BDOS SCIENTIFIC HIGHLIGHTS

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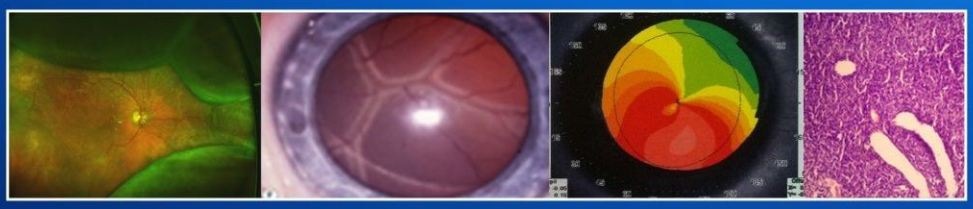

BHOPAL DIVISIONAL OPHTHALMIC SOCIETY

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BHOPAL DIVISIONAL OPHTHALMIC SOCIETY

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From the Editors' Desk

Dear Friends,

A very Happy Diwali and A Prosperous New Year!

To begin with, as the editor, I recognize that first step is never easy to take. I appreciate Dr. Vinita and her team's efforts to take an initiative to commence with this Journal. They have successfully set a benchmark for all of us. With the support of my team and thought process I wish to take it to greater heights and add newer dimensions to this journal.

I expect and invite greater participation from all corners of our community. Every institute has its own pattern of working and so the experiences of all consultants also vary despite the fact that we all are from one fraternity. I will be highly delighted to explore literature from the Community Ophthalmology to Super Speciality Surgical work.

I acknowledge the constant encouragement and moral support that I received from all of you.I also acknowledge the support from R.K.D.F. Medical college hospital and research centre Bhopal.I would appreciate feedback from all the members so that we can improve to a finer level. I wish even Sky is not the limit. I hope to see much more progress and increased participation from your side.

Regards,

Dr. Vasudha Damle
Correspondence
Vasudhadamle68@gmail.com

"Teamwork Means that we share a Common Ideal and Embrace a Common Goal"
Regardless Of Our Differences, We Strive Shoulder To Shoulder ,
Confident in One Another's Faith,
Trust And Commitment In The End
It Can be Summed up in Five short words
"We believe in each other"

CONTENTS:

CONSENT

Dr. Prakashchand Agarwal, Dr. Mary Jenifa Tigga, Dr. Nida Khan, Dr. Sagarika Laad
Peoples College of Medical sciences & Research Centre, Bhopal, Madhya Pradesh

Consent means to agree the same in the same sense.[1] The typical consent form includes an explanation of your condition and the procedure in simple language.

There exists a duty to obtain prior consent (with respect to living patients) for the purpose of diagnosis, treatment, organ transplant, research purposes, disclosure of medical records, and teaching and medico-legal purposes.[2]

It is the doctor's responsibility to give the patient information about a particular treatment or procedure so the patient can decide whether to undergo the treatment, procedure or test.(Nolo's article, Medical Malpractice Basics website)

A doctor doesn't have to tell a patient about every possible thing that might happen as a result of a procedure or treatment, but only those risks that are important.

Thus a doctor or hospital should obtain consent of patient and where the same is not possible due to age, injury and / or physical or mental condition, consent of next of kin such as parents, wife, children or close relatives should be taken.

Consent obtained by hospital or doctor does not require any stamping or registration.

It is advisable that consent of patient and/or (where patient is not in a position to give his consent) that of his parents / wife /close relatives accompanying the patient should be taken in a language understood by the patient and/or such relatives.

The aim of this section is to provide you with the tools required for the "basic minimum" as well as providing a more comprehensive picture of the informed consent process.

The consent can be: FREE CONSENT AND CAPACITY TO ENTER INTO CONTRACT

Where a patient or his guardian gives his assent to the proposal given by the medical expert, he is deemed to have given consent.[1]

A child is not considered competent enough, i.e., Sui juries to give consent till he or she attains the age of 18 year of age majority, Under Indian Majority Act.

Every person is competent to contract if he is a major according to the law to which he is subject, a person of sound mind and is not disqualified from contracting by any law to which he is subject.

Thus the three ingredients of competency are the following:

a) Age of Majority.

b) Person of sound mind.

c) Not disqualified from contracting by any law to which he is subject.

Consent can be given in the following ways-

i) **Informed Consent –** Informed consent means that you understand your condition and any proposed medical treatment. When a patient is informed about the nature, manner of treatment, chances of failure and risk involved etc., prior to obtaining his consent . An informed consent given by a competent person is a valid consent.[1]

ii) **Valid consent** –A valid consent has to be free from undue influence, coercion etc., and ought to have been obtained when give of such consent was in sound mental condition.[1]

