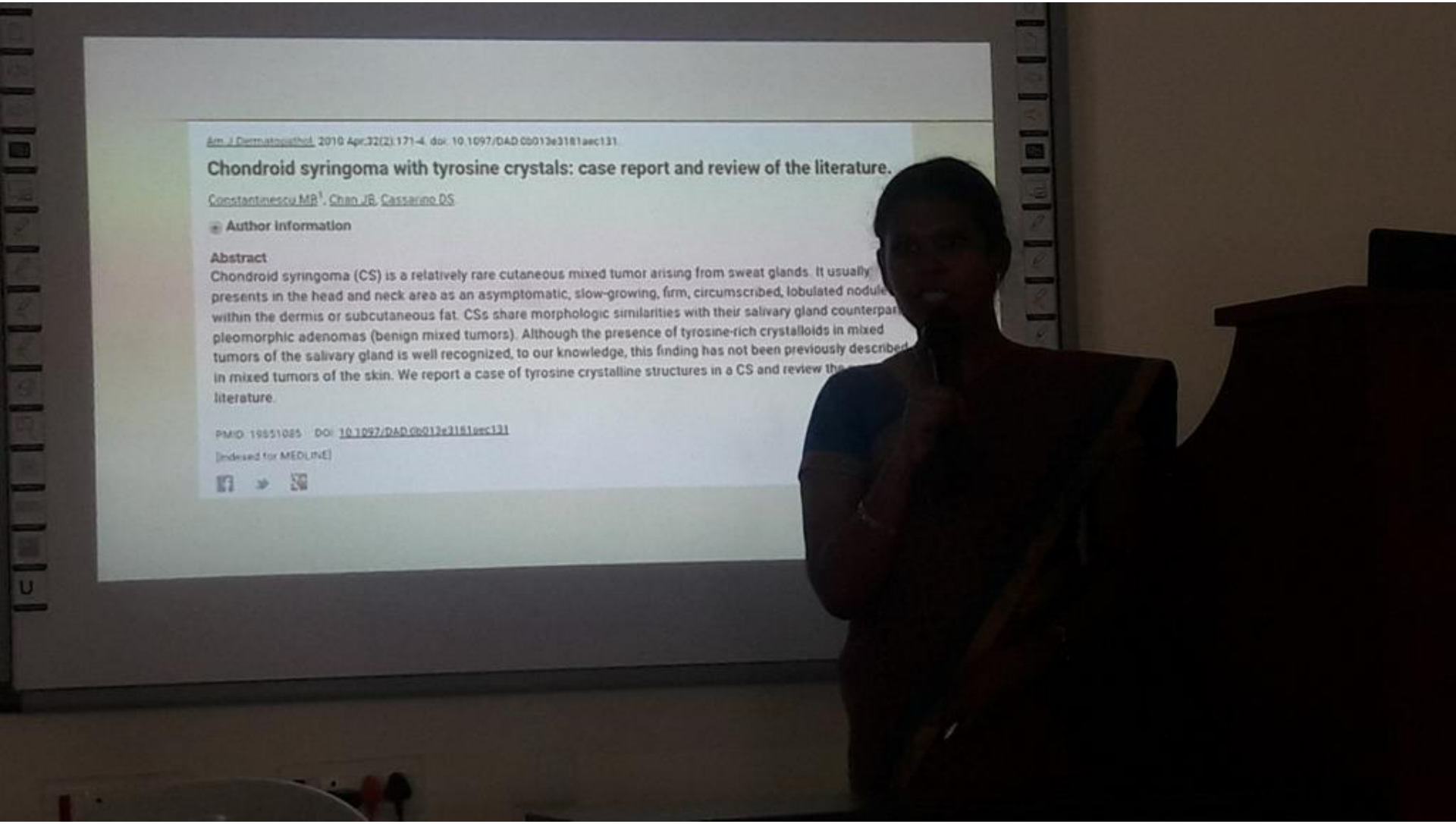
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CASE REPORT

Heterotopic pleomorphic adenoma in the postauricular area

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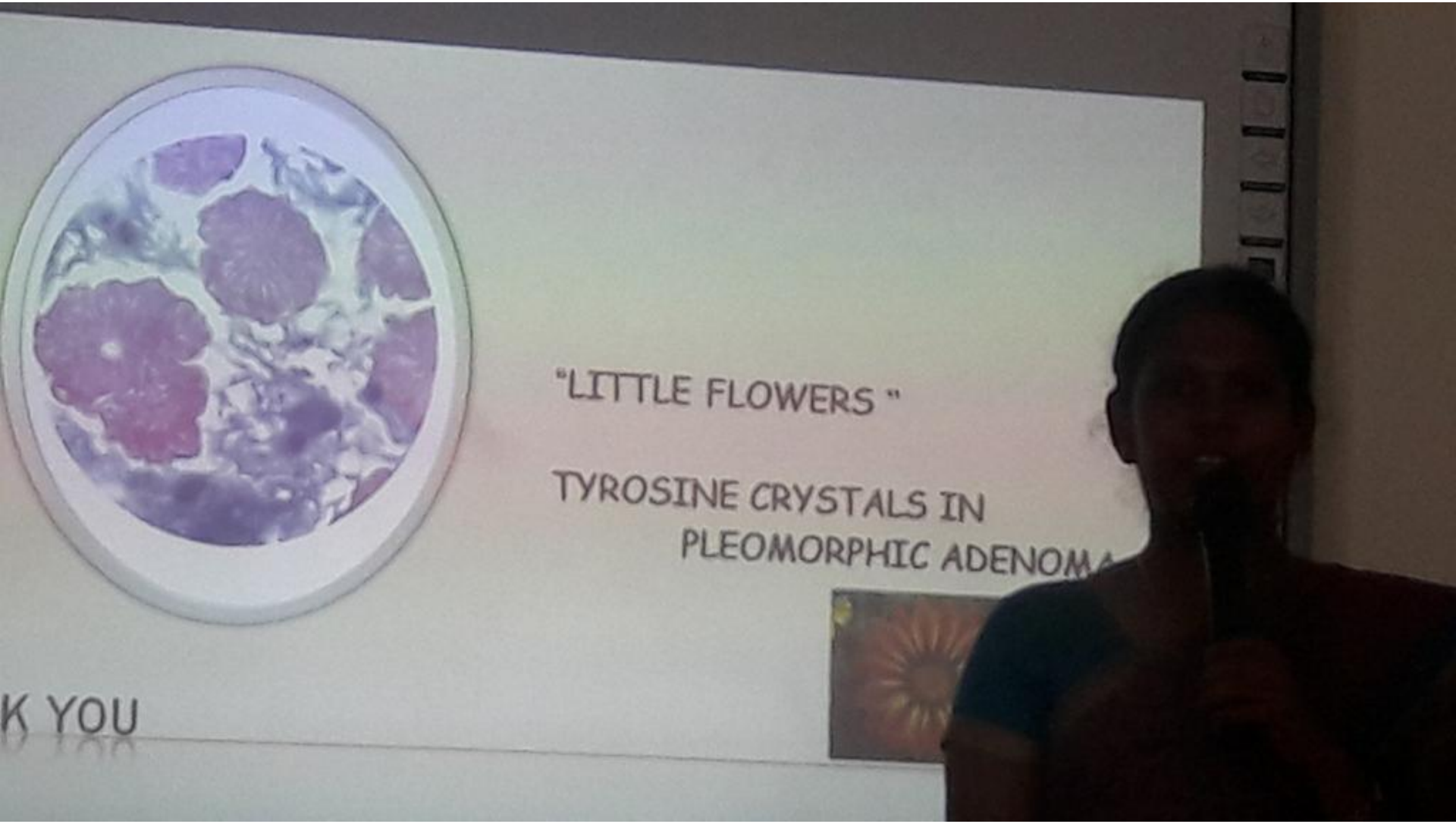
KEYWORDS
heterotopic salivary tissues;
neck mass;
pleomorphic adenoma

Abstract Heterotopic salivary gland tissue is salivary tissue located outside the sites generally known to accommodate major and minor salivary glands. Although heterotopic salivary tumors were reported in various regions of the head and neck, they are seldom found in the superio-posterior neck region and can be confused with other neck masses. Herein, we present a rare case of a heterotopic pleomorphic adenoma in the postauricular area and remind clinicians that heterotopic salivary tumors should be in the differential diagnosis of neck masses.


