bida JOURNAL

BRITISH INTERNATIONAL DOCTORS' ASSOCIATION

THE JOURNAL OF **THE BRITISH INTERNATIONAL DOCTORS' ASSOCIATION**

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Diversity and Inclusion in Surgery in the NHS

BIDA National Conference Announcement

Notice is hereby given that the
2022 National Conference
of the
British International Doctors' Association
will be held on **Saturday 8 October 2022**
at the **Potteries Museum and Art Gallery**
Stoke-on-Trent, Staffordshire
Hosted by BIDA's Stoke-on-Trent and Staffordshire Division.

(All fully paid members are cordially invited to attend, but please note that prior notification to Central Office is required).

BIDA 2022 AGM / ARM Announcement

Notice is hereby given that the 2022
Annual General Meeting / Annual Representatives' Meeting
of the **British International Doctors' Association**
will be held on **Sunday 9 October 2022** at
The Function Suite, Mirchi Restaurant,
60 Snow Hill, Hanley, Stoke-on-Trent, Staffordshire ST1 4LY

(All fully paid members are cordially invited to attend, but please note that prior notification to Central Office is required).

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Editorial

Mr Amit Sinha FRCS (Tr&Orth) Consultant Orthopaedic Surgeon Media & Communication Lead, BIDA Editor, BIDA Journal.

Last month has been dominated by news of the injustice meted towards Dr Manjula Arora. The huge uproar by the doctors community and solidarity by all organisations representing International Medical graduates, DAUK and the BMA seemed to show the true face of the GMC and the MPTS. The GMC has wrongly applied the "dishonesty test" and finally overturned their original decision. We will eagerly wait for their findings following a review of the case, which is expected to be published in September.

What I am concerned with is how many previous cases are we unaware of where the GMC has taken the wrong decisions? Sadly, they will remain lost. However, we must remain vigilant and tackle any injustice meted out to our colleagues. We urge our colleagues to come forward and contact us if they are in any difficulty.

Record Waiting Lists

The health secretary has repeatedly suggested that the problems around record waiting lists have been prompted by the pandemic.

Before Covid, we had waiting lists of over a year for patients to get surgeries. Currently it is a two-year plus wait-list. Covid has undoubtedly compounded it, but it was happening before the pandemic. The balance between increasing demand and resources has never been coordinated. We don't have enough staff or theatres; we don't have enough senior doctors or trained nurses. I doubt whether this will ever improve. Progress in the past fifteen years has been beset by poor planning and a lack of investment. The NHS is a source of inspiration for many around the world apart from this particular issue, which requires urgent attention.

Injustice to South Asian People with dementia

Thousands of south Asian people with dementia are being failed by archaic health and care services designed for white British patients, according to an alarming review done by Dr Karan Jutlla, the author of the report and Dementia Lead at the University of Wolverhampton. The warning is that the UK is "woefully unprepared" to cope with a predicted sevenfold increase in cases.

Getting a dementia diagnosis in the first place is often more difficult for South Asians, her review says, because of a *"lack of culturally appropriate diagnostic tools"*. Because questions in some cognitive tests are about significant events in UK history, many first-generation south Asian immigrants have insufficient knowledge to complete the assessments.

People of South Asian heritage in the UK are more likely to develop the disease than the general population due to their higher risk of illnesses, such as heart disease, stroke and diabetes that increase the risk of dementia. Moreover, with increasing life expectancy of South-Asian origin, the number of them living with dementia is set to increase by 600% within the next three decades.

This is quite alarming and steps must be taken to address this. Dr Mani Santhana Krishnan, the chair of the old age faculty at the Royal College of Psychiatrists, said there was an "urgent need" for translated health information for patients of all backgrounds.

Articles in this edition

This edition focuses on "Diversity and Inclusion". It is high time we spread the word that BIDA respects people with all varied characteristics. Ajit Sinha in his article advocates that *"To develop a respectful and accommodating world we have to learn to overcome racism and bigotry"*. The article gives an excellent interpretation of Diversity and the value of Inclusion. The next article paints a true reflection of the issues that encumbers the NHS for those whose aims are to develop their expertise in Surgery.

Nouby and Bhatt do great justice to update the advances in diagnosis, imaging and surgical techniques in Neuro-oncology. Hassan and Shankar present the clinical features of "Ocular Toxicity with Hydroxychloroquine". Their recommendations for monitoring are an essential read for all GPs and those who practice in the field of Ophthalmology. Mr Kaushik debates on the issue of retirement. I presume opinions will vary widely amongst all of us, but he does come out with some very valid arguments in favour of not retiring early. That's some food for thought!!!