A person is said to be in sound mind when he is in a position to understand the consequences of the act or incidents which will follow his consent on his interest, he is said to be of sound mind. Thus, a person of unsound mind such as a person under the influence of liquor or drugs cannot give valid consent to his doctor in respect of proposed treatment or surgery. **The valid consent – Not only protects the doctor from civil liability but also from criminal liability – Sec 87 of IPC Act.**

iii) **"Free consent** – Free consent' is one of the essentials of a valid contract. It can be said that

treating a patient without his consent may create a criminal liability in addition to civil liability. A medical practitioner is advised to obtain 'informed consent' before he embarks of treatment of his patient. Thus a doctor or hospital should obtain consent of patient and where the same is not possible due to age, injury and / or physical or mental condition, consent of next of kin such as parents, wife, children or close relatives should be taken. But under exceptional circumstances, treatment may be given and even surgery may be conducted without such consent when such treatment is in the interest of patient. However, it is advisable that such a decision is taken by a **panel of 2 or more doctors who decide on the plan of action in the best interest of the patient.**

iv) **Implied Consent –** When consent is given by conduct of a person, such consent is considered as implied consent. Sometimes consent is presumed by the circumstances and sequence of events such as where an accident victim who requires emergency treatment is brought to a doctor or a hospital. The fact that an appointment with doctor was arranged at the instance of the patient, patient replied to the queries and submitted to physical examination without any objection constitute a set of circumstances indicating implied consent of the patient to the treatment. However, in case of invasive investigations, treatment having serious side effect and surgical procedure etc., questions may arise whether the risk factors were explained to the patient and whether the patient gave informed consent for the proposed investigation, treatment and/or surgery undertaken by the doctor or hospital.

v) **Express consent –** consent either given in writing or expressed in words.[1] Such consent protects a doctor. Though both these categories of consents are of equal value, written consent can be considered as superior because of its evidential value.[2] In this type of consent before obtaining the consent patient should be informed about: The nature of condition he is suffering from The options of treatment available The advantages and disadvantages, the associated complications and material risks associated with each modality of treatment .

vi) **Implicit consent** is implicit in emergency or critical cases such as road accident (RTA) cases: In Pravat Kumar Mukherjee v. Ruby General Hospital and Ors 15, National Commission and Section 92 I.P.C. – Act done in good faith for benefit of a person without consent in emergency or critical cases. In case a doctor or hospital denies treatment or surgery in such a case on the ground that there was no consent, the burden of proving refusal to avail treatment or to undergo surgery despite being informed of the consequences there of is on such doctor or hospital. Section 10 of Contract Act merely refers to requirements of a valid contract in the normal course. But in case of a hospital or a doctor agreeing to provide medical treatment, it is understood that doctors and other medical staff have requisite qualification, capacity, expertise and the hospital has necessary infrastructure facilities for undertaking the same. Further, the requirements relating to investigations / diagnostics tests, employment of qualified doctors, medical and paramedical personnel, well equipped hospital enabling the hospital to provide pre and post operative care are also to be given due attention.

Consent Protection to Doctor

Consent does not give total immunity from being held negligent. Consent is given for the risk associated with procedure which should be explained. If complication happens or risk materializes due to negligence. A detailed valid consent will offer some protection (though not complete) in the count of law.

In a recent judgment, the National Consumer Disputes Redressal Commission has held that "consent is implicit" in emergency cases where the patient was brought in seriously injured condition and waiting for consent of patient or passer by who brought the patient in hospital is "deficiency in services "(Vide 2005 (II) CPJ 35-Pravat Kumar Mukherjee Vs. Ruby General Hospital.

Left against medical advice (LAMA) On emergency cases where the surgeon facts that an urgent operation is required to save patient but the patients is not willing to consent for the same it is advisable to obtain a written statement from the patient duly attested by his relatives or attendants. It may be that just because the patient has given consent for an operation it does not give total immunity from being held negligent. The consent indicates the readiness of the patient to undergo the operation with the all ending risks.

MCI guidelines on Record keeping- The issue of medical record keeping has been addressed in the Medical Council of India Regulations 2002 guidelines answering many questions regarding medical records. The important issues that have been addressed are as follows:

1. Maintain indoor records in a standard proforma for 3 years from commencement of treatment (Section 1.3.1 and Appendix 3).
2. Request for medical records by patient or authorized attendant should be acknowledged and documents issued within 72 hours (Section 1.3.2).
3. Maintain a register of certificates with the full details of medical certificates issued with at least one identification mark of the patient and his signature (Section 1.3.3).
4. Efforts should be made to computerize medical records for quick retrieval (Section 1.3.4).
5. Medico legal case(MLC) paper may be kept till 10 years or more

Reference-

1. All India Ophthalmological Society CME SERIES (No. 27)
2. M. S. Pandit and Shobha Pandit, Medical negligence: Coverage of the profession, duties, ethics, case law, and enlightened defense - A legal perspective: Indian J Urol. 2009 Jul-Sep; 25(3): 372–378.
3. Pravat Kumar Mukherjee vs Ruby General Hospital & Ors on 25 April, 2005: National Consumer Disputes Redressal.
4. Medical Council of India Regulations 2002 guidelines, Published in Part III, Section 4 of the Gazette of India, dated 6th April,2002)

HYPOTONY

Dr. Girish Lale, Consultant - Sankalp Netralaya, Zone 2 M.P. Nagar Bhopal

Introduction:Hypotony is a pressure related disorder of the eye.Everybody talks about rise of IOPand glaucoma,so lets talk about hypotony as many a times hypotony occurs secondary to glaucoma surgery.

Definition:It can be defined as an eye having an IOP below which the normal eye functions are altered.

Just like the wide range of sensitivity to high IOP's,there is also a range of sensitivity to low IOP's.That means some pts develop sequalae of hypotony with say 7mmof Hg while others have normal eye with say 3 or 4 mm of Hg.

