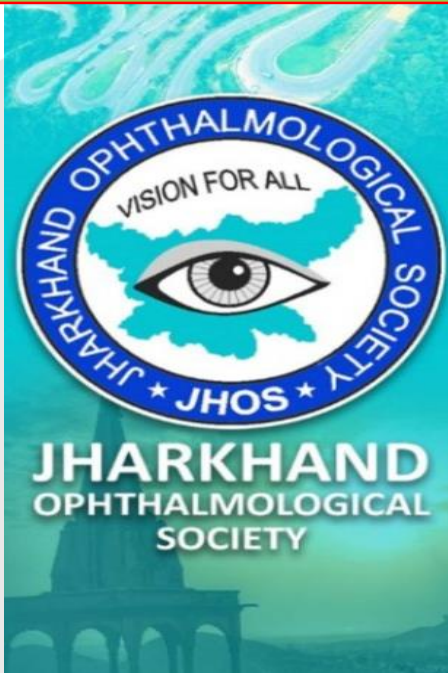


E - NEWSLETTER



Jharkhand Ophthalmological Society

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Webinars in Pandemic



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- **Reconstruction of Full Thickness Lid Defect - A case report - Dr. Subrata Kumar Mitra**



Editor Says -

Dear Colleagues,
Warm greetings. As you are aware that due to the present scenario of pandemic we are unable to bring out our journal this year. We are happy to publish this JHOS e-newsletter on the occasion of virtual annual conference of Jharkhand Ophthalmological Society 2020. The articles will surely be informative to the readers. I sincerely thank all who have contributed and supported in publishing this newsletter. We will definitely come out with super rejuvenated way in our 2021 issue of the JHOS journal. Long Live JHOS.

Regards
Dr.S.K.Mitra



Secretary Says

Honourable colleague,
We are facing the COVID-19 Pandemic which presents an unprecedented challenge to public health. We have to make difficult decisions every day. The fear of infection and hundreds of guidelines issued, make the situation more stressful for us.
Despite of all the complications and risks we have to put forth our best efforts in serving the community. Following the philosophy of "Life must move on" we are having our VIRTUAL annual conference and publishing the E- news bulletin this year.

Wishing you all a safe and healthy season.
Long live JHOS

Dr Bibhuti Bhushan
Hon. Secretary JHOS



CHAIRMAN SCIENTIFIC COMMITTEE SAYS -

Honorable Colleagues,
Greetings!
It gives me immense pleasure to inform you that after AIOS 2020 when all the conferences and scientific workshops got cancelled, I tried my level best to continue the Scientific Activities at great pace by organizing webinars with National and International Faculties on topics related to Ophthalmic Diagnostics and Surgeries as well as on safe OPD and OT patterns during Covid times.
Just before Covid times Jharkhand was represented very well in AIOS 2020 Gurugram by Dr Rajiv Gupta, Dr B P Kashyap, Dr Sunil Kumar, Dr Zahid Siddique, Dr Sujoy Samanta, Dr Bharthi Kashyap, Dr. Vijaya

Jojo, Dr Bibbhuti Kashyap, Dr Nidhie Gadkar Kashyap, Dr Seema Singh and Dr Payal Mukherjee. Dr.B.P.Kashyap won the best free paper award in Lacrimal Session for his paper on “Make your own Punctal plug” and the best physical poster in Cataract category. Dr.Vijaya Jojo presented two E posters & one poster podium in AIOS 2020.

JHOS feel proud to share that for maximum contribution in AIOS ARC Diabetic Retinopathy Research Project ‘ Jyot se Jyot Jalao – stop blindness Dr. Bibhuti Kashyap was felicitated by AIOS president Dr.Mahipal Sachdev.

I have tried my best to ensure pan Jharkhand participation of members of Jharkhand Ophthalmological society in various webinar.

The salient features of all the webinars was maximum participation from woman ophthalmologists.

