SEVEN HILLS TIMES

Volume 6 **Issue No 07** **July 2022**

An Official Publication of
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VISION

To emerge as one of the premier pharmacy colleges in the country and produce pharmacy professional of global Standards.

MISSION

• To deliver quality academic programs in Pharmacy and empower the students to meet industrial standards.
• To build student community with high ethical standards to undertake R&D in thrust areas of national and international standards.
• To extend viable outreach programs for the health care need of the society.
• To develop industry institute interaction and foster entrepreneurial spirit among the

ATYPICAL CENTRAL NEUROCYTOMA WITH BIVENTRICULAR INVOLVEMENT – A RARE DISEASE

M Naveen Kumar, Pharm D IV Yr

Introduction

Central neurocytomas are rare benign tumours comprising 0.1 to 0.5% of primary brain tumours and predominantly seen in intraventricular location. Extra ventricular neurocytomas have been described to affect brain parenchyma like cerebral hemisphere, thalamus, cerebellum, pons, amygdale and retina. It occurs mainly in young adults in 2nd&3rd decade.

Few of them show nuclear atypia and high proliferative index with MIBI more than 2% and have a poor prognosis. It is thought to arise from the precursor cells of septum pellucidum and subependymal cells of lateral ventricles. WHO included neurocytoma as a separate entity in the new classification in 1993 and graded it as grade 1 tumour. But it was subjected to label it as grade 2 if atypia or proliferative index is present. We describe a case of central atypical neurocytoma in a 27-year-old female involving lateral and third ventricle with immunohistochemical confirmation.

Case report:

A 27year old female presented with headache for two and half years and forgetfulness for one year. On examination her visual acuity was 6/24(B/L), higher motor function normal, bilateral papilledema, no motor/sensory deficit.

MRI revealed large globular T1 hypointense, T2 heterogenous hyperintense mass lesion showing heterogeneous enhancement extending to left side ependymal region and filling the entire 3rd ventricle. A clini-cardiological diagnosis of choroid plexus papilloma/glioma was given.

Squash cytology was reported as oligodendroglioma due to presence of small round cells with moderate amount of pale eosinophilic to clear cytoplasm and round vesicular nuclei. The gross received was multiple bits of greyish white tissue together measuring 1×.5×. 5cm.Hematoxylene and eosin stained sections showed presence of diffusely arranged tumour tissue with clear to pale eosinophilic cytoplasm, mild nuclear atypia and fine chromatin, intervening areas of a cellular eosinophilic fibrillary zones and proliferation of branching thin walled bloods vessels. Few areas showed perivascular arrangement of tumour cells showing a pseudo pattern. Due to presence of clear to pale eosinophilic cytoplasm in tumour cells possibility of oligodendroglioma, central neurocytoma, ependymoma and clear cell meningioma were considered as differential diagnosis. For confirmation immune histochemistry was done. It shows positive for synaptophysin and CD56(NCAM), negative for GFAP chromogranin and EMA. So, our diagnosis was confirmed as atypical central neurocytomas.

Discussion and conclusion:

Neurocytomas are rare benign intraventricular tumours of the CNS usually located in the lateral ventricle in the zone of foramen of Monro. Depending on location, it can be lateral ventricular, biventricular or rarely only third ventricular (3%of cases). besides it can also be seen in extra ventricular location.

These are usually benign with a favourable prognosis accounting for 75% of neurocytoma. But neurocytomas with a high proliferative index i.e.MIB-1 labelling index >2% with or without anaplastic features are designated as atypical and are noted to have worse clinical outcomes and higher recurrence rate compared with normal neurocytomas.MIB-1 LI score >3% is considered as a bad prognostic indicator and said to have an adverse outcome. A retrospective analysis of 15 cases of neurocytomas done by Mackenzie et al showed that the proliferative potential is a better predictor for clinical outcomes and prognosis than histological features. The terms atypical and anaplastic are not suitable to describe these lesions as they indicate a typical histologic appearance. Therefore, most accurate designation suggested would be proliferating neurocytomas.

In the above said case also there was no host morphological atypia but the proliferative index was high (6-7%) which also was again confirmed as the patient did not survive more than 6 months. The limitations of the pathological diagnosis consist of morphology very similar to ependymoma, which also contains perivascular acellular areas, but subtly fewer monomorphic nuclear shapes and a fibrillar matrix. In this case, the first diagnosis oligodendroglioma, which is much more likely because of the perinuclear clearing of cytoplasm and delicate branching vasculature, was based only upon morphology. However, using immunohistochemistry, it was possible to reach the correct diagnosis of neurocytoma.