Causes:

Occular causes

1. Over functioning filtering bleb
2. Inadvertant filtering bleb
3. Leak:it could be a leaking bleb or a perforating injury.
4. Cyclodialysis cleft
5. Uveitis
6. Rhagmatogenous retinal detachment
7. Vascular events:like CRAO,CRVO,Ocular ischemia.

Systemic causes Rarely causes hypotony which is always bilateral. They are as follows:

1. Myotonic dystrophy
2. High serum osmolarity as in dehydration
3. Uremia hyperglycimia
4. Systemic acidosis.

Most of the cases of hypotony are uniocular and commonest is that after glaucoma filteration surgery.In old days inadvertently leaking cataract incisions may lead to bleb formation.Leaks can also occur after perforation of sclera or cornea by trauma

or surgery.Globe perforation can happen due to a retrobulbar needle or a bridle suture.

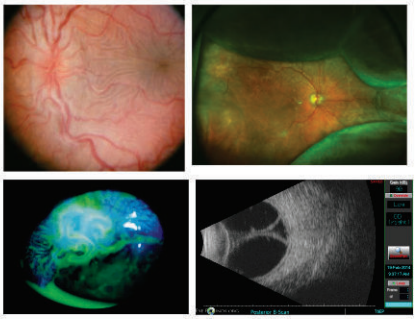
Cleft can be intentionally created to control glaucoma or can occur after trauma or surgery.

Ocular inflammations can cause hypotony due to ciliary body inflammation which leads to breakdown of blood aqueous barrier which decreases aqueous production.Inflammation also increases permeability of uveoscleral tract thus increasing nonconventional outflow.

A rhegmatogenous RD with associated inflammation leads to hypotony as aqueous is pumped by RPE in to choroid through retinal break.

Evaluation of a case of hypotony:

1. Carefully measure the IOP if A/C is shallow or flat.
2. In any patient with hypotony,performing a Seidel test is critical to determine whether aqueous leak has occurred.Seidel test is easily performed on the slit lamp using a moistened fluorescein strip and cobalt blue filter.
3. Limbus is carefully examined for a filtering bleb created either intentionally or inadvertently as after cataract surgery.



4. A/C evaluation is done for signs of intraocular inflammation.
5. Gonioscopy if possible should be attempted to identify cleft or else can be done on OT table after injecting viscoelastic by using a direct goniolens.Alternatively UBM if available is used to identify a cleft.
6. Indirect ophthalmoscopy and/or B scan is done to detect retinal detachment.

Sequelae of hypotony:

1. Cornea becomes oedematous and develops Descemet"s folds.
2. Pressure from lids can produce astigmatism.
3. shallowing of A/Cmay hastens cataract progression in phakic eyes or may cause corneal decompensation in pseudophakic eyes if left untreated for long time.
4. In a/c there may be cellular reaction causing photophobia and discomfort.
5. Ciliochoroidal effusions may develop frequently which may be small peripheral elevation to huge elevation filling vitreous cavity (kissing choroidals).
6. Hypotony maculopathy may develop which if treated in time reverses completely.
7. Suprachoroidal haemorrhage specially in older pts. Occur due to stretching of vessels.
8. Disc oedema may develop after hypotony.
9. Prolonged hypotony may lead to phthisis bulbi.

Management:

1. Treatment is directed at the underlying cause.
2. In early post op. Period limiting use of steroids may encourage fibrosis and healing.
3. Pressure patching can be used to slowdown the flow of aqueous from bleb.
4. Autologous venous blood from pts arm can be injected into bleb.The blood stimulates scarring and decreases aqueous outflow into bleb.
5. Aqueous suppressants can also be used to decrease flow of aqueous through leaking area.
6. Tissue glue can be used to close leaks,but is less effective in conjuctival leaks than in corneal leaks.
7. Suturing the bleb with 10/0 nylon suture can be tried.
8. If these measures fail, the bleb can be excised and freash conjunctiva can be brought down to limbus.
9. An inadvertent cyclodialysis cleft can be closed with laser treatment(argon laser spot size100 microns duration .1 to .2 sec. And power of 500 to 1000 mW.)
10. Rhegmatogenous RD is surgically repaired.
11. Uveitis is treated with vigorous steroids and cycloplegics.
12. Ciliochoroidal effusions may require oral steroids and large choroidal effusions may need surgical drainage which is done in both the inferior quadrants.

RETINAOBLASTOMA

Dr. Amit Srivastava
Sankalp Nethralaya & HP Eye Care

Introduction

Most common intraocular malignancy in children. Incidence ranges from 1 in 15,000 to 1 in 18,000 live births. It is second only to uveal melanoma in the frequency of occurrence of malignant intraocular tumors. It arises from embryonic retinal cells (<4 years age).

History

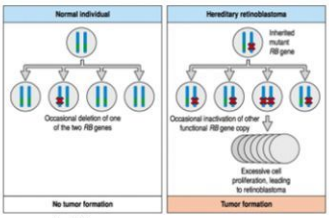
Pawiusdescribed retinoblastoma in 1597. In 1809, Wardrop suggested enucleation as the primary mode of management. 1864 Virchow thought derived from the glial. American Ophthalmological Society officially accepted the term Retinoblastoma in 1926

Inheritance

RB mutation.