I am so pleased to say that face-to-face meetings are back. We are now more confident and have left our Covid fears behind. Don't forget to diarise the dates of BIDA's National Conference, coming up on 8th October this year at Stoke on Trent, followed by the AGM/ARM on the day after.

"The function, the very serious function of racism is distraction. It keeps you from doing your work. It keeps you explaining, over and over again, your reason for being. Somebody says you have no language and you spend twenty years proving that you do. Somebody says your head isn't shaped properly so you have scientists working on the fact that it is. Somebody says you have no art, so you dredge that up. Somebody says you have no kingdoms, so you dredge that up. None of this is necessary. There will always be one more thing." *Toni Morrison.*

Amit Sinha Editor, BIDA Journal.

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Instructions for Authors

BIDA Journal is a peer-reviewed journal. We welcome original articles from physicians, surgeons and medical students from any part of the world. These include review articles, scientific articles, case reports, audits and letters to the Editor. Please visit BIDA's website for instructions.

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Instructions for Authors

BIDA Journal is a peer-reviewed journal. We welcome original articles from physicians and surgeons, medical students from any part of the world. These include review articles, scientific articles, case reports, audits and letters to the Editor. Each submission would be peer-reviewed and then discussed by the members of the Editorial committee at a meeting prior to publication and then either accepted for publication or rejected by the Editor.

Proofs of the edited paper are emailed to the corresponding author for correction and to respond to any queries from the Editor. Once the article is published the authors would receive a free PDF version of the journal. The printed copy would be sent to the author if requested for.

Manuscript guidelines

1. Review articles do not have a word limit but all other submissions would have a limit of 4,000 words or less.
2. We only accept papers that have 5 authors or less. Please list only those authors who have positively contributed to the article.
3. Papers should be divided into headings, which are relevant to whether it is a review article, scientific article or case support etc.
4. The conclusion should be clear and relevant to the work described in the article. Do not repeat the introduction.
5. References in the text should include only those are important and have been studied in full by the authors.
6. It is expected that each article should have a take home message wherever relevant. Please write a brief text or learning points, which should be put in a box as a take home message to explain the relevance of the article.

References

1. References should only be used for published work.
2. They should be presented using the Vancouver system by superscript numbers in the order of the appearance and not in alphabetical order.
3. The list of the references at the end of the text should be with details and punctuation as follows:
   - List names and initials of up to 3 authors after which you could add et al.
   - There should be space between words up to the year after which no spaces.
   - The Journal title should be in italics and preferably in the abbreviated form as it appears in Pub Med. If the journal is not Pub Med index linked then put in the whole name.

Examples:

Journal Reference:

Phillips AM, Wiliams DJ. Ultrasound and the diagnosis of metabolic disorders. J Metabolic dis 2013;95-B:1 – 5.

Book reference:

Watson-Jones R. Fractures and joint injuries. Vol. 2. Fourth ed. Edinburgh: Churchill-Livingstone, 1955:744-5.

Chapter in a Book:

Wilson RA, Frank VH. Complications of implant use. In: Epps CH Jr, ed. Complications in ENT surgery Vol.1. Philadelphia: JB Lippincott Company, 1978:99 – 129.

Web reference:

International commission on radiological protection. http://icro.org (date last accessed 20 September 2009).

Abstract reference:

Sinha L. DVT in Shoulder surgery [abstract]. BOA Congress, 2011.

Figures

Please include as many figures as it is relevant to the article but you must ensure that you split the figures into separate images, as they will need to be uploaded individually. Each figure would require a short description. For x-rays, please ensure that you state the view used for that radiograph. The figures should be numbered as 1, 2 and 3 separately.

Tables

We do accept as many tables as it is relevant to the article. Each table should have a short descriptive heading or legend. Tables must not duplicate information already in the text.

Acknowledgements

These should be made onto a separate page at the end of the text.

Submission

Once you have read the guidelines and are ready to submit your article please ensure all elements are included in the same document. They are to be sent to the BIDA office or the Editor. The email address is as follows:

bida@btconnect.com

amitani2000@yahoo.co.in

1. On a separate page with the articles heading please include the details of all the authors, their designation and their place of work.
2. The author who submits the article must include his/her email address for further correspondence.
3. Once the article is accepted then it is the Editor who would be asking for photographs of each individual author, which will be uploaded and printed with the article in the Journal. Please ensure that these photographs are in JPEG format.