Discussion &Conclusion:

Our case was GFAP negative which rules out ependymoma and oligodendroglioma. Other differential diagnosis was clear cell meningioma, which are usually seen in cerebellopontine angle and must show predominantly clear cell morphology. These are also biologically aggressive tumours and the diagnosis should be made carefully. Since the present case didn't have the criteria satisfying clear cell meningioma and was negative for EMA, further confirmed our diagnosis as. The proliferative index using MIBI was around 5-7% in the highest proliferating zones. So, a final diagnosis of atypical central neurocytoma was given. This patient died within 6months of surgery indicating the poor prognosis of these tumours. Treatment protocol usually followed for these cases are complete resection (CR), complete resection plus radiotherapy, incomplete resection (IR) and IR plus radiotherapy. Even cases of incomplete resection can also be treated by chemotherapy and have better prognosis. This patient expired before receiving radiotherapy. But there are reports documenting decrease in Ki67 after radiotherapy.

In summary, the case is of interest to the readers due to its unusual course, extensive involvement of both lateral and third ventricles as well as it's monomorphic histological appearance with high proliferative index proved by immunohistochemistry.

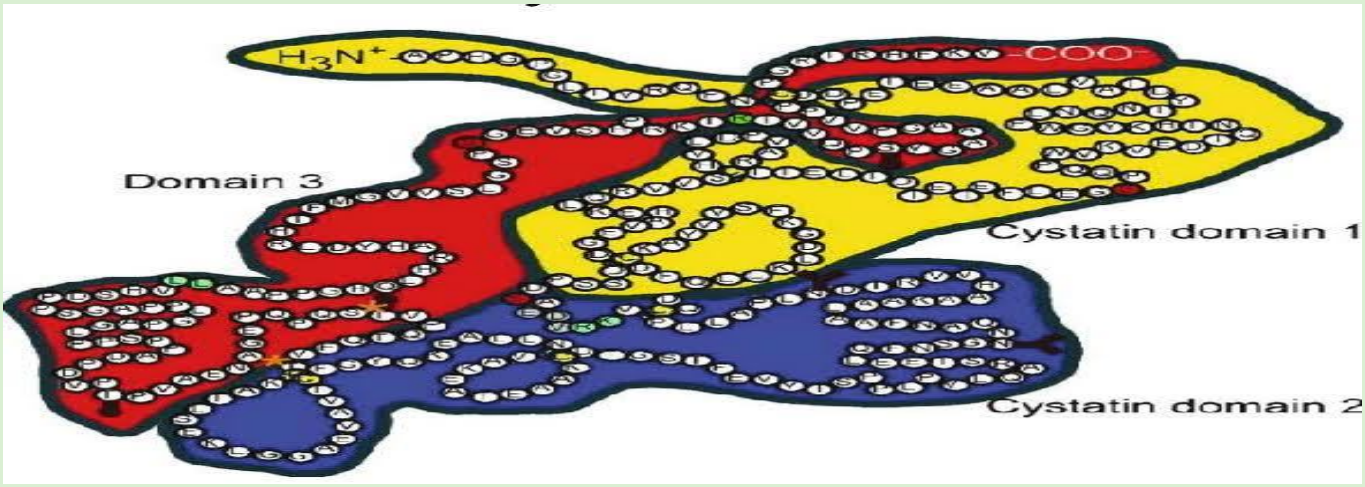
Feutin-A: Super Molecule for Insulin Resistance

S Salma, Pharm D V Yr

Introduction

Alpha-2-HS-glycoprotein (AHSG, Alpha-2-Heremans-Schmid Glycoprotein) also known as fetuin-A is a protein that in humans is encoded by the AHSG gene. Fetuins are vertebrate plasma proteins. Fetuin-A/α2-Heremans Schmid (HS) glycoprotein homologues occur in reptiles, fish, birds, marsupials, and mammals. Bovine fetuin (derived from the Latin word foetus) was first described in 1944 by Pedersen as the most abundant globular plasma protein in foetal calf serum.