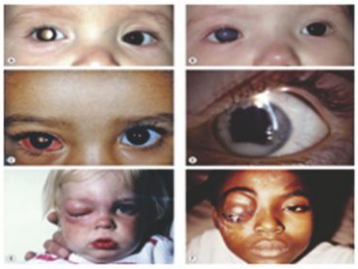
Heritable 40% (at least one allele of RB gene) & Sporadic (Non Heritable) 60%.

Knudson's "two hit" hypothesis for the generation of RB.

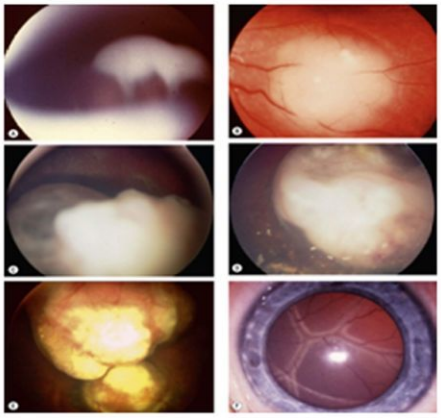


Clinical presentation

Symptoms



(A) leucocoria (B) Secondary Glaucoma (C)Uveitis (D) Pseudohypopyon (E) Orbital inflammation(F) Orbital invasion



A-Small peripheral mass B- Intraretinal mass C- Endophytic tumor D- Endophytic tumor with vitreous seeding E- Exophytic mass F- Total Retinal Detachment

Gruop A- Very low risk
Small discrete intraretinal tumors away from the foveola and disc
- All tumors are >3 mm in greatest dimension, confined to the retina
- All tumors are located further than 3 mm from the foveola and 1.5 mm from the optic disc

Group B - Low risk
All remaining discrete retinal tumors without seeding
- All tumours confined to the retina not in group A
- Any tumor size and location with no vitreous or subretinal seeding.

Group C - Moderate risk
Discrete local disease with minimal focal subretinal or vitreous seeding
- Tumor(s) must be discrete
- Subretinal fluid, present or past, without gross seeding, involving up to one quadrant of retina.
- Local subretinal seeding, present or past less than 5 mm from the tumor
- Focal fine vitreous seeding close to discrete tumor

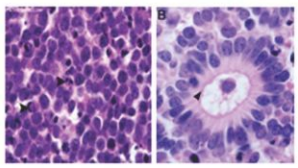
Group D - high risk
Diffuse disease with significant vitreous and/or subretinal seeding
- Tumor(s) may be massive or diffuse
- Subretinal fluid, present or past up to total retinal detachment
- Diffuse subretinal seeding may include surretinal plaques or tumor nodules.
- Diffuse or massive vitreous disease may include "greasy" seeds or avascular tumor masses

Group E - Very high risk
Presence of any one or more of there poor prognosis features
- Tumor touching the lens
- Nevascular glaucoma
- Tumor anterior to anterior vitreous face involfing ciliary body or anterior segment
- Diffuse infiltrating retinoblastoma.
- Opaque media from hemorrhage
- Tumor necrosis with aseptic orbital cellulitis
- Phthisis bulbi

Pathology

Undifferentiated neuroectodermal cells (precursors of retinal neuroepithelium)

Tumor cells are primitive undifferentiated cells with scant cytoplasm and round to oval nuclei



central lumen of the rosette and peripherally arranged nuclei.

High Risk Factors

- Microscopic tumor invasion
  - Postlaminar optic nerve (i.e. beyond the lamina cribrosa),
  - Choroid, or
  - Sclera
- Undifferentiated form
- High mitotic activity
- Pseudoresettes

Workup

Diagnostic

Indirect ophthalmoscopy with indentation
B-scan shows intralesional calcium
CT scan (can be omitted if USG shows calcification)
MRI scan of orbit and Brain (with Gadolinium enhancement and Fat Suppression)
Rb gene

Metastatic

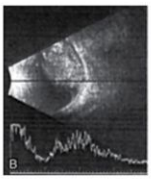
Bone marrow aspiration Biopsy (more than 1 site)
Lumber puncture for CSF analysis
PET scans

Indirect ophthalmoscopy under GA

Unilateral or bilateral nature of the lesions
Number of tumors
Position in the retina (posterior pole and anterior retina)
Tumor size (diameter and thickness)
Vitreous seeding: localized or diffuse

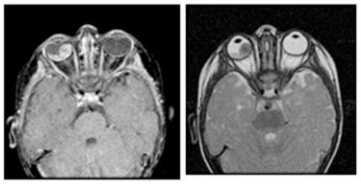
B scan

Echogenic soft-tissue masses
Variable shadowing due to calcifications
Heterogeneity due to necrosis and / or haemorrhage



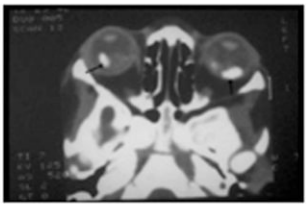
MRI

Evaluate extraocular extension
Optic nerve invasion
Specific cuts directed through Pineal gland (Trilateral RB)
Hyperintense on T1 AndHypointense on T2



CT Scan

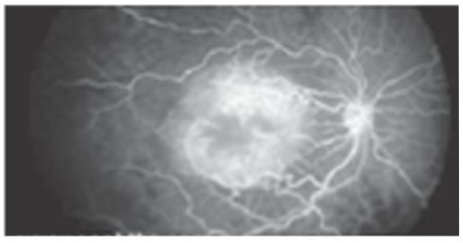
Calcification esp in exophytic RB
Multifocal
If B scan does not demonstrate calcification than CT scan becomes mandatory
Exposes the child to low dose of radiation
Avoided in heritable RB