Letters to the Editor

We do welcome letters to the Editors on matters of general medical concern, the NHS or about any recently published article. To submit letters please write directly to the BIDA office or the Editor – all letters should be under 300 words.

Copyright agreement

If the paper is accepted for publication it is to be accepted by the authors that they are bound to an assignment of copyright. The articles become the property of BIDA Journal.

Conflict of Interest

A conflict of interest statement (if applicable) should be submitted by the author/authors to the Editor for any article, which is accepted for publication. This statement would have no bearing on a decision whether to publish or not to publish.

Amit Sinha FRCS (Tr&Orth)
Editor, BIDA Journal

Date: 01.07.2022

National Chairman's Report

Dear Colleagues,

I hope you and your loved ones are keeping well. Over the last few months we have had a big respite from the Covid-19 pandemic. Although Covid-19 cases keep fluctuating, courtesy of the vaccine programme, life in the UK is reverting back to normality. In my opinion I believe all key workers deserve recognition for the sacrifices made in the last 2 year. However, we should still remain vigilant against Covid-19.

We have all been aware of the unfortunate 1-month suspension of Dr. Manjula Arora. BIDA along with other organisations has taken this case up with the GMC with the utmost severity and after a series of conversations with the GMC, the decision has been overturned and the suspension has been withdrawn. Whilst BIDA welcomes this positive step from the GMC, this case simply highlights the amount of work that needs to be done within the GMC to stride forward and ensure equality and fairness is present within the organisation. It is only due to the pressure applied by BIDA and other organisations that the GMC has allowed an independent review of the case to get to the bottom of this issue and apply lessons learnt so that this doesn't happen again.

Professor. Iqbal Singh a member of BIDA is a representative of the 2-man review team. We remain hopeful that this panel will get to the bottom of this case and insight and wisdom from this case will be applied by the GMC to improve equality and fairness within the medical workforce.

This week also saw Dr. Chaand Nagpaul complete his term as BMA chair. On behalf of BIDA, I would like to thank Chaand Nagpaul for his efforts in highlighting issues faced by BAME and IMG doctors. I would highly recommend that our BIDA members read the BMA report on racism that was commissioned by Dr. Nagpaul. This report makes for a very difficult read in terms of how far away we are from true racial equality and with this backdrop it comes as no surprise that cases like Dr. Manjula Arora keep on happening within the NHS.

BIDA is slowly returning to a normal level of activity regarding conferences and social events. I would urge all members to register for the upcoming BIDA National Congress, which is taking place on 8th October at the Potteries Museum Educational Forum at Stoke on Trent. We have a list of eminent speakers lined up for the day.

The Presidents Cup cricket tournament which is currently on is drawing a lot of interest from various divisions.

The current edition of BIDA Journal once again has a perfect mix of various medical fields that ensure there is something for everyone to read.

Enjoy the summer,

Best Wishes

Dr Ashish Dhawan
National Chairman, BIDA

National Secretary's Report

Dear Members,

Since the start of the new team taking over, we have seen tremendous enthusiasm within our ranks with strategies and focus to achieve our goals. One of the principal strategies is collaboration between all the various IMG organisations. We have jointly represented issues to the respective offices of the government continually through the Covid period and now. You will be pleased to know that the major organisation's representatives of BAPIO, APPNE and BIDA met recently face to face to discuss issues and plans to further strengthen this collaboration. This indeed represents a coming together of all the ideals, which were set by the founder members of our organisation.

Rebuilding the "Mentorship" programme for our new members and other IMGs coming through is another strategy I am passionate about. This requires a concerted effort from all seniors. We are all aware of its need but the drive for this strategy has been slow. I am hoping this will gather momentum in the coming year. I wish to encourage you to do the NHS mentoring and coaching course.

We are now in the process of updating our database. I request all members to ensure their emails and correspondence addresses are up to date. Letters are being posted to all division leads with the members' list of their division.

I wish to congratulate John Raj Muthiah and Aarushi Dadhich for organising and conducting our first ever Public Health Forum meeting. It was a very successful event.

The cricket season has brought all divisions together. It was wonderful cheering our teams on the field. The Final, between North Wales Division and Wigan Division, is being held on 7th August at Appleton Cricket Club at Warrington. I wish to invite all cricket lovers who wish to have some fun and encouraging the teams to attend.

Mr Amit Sinha
National Secretary, BIDA

G.P. Forum Chairperson's Report

Dear Members,

First of all I would like to thank you all for your hard work and dedication in providing excellent patient care in these challenging times. From providing Covid vaccinations at the time of the country's need to overseeing the population's health and chronic disease management, you have excelled in all areas.