JHOS was very well represented on International Forums that is annual virtual conference of American (2020 ASCRS Virtual May 16-17, 2020) and European Society of Ophthalmology (2020 ESCRS Virtual Oct 2-4, 2020) by Dr Bharthi Kashyap, Dr B P Kashyap and Dr Bibbhuti Kashyap.

First all India meeting of FBS-AIOS Women Empowerment & Networking Committee Chapter was organized on 27th Oct 2020 in Jharkhand.

JHOS was represented in AIOS Talent Search Series - East Zone by Dr Bibbhuti Kashyap on 4th Nov 2020.

JHOS was represented very well in various EIZOC Webinars.

Dr S K Mitra, Dr Bharthi Kashyap, Dr Bibbhuti Kashyap and Dr Nidhie Gadkar Kashyap were speakers in EIZOC Webinars dated 3rd May 2020 and Voice of East webinars dated 21st Oct and 25th Nov 2020.

“JHOS INTERNATIONAL WEBINAR” was organized with theme “NAVIGATING THE NEW NORMAL IN OPHTHALMOLOGY and HOW TO LIVE WITH CORONA” on 14th June 2020.

“2020 GLOBAL MID-TERM JHOS-BOS COMBINED WEBINAR” was organized on 12th of July 2020. The theme was “Crushed by Cataract Complications and Retrieval Strategy, Premium Patients, Premium IOLs and Premium Techniques.”

There were eminent guest faculties Dr Ravi Kashyap, Dr Lori Racsa, Dr Andrew J. Lancia from USA and Dr Ruth Lapid-Gortzak and Dr Pierre Bouchut from Europe in these two International webinars.

JHOS participated in “FIVE HINDIBHASHI Belt WEBINAR” on 23rd of June 2020. The theme was “कोवड-19 और हमारा अपताल” . In this webinar Dr Bibhuti Kashyap presented his topic in Hindi. It was meant for optometrists and OT technicians.

“TAKE A BREAK” webinar was organized on 25th of July 2020. Tips in Ophthalmic Surgery by Dr Chitra Ramamurthy and Dr HariPriya Aravinda and Innovators Session with Dr Nilesh Kumar, Dr. Jagdeesh Kakadia and Dr. Prithvi Chandrakanth as speakers was very well appreciated.

An innovative “RETINOPATHY OF PREMATURITY” webinar was organized on 19th of August 2020, which had an Interdisciplinary Approach, involving Obstetricians, Neonatologists and ROP Expert.”

AMD Webinar focusing on New OCT Bio Markers, Unmet Needs and Breaking the Barriers in Neo Vascular AMD was organized on 31st October 2020.

Annual Web Conference was scheduled in three parts with all the regular features that is Dr V S Gupta Gold Medal Competitive Free Paper Session (Winner - Dr Bibbhuti Kashyap), Dr Manjul Pant Gold Medal Competitive Video Session, Dr B P Kashyap Extramural Oration by Dr Partha Biswas and Dr Lakshmi Narayan Intramural Oration by Dr Lalit Jain. Topic of JHOS Symposium was Manual SICS with eminent guest faculties Dr T P Lahane, Dr M S Ravindra and Dr Ragini Parekh. Special FBS AIOS session was also organized with Prof. Dr Rajesh Sinha Gen. Secretary, FBS AIOS.

I assure you for more stimulating and rewarding scientific webinars in this testing time.