Ret Cam 120 Fluorescein Angiography

Iris neovascularization
Recurrent retinoblastoma in treated scars (Patterns seen)
Leakage
Pooling
staining
Retinoma do not show leakage or staining

Differential Diagnosis



3 most common causes
Persistent hyperplastic primary vitreous
Coats disease
Ocular toxocariasis
Others
ROP
Congenital Cataract
FEVR
Norrie Disease

Normal sized eye

calcified : retinoblastoma; retinal astrocytoma

non-calcified :toxocaralendophthalmitis; Coats disease

Microphthalmia

unilateral : persistent hyperplastic primary vitreous (PHPV)

bilateral : retinopathy of prematurity; bilateral PHPV

SPINDLE CELL TUMORS AND THE ROLE OF MARKERS

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Assistant Professor, R.K.D.F. Medical college, Jatkhedi Bhopal

INTRODUCTION: Orbital tumors represent .1 % of all body tumors and 1/5th of orbital diseases . They could be pseudotumors , neoplastic lesions ,Grave"s disease,mesenchymal tumor, myopathic disoders, sarcoidosis , tuberculoma or mucopyelocoel.

Pseudotumor refers to describe inflammatory lesion of orbital tissues. A mixed inflammatory infiltrate with fibrosis of varying degree is histopathological hallmark of pseudotumor.

Spindle cell tumors are mesenchymal tumors having mesodermal origin.They can be categorised as follows depending upon tissue of origin :

1. Vascular origin : Hemangiopericytoma(HPC), hemangioma, lymphoma and giant cell angiofibroma
2. Nervous origin : Neuromas , Neurofibroma and Schwannoma
3. Muscular orgin : Leiomyoma, Rhabdomyoma
4. Fibrous origin : Solitary fibrous tumor(SFT), Fibrous histiocytoma

All these tumors are benign except histiosarcoma , fibrosarcoma , rhabdomyosarcoma and melanomas. Hemangiopericytoma(HPC) arises from pericytes. Another view is it originates from pleuripotent perivascular cells. In 1942 Stout and Murray described tumors ,which were composed of capillary blood vessels with one or more layers of rounded cells arranged about them .These differed from hemangiomas because of presence of perivascular cells and named it HPC based on morphologic similarities with pericytes. Pericytes were first described by Zimmerman in 1923.(Stout and Murray et.al.1942)

Hemangiopericytoma is an unusual tumor representing only about 1% of all vascular neoplasms. It occurs in both genders with equal frequency in the head and neck region but is seen less frequently in the orbital region. It is more commonly found in the nasal cavity. It is responsible for about 1-3% of orbital lesions Solitary fibrous tumor (SFT) was first reported by Dorfman in 1994.After that more and more cases were reported. Earlier they were reported as HPC or HPC like tumors. They are more commonly seen in pleural region.(Dorfman et al.1994)

It has been point of debate over the years that whether HPC , SFT and SFT like tumors are variants of same entity or should be designated separately. Despite overlapping features there are many distinctive individual features.

Histopathological features :

The distinction between HPC and SFT can be subtle. Stag horn vasculature though pathognomic of HPC ,

can be found in variety of soft tissue tumors like SFT , fibrous histiocytoma and the variants of SFTalso. Dense reticulin network and poor collagen content goes in favour of HPC while in SFT variable pleomorphic spindle cells are admixed with collagen and arranged haphazardly in a patternless manner, though collagen fibrils may be minimal in cellular variant of SFT also.(Gengler c et. al 2006)

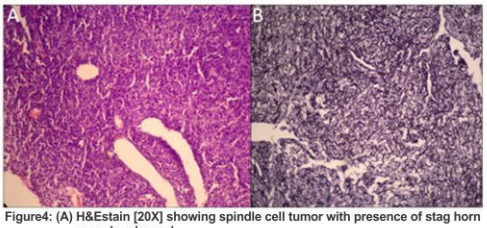

Figure4: (A) H&Estain [20X] showing spindle cell tumor with presence of stag horn vascular channel
(B) Reticulin stain [20X] demonstrating rich reticulin fibre networkaround individual tumorcells.

Histochemical Markers

There are special markers S-100 and SMA for tumors of muscular and neuromuscular origin .Keratin and cytokeratin are markers for tumors of epithelial origin. Its strong , diffuse and consistent reactivity to CD 34 which is pathognomic of SFT .(Westra et al. 1994) InHPC it could be focal or faintly positive reactivity to CD-34.

BCL -2 and CD 99 can be positive in SFT .