It's unfortunate though that the government hasn't really taken this into account, and has reduced the tariff for Covid vaccinations alongside continuing with more tick-box exercises and hoops to jump through for funding, rather than investing in core general practice.

GP's are also likely to be facing huge tax bills if the pension reforms don't go ahead. As your chair I have highlighted these issues and have worked in conjunction with the BMA to lobby the government.

Your support as always is very much appreciated.

Dr Preeti Shukla
Chairperson, G.P. Forum, BIDA

Notice to all members:

DIVERSITY, EQUALITY & INCLUSION STATEMENT:

BIDA values diversity and celebrates the contributions of people of all backgrounds, across age, ethnicity, race, colour, disability, religion, faith, socioeconomic status, culture, marital status, languages spoken, sex, sexual orientation, and gender identity or expression. We go beyond and respect differences in ideas, thoughts, values, and beliefs.

We believe that all people hold visible and invisible qualities that inherently make them unique, and we strive to create an inclusive culture where each person knows they are valued and belong.

bida Public Health Forum Conference report

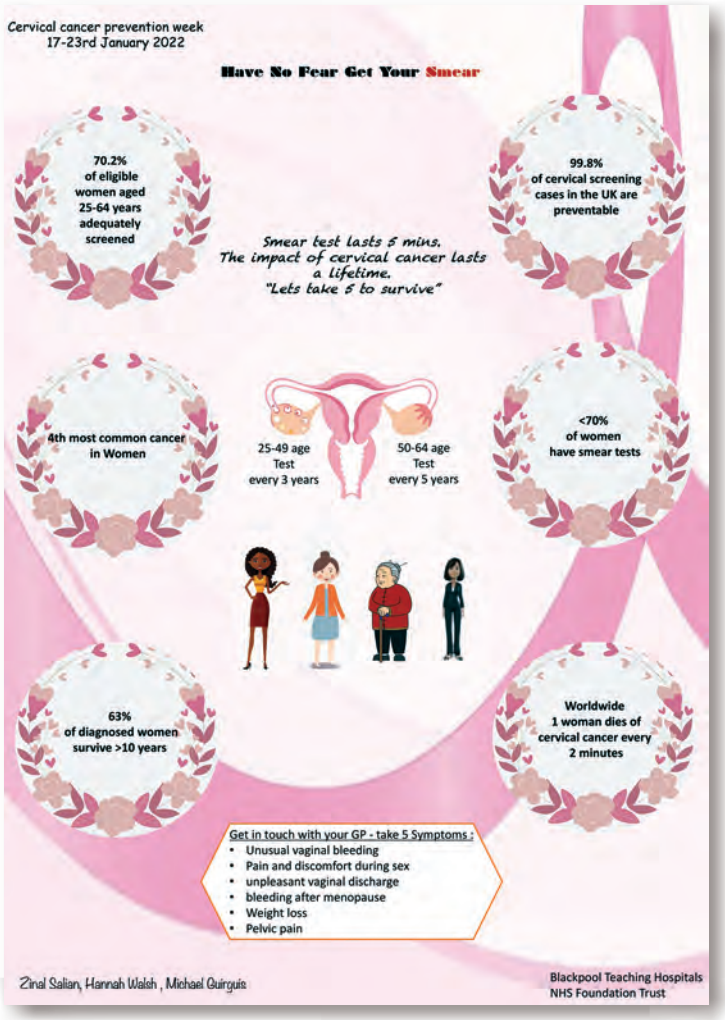
We have had a very successful first Public Health Forum Conference which was held on Saturday 11 June. This was an online conference with delegates from the UK and India, and featured an array of talks on varied essential subjects relating to Public Health.

The event started with the *Introduction* given by the BIDA National Chairman, **Dr. Ashish Dhawan**, which was followed by the *Events of the Day* voiced out by **Dr. Dadhich**. The speaker introductions were alternated between **Dr. Dadhich** and **Dr. Raj**.

The 1st topic – *Dry January* – was given by **Dr. Rakesh Sharma**, and was followed by the talk on *Cervical Cancer Prevention* given by **Dr Fatima Khattak**. The 3rd topic covered *International Obesity Awareness Week*, whish was given by **Prof. Siba Senapati,** and was followed by a presentation on *The Impact of Tropical Diseases in Developed Nations* which was given by **Dr. M. S. Regan**. The final topic, on *World Leprosy Day & Polio Awareness,* was given by **Mr. Amit Sinha**. We had an actively engaging participation from the delegates with regards to question and answers post the presentation for each topic.