Dr Bharthi Kashyap
Chairman Scientific Committee, JHOS



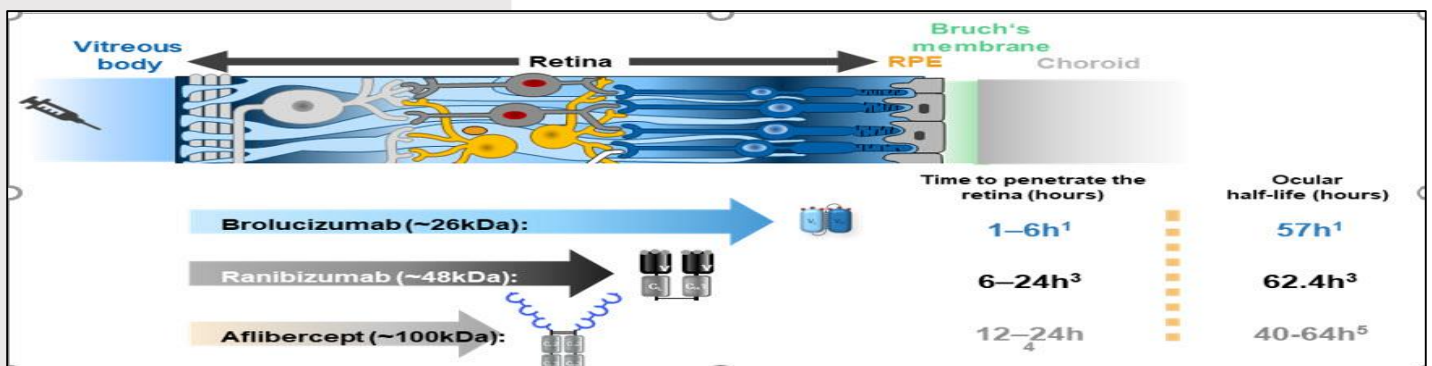
' BROLUCIZUMAB ' – NEW KID IN THE TOWN OF ANTI-VEGFs

- Dr. Bibbhuti Kashyap, Retina Services, Kashyap Memorial Eye Hospital, Ranchi

There are quite a few anti-VEGFs that are used in ophthalmic practice to treat a variety of conditions. Ranibizumab (Lucentis: Genentech, South San Francisco, CA) (Razumab: Intas Pharmaceutical Ltd, Ahmedabad, India * Bio-similar of ranibizumab approved only in India) Bevacizumab (Avastin: Genentech, South San Francisco, CA) and Aflibercept (Eylea: Regeneron, Tarrytown, NY) are currently being used in the management of diabetic macular oedema (DME), uveitic macular oedema, retinal vein occlusions and neovascular age related macular degeneration (nAMD) [1]. The latest drug brolucizumab is a humanized single-chain antibody fragment (ScFv) inhibitor of all isoforms of vascular endothelial growth factor-A (VEGF-A) and has a molecular weight of just 26 kDa when compared to its predecessors, bevacizumab (149 kDa), ranibizumab (48 kDa) and aflibercept (115 kDa). This is the smallest monoclonal antibody ever made in medicine.

	Aflibercept	Ranibizumab	Unlicensed bevacizumab	Brolucizumab
Format	VEGFR1/2-Fc fusion protein	Fab fragment	Full antibody (IgG1)	single-chain antibody fragment
Molecular structure				
Molecular weight	97-115 kDa	~48 kDa	~149 kDa	26 kDa
Clinical dose	2.00 mg	0.50 mg	1.25 mg	6.00 mg
Relative number of molecules per injection	1.0	0.5-0.6	0.4-0.5	11.2-13.3

While ocular half lives of Anti VEGFs are similar, the ScFv design of the molecule in addition to enabling a greater penetration through retinal layers also enables highest molar concentration of drug per injection. These theoretical advantages, practically translates to reduced burden of treatment on patients with respect to number of injections for treatment, and increased potency of the drug with respect to anatomical drying effect on macula.



HAWK and HARRIER are two similarly designed Phase III trials comparing Brolucizumab with Aflibercept to treat neovascular age related macular degeneration. These studies evaluated the sustained macular dryness (3 consecutive intraretinal and subretinal fluid free visits) achieved with Brolucizumab and Aflibercept, in terms of, the time taken, number of injections needed and its cumulative incidence rate at week 96. Studies demonstrated that 50th percentile of macular dryness was achieved significantly earlier with Brolucizumab albeit with almost similar number of injections as Aflibercept. 75th percentile of macular dryness was achieved significantly earlier and with significantly lesser number of injections of Brolucizumab (compared to Aflibercept). Cumulative incidence rate of sustained macular dryness was significantly higher in Brolucizumab arm at week 96 in both studies. Studies showed lesser central subfoveal thickness variability in Brolucizumab treated patients, which translated to better visual outcome, compared to Aflibercept.