K 1 -67 less than 1% ,lack of bony infiltration, pleomorphism and low mitotic activity differentiate benign from malignant

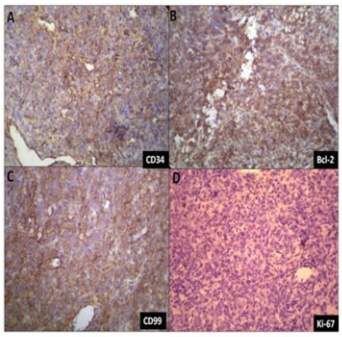

Figure 5: (A) Immunostains for CD34[40X] highlights the presence of vascular channels and moderate positivity in tumor cells in between
(B) Immunostain for Bcl-2[40X]
(C) Immunostain for Cd99[40X] shows membrance staining in tumor cells
(D) Immunostain for K1- 67 shows very low proliferative activity

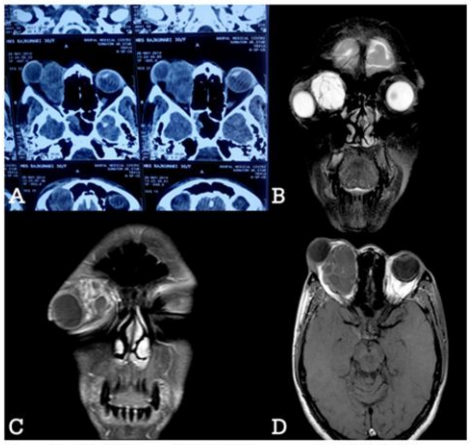

Figure2: (A) CT Scan, (B) T2 W image axial, (C) T1 W image coronal with contrast, (D) T1 W image pre contrast

Radiological Investigations:

Radiologically, in general, hypointese signals on T1W images and isointense to hypointense signals on T2W images indicates more of collagen content in solitary fibrous tumor.

According to H J Kim et al (2008) hyperintense signals in T2W images could be due to cystic degeneration, hemorrhage or recent fibrosis.

A hemangiopericytoma(HPC) gives isointense signals on both T1W and T2W images. Hence, it is difficult to differentiate hemangiopericytoma from solitary fibrous tumors(SFT) on MRI but it gives indication about collagen content, fluid content or hemorrhage within the tumor.

Differential Diagnosis : Lack of response to systemic steroids rules out pseudotumor and myositis .

Hemangiomas and HPC are highly vascular tumors .

Cavernous hemangiomas and rhabdomyomas are usually found in childhood (less than 15 years). Lymphoid masses are usually palpable. malignant lesions can be detected by pleomorphism, mitotic activity, K1-67 more than 1% and bony infiltration.

Strong and consistent reaction with CD-34 and ropy collagen fibrils differentiate SFT from HPC as stag horn vasculature is not restricted to HPC only. S-100 , SMA .Keratin and cytokeratin can detect tumors of epithelial and neuromyogenic differentiation.

TREATMENT:

HPC is known for its aggressive behaviour that may show recurrence or may matastasize.Recurrence after 33 years is reported.(Rice CD et al) .Incomplete excision was also one of the cause for recurrence as reported by croxatto et.al.

In comparison, malignant SFT and malignant transformation of a recurrent SFT are uncommon though reported. This aggressive behavior doesn't correlate with the histologic grade. Though enbloc resection is treatment of choice ,yet ,it's not always possible as it fractures due to cohesive nature(Tam &chen Et.al. 2005).

Preoperative radiation therapy has also been suggested by Shinger et.al. in treatment of HPC.

The role of external beam radiation therapy (EBRT) alone in the management is controversial. Doses of 60 -65 GY in 6-7 weeks are required in postoperative cases.(Edward C Halperin et al.2013)

The role of chemotherapy is not well determined .In some lesions partial tumor regression was seen with cytotoxic drugs. Doxorubicin alone or in combination is effective for HPC.

Role of high beam proton radiotherapy in recurrent cases, in doses of 50 GY equivalent in 20 fractions over 28days is given (HC Gear et.al.).

Other treatment options in recurrent cases were orbital exenteration, further attempts at complete excision and adjuvant therapy with radiotherapy, brachytherapy or chemotherapy.

In Brachytherapy radioactive material is kept inside or close by tumor while in EBRT radiation comes from machine. In Brach therapy ,EBRT related risk like blephritis, brow losing are not there.

Conclusion:

It has been a point of debate over the years whether hemangiopericytoma, solitary fibrous tumor and its variants are variants of the same entity or whether they should be designated separately.

Furusato et al (2011) published a study of 41 cases designated as hemangiopericytoma, fibrous histiocytoma and giant angiofibroma. They found that these tumors have overlapping morphologic and histochemical features and suggested solitary fibrous tumor be used as an all-encompassing terminology.

Despite overlapping features, there are many distinctive individual features Strong and consistent reactivity with CD -34 with ropy collagen fibrils marks it as SFT while dense reticulin network with poor collagen and faint reactivity with Cd-34 designates it as HPC though cellular variant of SFT also shares the same features.

So, in a nutshell, according to available evidence, (Demmico EG et al, 2012) although hemangiopericytoma was once considered to be a distinct entity separate from solitary fibrous tumors, it is now considered to represent a cellular variant within the spectrum of solitary fibrous tumors. The term hemangiopericytoma refers to a particular morphologic pattern. Hemangiopericytoma is rather a growth pattern and is considered a cellular variant of solitary fibrous tumors. The terms like hemangiopericytoma and cellular variants of solitary fibrous tumors are now interchangeable.