The human species homologue was independently identified by Heremans and Schmidt and Burgi. It was later named α2-HS-glycoprotein by Schultze in honour of two of the original co-discoverers. The name also indicates that α2-HS glycoprotein co-migrates with the α-2-globulin fraction of serum proteins in cellulose acetate electrophoresis.



Functions:

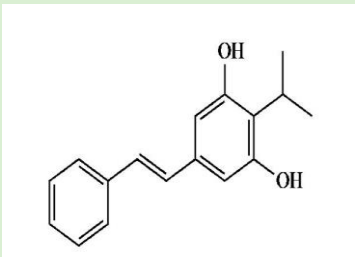
Fetuin-A could inhibit insulin receptor tyrosine kinase activity through blocking the auto-phosphorylation of tyrosine kinase and insulin receptor substrate-1(IRS-1), and induced a lower-grade inflammation, which resulted in **insulin resistance.** Fetuin-A mediates the formation and stabilization of calcipotriene particles (CPPs), soluble colloids made of fetuin-A, further serum proteins, and calcium phosphate mineral. CPP formation ensures mineral solubilisation and rapid clearance from circulation by macrophages of the mononuclear phagocyte system, thus preventing **pathological calcification.**

Fetuin-A as a **local calcium mineral scavenger**, not only counteracting intrarenal calcification, but also attenuating renal fibrosis and inflammation through TGF-β1 antagonization and regulation of macrophage polarization. Fetuins are blood proteins that are bloodstream. Fetuin-A is a major **carrier protein of free fatty acids** in the circulation. Fetuin-A is a "**Hypoxia – Inducible Transcription Factor"** (HIF) target that safeguards tissue integrity during hypoxic stress.

VTAMA Cream- For the Topical Treatment of Plaque Psoriasis

Sree Vidya, IV Pharm D

Drug: VTAMA Cream (3,5dihydroxy -4-isopropyl- trans stilbene)
Manufacturer company: Dermavant sciences, US
Molecular formula: C17H18O2
Molecular weight: 254.32



Indications: VTAMA cream,1% is an aryl hydrocarbon receptor agonist indicated for the topical treatment of plaque psoriasis in adults.
Dosage and administration:

- Apply a thin layer of VTAMA to affected areas once daily.
- Wash hands after application, unless VTAMA cream is for treatment of hands.
- VTAMA cream is not for oral, ophthalmic or intra vaginal use.

Dosage form and strength: CREAM 1% Each gram of VTAMA cream contains 10mg of Tapinarof in a white to off white cream.
Mechanism of action:

Tapinarof is an aryl hydrocarbon receptor Agonist. The specific mechanisms by which Vtama cream exerts its therapeutic action in psoriasis patients are unknown.

Pharmacokinetics:

Absorption: No accumulation was observed with repeat topical application. Plasma conc. was below the quantifiable limits of the assay in 68% of pk samples.
Distribution: Human plasma protein binding is approximately 99% invitro.

Metabolism: Tapinarof is metabolized in the liver by multiple pathways including oxidation, glucuronidation and sulphating in vitro.

ADRs: Folliculitis, Nasopharyngitis, Contact Dermatitis, Headache, Pruritis, Influenza.

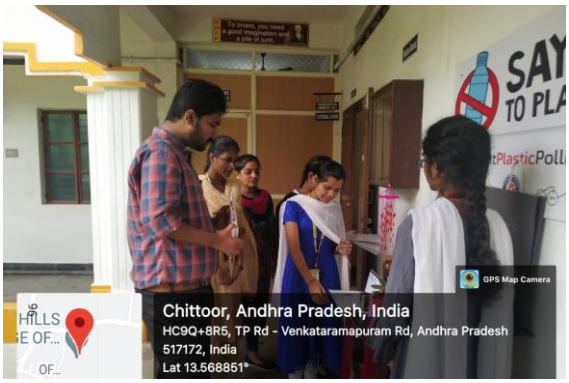
Departmental Activities July-2022:

No of Patients Screened	Drug Information Queries	Adverse Drug Reactions	Medication Errors	No of Prescriptions Audited
1231	56	31	08	1248

Perfect Click

World Zoonosis Day – Awareness Program conducted in Surrounding villages by SHCP

Dr B Jyothi – Elected as APTI EC Member



World Plastic Bag Free day- Observations in College campus

Dental Health Camp in association with CKDC Tirupati

National Nature Conservation Day Observations in College Premises