"LITTLE FLOWERS "
TYROSINE CRYSTALS IN
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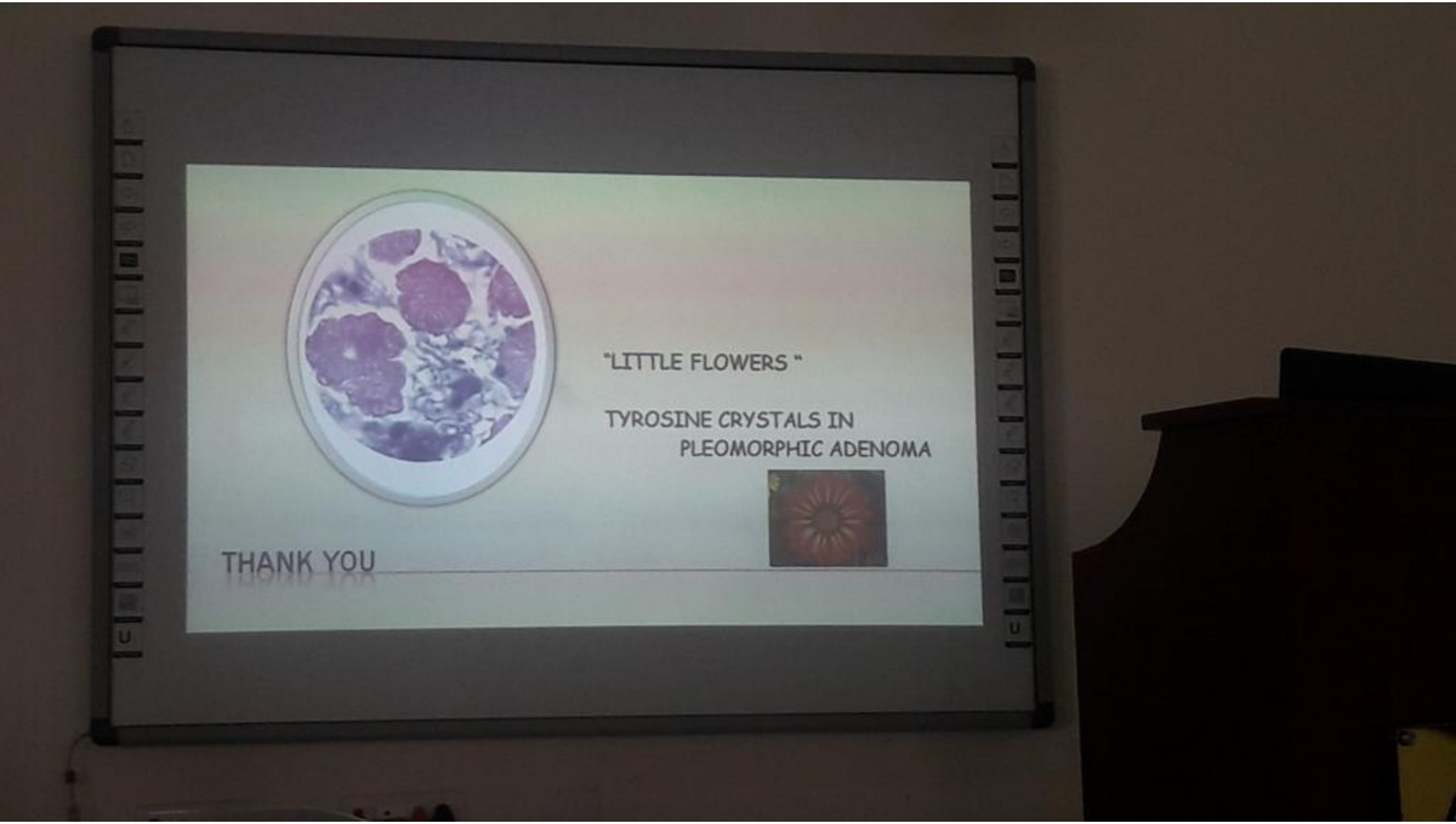
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