Apart from this debate of categorizsing them separately or as a common entity aggressive nature and recurrence pattern of these tumors is really a point of major concern

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CORNEAL COLLAGEN CROSS-LINKING

Dr. Prerna Upadhyaya
Medical Director - Sewa Sadan Eye Hospital, Bairagarh

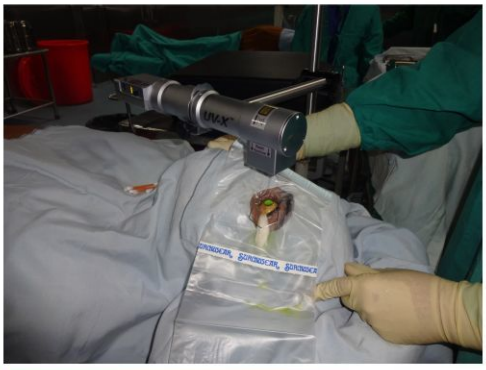
Keratoconus is a common condition that affects about 1 in 2000 of the population. It is usually bilateral ectacia, non inflammatory and manifests at puberty in most of the cases.

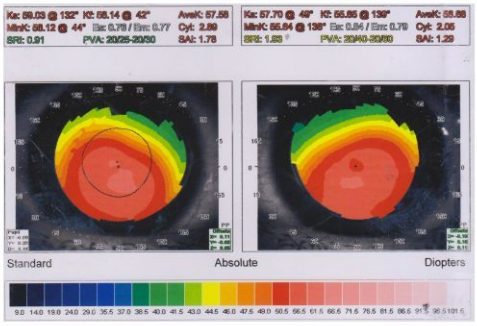
Mechanism of Action: collagen cross linking of the corneal (C_3R) is the only treatment modality which helps in stabilising the keratoconic process. It is a non invasive procedure in which photochemical reaction propagated by the riboflavin (Vitamin B2) in presence of UVA Light (370n ma wavelength) in the corneal stroma. It produces stiffening effect on the natural human corneal collagen. Interaction of these two liberated free oxygen radicals which produces the photo polymerisation of stomal fibres of cornea. The resultant cross linkage stiffens the cornea, thereby stabilising its shape & halting the progression.

Indications: Progressive Keratoconus, pelluid marginal degeneration & post lasik ecfacia. It could be combined with other procedures in specific cases like lasik, intracorneal rings, conductive keratoplasty. It gives temporary relief in pain in cases of bullous keratopathy.

Age: Ideally any patient who is showing progression can be planned for CXL treatment. In age group 10-25 years it is more common sometimes it progresses even in later ages between 25-35 years, they also need this treatment. After 40 it is unlikely to progress because age & diabetes itself promote collagen cross linking.

Technique: After putting topical paracaine drops, epithelial debridement should be done. ·1% riboflavin drops in Dextran 20% solution are applied 3 minutes for half hour UV-ray source (3 mw/cm^2) is focused at 5-10 cm above the cornea for 30 min. The riboflavin solutions must be reapplied on the cornea every 3-5 min during UVA exposure. If the corneal thickness is less than 400 u use hypotonic riboflavin solution. Newer TE riboflavin's have a higher concentration (·25%) with additive such as EDTA 2,





BAK & use transepithelially. Some surgeons prefer to leave an island of epithelium at the apex of the cone in case of thinner corneas.

Advancement: Flash linking or accelerated cross linking is also available these days various systems are available. They may deliver 5 mw/cm^2 for 18 min, 30 mw/cm^2 for 3 min or 45 mw/cm^2 for 1-2 min. It cuts down the surgical time and seems to be equally safe & effective in the short term studies.

Follow ups & post operative regime:

- Follow ups are done on 1st day, 4th day, after 15 days then monthly for a year.
- Topical antibiotic drops with lubricating drops are prescribed.
- Topical steroid drops only added after completion of epithelial healing.
- Contact lens removed after epithelial healing is complete.

Complications:

It complications are very rarely seen. Some patients develop microbial keratitis, endothelial damage, persistent epithelial defect & superficial corneal scarring. It is very simple, safe and easy to perform outpatient surgical procedure.

**" Greatness Is Not In Where We Stand ,
But In What Direction We Are moving ,
We Must Sail Sometimes With The Wind
And Sometimes Against It- but Sail we must,
And Not Drift , Nor Lie At anchor"**

ACHIEVEMENTS OF BDOS MEMBERS FROM 1st NOVEMBER to 31st October 2015

At International level

1. **Dr. Gajendra Chawla** delivered a talk in

a. International joint DOS-Uzbek conference on 12th to 13th Dec.2014 at Tashkent (Uzbekistan) on "Update on Diabetic Macular Edema".

b. 10th International telemedicine conference of telemedicine society of India (Telemedicom 14) from 7th to 9th Nov. 2014 at Bhopal. On "Telescreening for diabetic Retinopathy

c. 21st Bi annual meeting of International society for Laser in surgery and medicine on 19-20th August 2015 at Indore on :

"Pan Retinal Photo coagulation" & "Sub Threshold Laser".

2. **Dr. R. K. Gupta** presented paper on" Clinical Presentation and Outcome of Orbital Complications due to Acute Infective Rhino Sinusitis" and a video in 75th Annual conference of Asia Pacific Association of Cataract and Refractive Surgery Society held at Jaipur (Rajasthan) from 13th to 16th November2014
3. **Dr. V. K. Nichlani** presented a paper in World Congress in Tokyo in April 2015
4. **Dr.Saroj Gupta** presented a paper at 27th annual conference of *Asia Pacific Association of Cataract and Refractive Surgery Society held at Jaipur (Rajasthan)from 13th to 16th November 2014.Title-" Suppurative keratitis - Microbiological diagnosis and risk factors*
5. **Dr.Vinita Ramnani** delivered faculty talk in International joint DOS-Uzbek conference at Tashkent on 12 to 15th December 2014 and presented a paper and video at 27th APACRS jaipur from 13- 16th November 2014.
6. **Dr Nida Khan(3rd Year P.G. resident People's Medical College)** presented a paper in APACRS in August 2015 at Kuala Lumpur Malaysia.