Ocular inflammation has been reported with all the Anti VEGFs currently used in practice. However, the inflammation profile of Brolucizumab is different. Reports of occlusive retinal vasculitis with use of Brolucizumab, has raised concerns regarding its safety. Although, mechanism is still unclear, the occlusive vasculitis of Brolucizumab is different from Hemorrhagic occlusive Retinal Vasculitis (HORV) of Vancomycin. HORV is predominantly venous, with hemorrhages, whereas Brolucizumab associated vascular is predominantly arteriolar, and is rarely associated with haemorrhage. Mean onset of vasculitis has been reported to range from 17 days to 55 days, and the risk of onset increases with increasing number of injections. Early signs of anterior chamber cells, even in absence of frank retinal vasculitis, should prompt a retinal physician for early fluorescein angiography to detect subclinical signs of posterior segment involvement. Corticosteroids remain the mainstay of Brolucizumab induced vasculitis.

Although FDA has approved, a robust real world data is still needed to validate Brolucizumab's permanent slot in a retinal physician's armamentarium.

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Chandelier assisted Buckle

Dr. Shirshendu Mahato, Dr. Sourav Sinha, Dr. Rupak kanti Biswas,

Dr. Krishnendu Nandi, Dr. Sakshar Soumya Pal.

B B Eye Foundatio, Shree Tower-II, RAA 36, Raghunathpur, VIP Road, Kolkata

INTRODUCTION :-

Scleral buckling has been a highly successful technique for the repair of rhegmatogenous retinal detachment since its introduction in the 1950s.^{1,2} However, data suggest that there is a declining trend in popularity of this time-proven treatment. Recent American Society of Retinal Specialists (ASRS) Preferences and Trends Survey (PAT) asked surgeons: "In what percentage of cases of primary rhegmatogenous retinal detachment do you place a scleral buckle?" – 28.7% of US surgeons and 39.5% of European surgeons answered "0- 10%." ³This real world data shows the alarming downfall of Scleral Buckling procedure in recent times.

Primary reason for this declining trend may be because of significant advances in vitrectomy machine, instrumentation and visualization systems. Another reason could be the inability of learners to observe their teachers employing intraoperative indirect ophthalmoscopy in scleral buckling and the poor ergonomics related to buckle surgery. Despite these issues, scleral buckling is the preferred treatment modality for many indications like in young phakic patients, children with attached hyaloid or those with a retinal dialysis, as detaching the hyaloid and performing complete vitrectomy in such patients may be technically challenging. Scleral buckling also preserves the vitreous, which can be beneficial in the event that intravitreal injections, now commonly used to treat numerous retinal diseases (eg: CNVM developing in Young Myopes).

The recent introduction of chandelier endoillumination during scleral buckling could be a ray of hope in this struggling time of scleral buckling surgery. This method takes advantage of the advances in visualization technology through the operating microscope along with inherent benefit of conventional buckle surgery. As this method is completely done under microscope so it is also easy for the trainees to observe the complete procedure.

Aras et al in 2012 described the first transscleral fiberoptic-assisted scleral buckle, which consisted of a conventional scleral buckling surgery performed along with visualization and treatment of retinal breaks under an operating microscope using a torpedo-style light source inserted through a noncannulated sclerotomy.⁴ In 2013, Kita et al described an updated technique for endoilluminator-assisted scleral buckling using a 25-gauge fiber-optic chandelier light source through a standard trans-scleral cannula and a non-contact wide-field viewing system to identify and treat retinal breaks (cryotherapy) and drain subretinal fluid.⁵ Since then, promising but limited data from around the world regarding the use of this technique and patient outcomes have been published.⁶⁻⁹

THE TECHNIQUE :-

Chandelier-assisted scleral buckling surgery starts with a conventional 360° conjunctival peritomy followed by isolation and tagging of the rectus muscles.

A transscleral cannula is placed for the chandelier fiberoptic illumination system. Upon insertion of the chandelier light source, we use the operating microscope with a noncontact wide-angle visualization system for retinal examination and treatment of retinal breaks by cryotherapy.