At National level-

1. **Dr.Salil Kumar** presented two papers at AIOC New Delhi 2015
2. **Dr. R. K. Gupta** presented a paper in annual conference of Delhi Ophthalmic Society conference from 10th April to 12th April 2015. Title –" Challenges in management of chemical burn
3. **Dr. Gajendra Chawla** delivered a talk in 6th DOS annual conference 10-12th April 2015 on topic: (a)"Telescreening for diabetic Retinopathy" (b)"Macular Hole surgery - Some surgical dilemma".
4. **Dr. Vinita Ramnani**

a Honoured to present faculty talk at Glaucoma society of India 25thannual silver jubilee conference on 2-4th October 2015 at Mumbai. delivered faculty talk on "glaucoma in post vitrectomized eyes" at 66th DOS annual conference on 10th-12th April 2015

b was invited as guest faculty for 49th annual conference (Noida UPcon 14) December 20-21st 2014

At State level -

i. **Dr. Salil Kumar** received **I. B. Goel award** for best paper in paediatric ophthalmology and **R. K. Mishra award** at 39th annual MPSOS 2015,Ujjain

ii. **Dr. Vinita Ramnani** received best video award(**shri sadguru sewa sangh Chitrakoot Award)**at 39th annual MPSOS 2015 Ujjain for presentation at 38th MPSOS 2014 at Sagar.

iii. **Dr. Salil kumar** was invited for faculty talk in MPSOS 2015 at Ujjain.

iv. **Dr. R. K. Gupta** was invited as faculty in "Nayan Kumbh 2, 39th Annual Conference of MPSOS held at Ujjain from 23rd to 25th October 2015 . Delivered talk on "Benefits of Aspheric IOLs:

v. **Dr. Saroj Gupta** was invited as faculty in 39th annual MPSOS Conference held at Ujjain from 25th to 26th October 2015 delivered talk on Problems faced while approaching a child with squint and Challenges in management of pediatric cataract and in HOW to WOW session on- Diagnostic dilemma in a case of basifrontal space occupying lesion ,

vi. **Dr. V. K. Nichlani** was invited as faculty in 39th annual MP State Ophthalmic Conference held at Ujjain from 25th to 26th October 2015 on use of 30 gauze needle and a novel approach to post polar cataract by floating sign.

vii. **Dr. Gajendra Chawla** delivered talks in 39th annual conference of MPSOS at Ujjain on topic

"Combined Photo - Vitrectomy- A Vitreo Retinal surgeon prospective" & "Pearls for macular hole surgery"

viii. **Dr. Vinita Ramnani** delivered talk on secondary glaucoma following vitreoretinal procedure & video presentation on" Road to success for combined single site phacotrabeculectomy" in 39th annual conference of MPSOS at Ujjain

ix. **Free papers and poster presented by** following BDOS members in MPSOS Ujjain conference- Dr. Salil Kumar , Dr. Saroj Gupta, Dr. Prerna Upadhyaya,,Dr.Vasudha damle, Dr., Bhavna Sharma Dr, Prateek Gujjar and Dr.Mary Tigga.

INTERNATIONAL AND NATIONAL PUBLICATIONS-

1. Publication on Atypical presentation of orbital hemangiopericytoma By **Dr. Vasudha Damle, Dr. Rahul Agarwal, Dr. Nitin Garg and Dr. Hanni Gulwani** in International Journal Of User Driven Health Care ,4(3),46-55, ijudh 20140 70107
2. Publication by **Dr. Saroj Gupta and Dr. Rekha Mehani** in Int J Basic Clin Pharmacol 2015;4:1-5 on - A comparative study on safety and efficacy of travoprost and brimonidine/timolol fi xed combination in patients of primary open-angle glaucoma.
3. Publication by **Dr. Nida Khan, Dr. Saroj Gupta, Dr. V. K. Saini Dr P. Agarwal and Dr. M. Tigga** in National Journal of Community Medicine Vol 2 issue 2 April-June 2015 on - Level of awareness regarding eye donation among patients attending eye OPD at tertiary care hospital

Dr. V. K. Nichlani has been nominated as General Secretary MPSOS, **Dr. R. K.Gupta** as Treasurer MPSOS and **H. S. Patel** has been nominated as president elect MPSOS.

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INSURANCE & TPA's (Third Party Administrator)

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4. Star Health - Insurance
5. DHS (Dedicated Healthcare Services) - TPA
6. Apollo Munich Health - Insurance
7. Sphurti Meditech – TPA
8. Reliance Health Insurance
9. Raksha TPA
10. Paramount TPA
11. MD-India TPA

LIST OF EMPANALMENTS

1. M.P State Government
2. CGHS- Central Govt. Health Scheme
3. RSBY- Rashtriya Swasthya Beema Yojna
4. BSNL – Bharat Sanchar Nigam Ltd.
5. Police Welfare
6. IISER- Indian Institute of Science Education & Research
7. Airport Authority of India
8. Ordnance Factory - Itarsi
9. Punjab National Bank (PNB)
10. BHEL – Bharat Heavy Electricals Ltd.

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