In pseudophakic patients we preferably place chandelier system 180° away from the retinal breaks and in phakic patients it is placed 90° away from the break to avoid lens touch.

The primary retinal break is marked to determine the location for buckle placement.

At this point the chandelier light is removed and the cannula is plugged.

The buckle is then sutured in place.

The chandelier is reintroduced through the cannula for visualization of buckle height and assessment of the relation of the retinal breaks to the supporting buckle. Drainage is also done under direct visualization when needed.

After confirming the optimal buckle position again the chandelier light is removed and the cannula is plugged.

Buckle sutures are then finalised. Transscleral cannula is then taken out and cannula site sutured with 7-0 vicryl after confirming no vitreous prolapse. Conjunctiva is closed with 7-0 vicryl suture.

ADVANTAGES OF THE CHANDELIER :-

The main advantages of use of a chandelier endoillumination system are improved visualization and better ergonomics during scleral buckling surgery. Studies also showed that this method reduces the overall surgical time than conventional procedure.

Missed breaks are common causes of recurrent detachment in scleral buckling which is mostly due to poor visualisation. This procedure has a great potential to reduce the incidence of missed breaks so to reduce the incidence of recurrence by providing better visualisation. The combination of a wide-angle viewing lens with diffuse endoillumination provides excellent visualization of retinal breaks, even in the far periphery, ensuring accurate identification and precise cryotherapy of all breaks. Indeed, several studies reported the identification of retinal breaks intraoperatively that were not seen on pre-operative examination. Wide-field viewing may also make subretinal fluid needle drainage safer.

All team members share the same surgical view in chandelier-buckling surgery. This helps in surgeon-team communication during the surgery and it also helps in teaching as the instructor may directly supervise trainees during cryotherapy and subretinal fluid drainage. By permitting the use of the operating microscope it is possible to video record all the steps of the surgery which in turn becomes a great tool in teaching as well as in documentation.

This procedure reduces assistant dependency by precluding the need to continually switch between indirect ophthalmoscope and operating microscope. This, combined with the benefit of better overall visualization through the cornea, potentially shortens the duration of the procedure. Finally, chandelier-assisted scleral buckling is ergonomically better than conventional one and may help to reduce related musculoskeletal injuries, which are quite prevalent among retina specialists.

OUR EXPERIENCE :-

We did a retrospective evaluation of all Chandelier assisted Scleral Buckle surgery done in our centre in the last 5 years. Total 80 cases were done by 5 fellowship trained senior vitreoretinal surgeons. The recurrence rate was low, where only 6 cases had recurrences. In our experience the overall surgical time was also reduced when compared to conventional buckle surgery. This is also a good way to teach Buckle surgery to fellows as every step can be supervised. Even with this encouraging results, 3 out of 5 surgeons are not doing this method any more as they are more comfortable with conventional technique and are not willing to adapt to any modification.

CONCLUSION :-

Although data suggest that Scleral Buckle results in improved outcomes for many patients but the popularity of the scleral buckle is gradually declining. This may be secondary to the improved visualization afforded by contemporary wide-field viewing systems used during Pars Plana Vitrectomy. Chandelier assisted buckle is a novel advancement that perfectly blends traditional scleral buckling with contemporary vitreoretinal visualization through wide-field viewing systems. So, this technique has a great potential to bring a distinct advantage to the performance and teaching of scleral buckling. The fading art of scleral buckling, which has many indications and advantages in selected situations, can survive with this little modification.

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“Reconstruction of full thickness lid defect” – A case report

**Dr.S.K.Mitra, Consultant Phaco Surgeon,
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In congenital anomalies, trauma and post-excision of neoplasm, reconstruction of the eyelid defect for functional and cosmetic purpose is very important. There are different techniques for reconstruction of the upper and lower eyelid. The lining should be similar to the conjunctiva, a cover by skin and the middle layer to give firmness and support. One layer should have the vascularity to support the other layer.

The eyelid defects classified according to the age of the patient [3]:

SIZE	YOUNG	OLDER
Small	20% - 25 %	30%
Moderate	30% - 50%	30% - 60%
Large	50% and above	60% and above

Moderate to large size defects can be reconstructed with Mustarde’s lid switch flap.

According to Mustarde , “When the eye is still present, reconstruction of an eyelid or even a part of it requires a minimum of three elements: an outer layer of skin; an inner layer of mucosa; and a semirigid skeleton interposed between them.” The reconstructed eyelid must conform to the curvature of the globe[1,2]. In 1980 Mustarde designed a lower lid full thickness flap to rotate through 180° with its blood supply running in an isthmus 5mm wide at the lid margin. The length of the lower lid rotation flap may be a quarter less than the length of the upper lid defect. The principle is to create a broad-based full thickness flap of the lower lid, rotated into the defect of the upper and reconstruction to complete in two stage procedure.

A Case Report :

A 63 years old housewife presented in our clinic with a recurrent ulcer in the left upper eyelid (Fig: 1 & 2). She was treated with various antibiotic , steroid, antifungal drops and ointment for one year before but the ulcer refused to heal. Mustarde’s lid switch was planned and the ulcer with tumour mass was excised leaving behind a defect in the upper lid(Fig: 5 & 6).

The defect of the upper lid is transferred into the lower lid. The upper lid defect is measured and the lower lid is marked accordingly 4mm less than the actual defect but of the same height as the mobility would be affected if it is lax. The lower lid is incised full thickness except at the medial side of the hinge 4mm from the lid margin. The switch flap is turned up swung into the defect and inserted as far as possible into the defect lying above the flap base and sutured(Fig : 7 & 8). The switch flap is the method of reconstruction which gives the natural looking lashes to the upper eyelid. Two weeks later the base of the flap is divided and the rest of the lower lid is rotated into the remaining upper lid(Fig : 9 & 10).



Fig:1 (Pre-op. Lid closed)

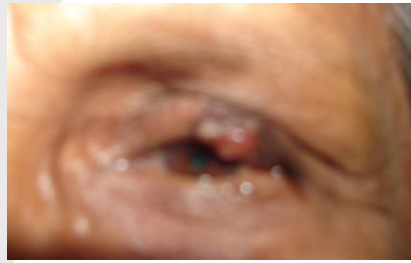


Fig: 2 (Pre-op. Lid open)



Fig : 3



Fig:3&4:Plan for a full thickness Lower lid flap rotation through 180°



Fig:5:The defect after excision

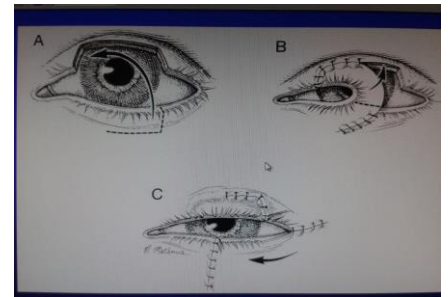


Fig:6:The Pedicle graft as planned



Fig : 7 & 8 (The first stage, Pedicle flap grafted from the lower lid)



Fig:9 & 10 (The base of the flap is divided & the rest of the lower lid lid is rotated into the remaining upper lid along with canthotomy)



Fig:11:Final suture removal after three weeks

Discussion :

Mustarde sets out three rules [4] : -

- 1.If there is a remnant of the upper lid, the lower lid is hinged on the same side.
- 2.If the defect is central or total, the hinge is placed on the lateral side.

3.The lacrimal punctum of the lower lid is not included in the flap.

These prevent notching of the reconstructed upper lid, limit edema of the transplanted lid and also preserve lacrimal drainage. Shortcomings of this procedure are the time lag for the separation of the lids and due to this, it is not useful for monocular patients. The drawbacks are edema which may persist for a long period, and total loss of flap. Extensive dissection is needed if the entire upper lid is to be reconstructed. Entropion and lack of lashes are the other drawbacks. It is an excellent method of reconstruction in defects following the excision of cancer mass.

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