The Judges for the poster competition were **Professor Sanjay Arya** & **Dr. Rakesh Sharma**. The 7 entries received were all of a high standard. The *Judges Note* was given by **Prof Arya** along with the *Announcement of the Winners* (the winning entry is shown right), with the winners being invited to become members of BIDA with their first year being free.

The programme ended with the *Conclusion*, given by **Dr. Raj**. There are plans to regularly hold such conferences in the future.



Humanity

The Caretakers of an Equal World

Ajit Sinha MBA MSc CPHR SHRM-SCP RCIC Principal Consultant, Checkpoint Immigration Strategies, Canada

Introduction

"Tackling racism in any form is one of the keys to survival of humanity's well being and happiness. As individuals, what we want from our lives - one way or the other is happiness - personally, and professionally. The modern world has come a long way in taking corrective steps to solve for poverty, hunger, and wars. There have been strides made to solve for discrimination. To develop a respectful and accommodating world we have to learn to overcome racism and bigotry. This article is an attempt to understand what this malaise is and why it is imperative that we solve for it - sooner than later."

Equal at Birth

I was born and educated in India, like millions of my brothers and sisters – all at the moment of birth - born equal. For three decades, I worked in India and then immigrated to Canada and continue to work there aiming to cross another decade. I have seen racism, explicit and implicit, in many forms in my own birth country and the first world. Any incident or event has only strengthened my resolve to rise above the discriminatory actions of perpetrators and demonstrate better results. You will ask why? The reason is to rise above petty actions. Did I not see racism in my own country? I did. The difference was that in India, I learnt that "diversity" is the norm and this skill was already ingrained in me by working and living with people coming from different backgrounds, religion, colour, languages, gender, and facial features. However, there was one common binding factor. We all belonged to the same country. The Indian government and its services are not as equitably distributed [1] as it ideally should be. There are privileged classes and many underprivileged groups and communities. It pains me when I see an inept government machinery and its poor strategies to end exclusion and show usher in inclusion. However, let me categorically state that the intent to bridge the gap is there. Our culture and mythology have several anecdotes to teach what should be done when there are atrocities heaped on people who are at the receiving end[2]. With several religions thriving simultaneously, the Indian diaspora inherently has learnt to be accommodating. Corporates have begun focusing on diversity and workplaces have become increasingly inclusive. It is understood that there is an urgent need for systemic Diversity, Equity, and Inclusion (DEI) efforts.

However, underneath the veneer of fairness, equity, and inclusiveness, there is a side of my country that needs more work. The ancient caste system continues to drive society. There are the superior Brahmins, the Kshatriyas, Vaishyas and the Shudras or Dalits. Women in each category are the oppressed lot. Religious discrimination continues to be prevalent. There's constant news of brutality against minorities and violence between various religious communities. Even then the

government machinery remains dormant and oblivious to heinous crimes. "There has been a consistent decrease in the quality of political discourse and critical thinking in India," Cynthia Stephen, an independent researcher on gender, poverty, and development and policy issues, told Insider[3]. A priest with two of his henchmen, gang raped a 50-year-old woman and left her to die in the street. A brother murdered his sister and buried her in the family field after she married a Dalit boy even after the family's disapproval. In 2018, a Dalit girl was beheaded in front of her mother by a man of higher caste because the girl had accused him of sexual advances. There have been many advances in modernisation of the country's infrastructure, but the backdrop is brutality against minority. There are absurd laws promulgated like the citizenship act which are disadvantageous to the Muslims. In 2020, Muslim festivities and celebrations were broken down by the police while some days later a Hindu festivity was allowed. The leaders in the country are so obsessed with religion, caste, and race that they're allowing these factors to affect our laws and policies. There is mass intellectual bankruptcy among the leaders. India is a massive country with potential to be a player on the global stage, and it is baffling why it takes one step in the right direction and four backwards in the direction of mayhem and anarchy making any action to achieve diversity, inclusion, and belongingness a total farce.

The Seat at the Table – But at a distance

Diversity is having a seat at the table; inclusion is having a voice and belonging is having that voice heard. This quote from the "Culture Chapter" of Liz Fosslien and Mollie West Duffy's book[4], "No Hard Feelings", defines what should be the end goal for humanity to achieve in our combined task to make this world inclusive. For corporate cultures to truly drive the spirit of belongingness among employees, *Business leaders must be ready to take a bold stance to make the world better for employees, for consumers, and for the greater community*[5]. As a black man, James D White and his daughter Krista White, demonstrated a deep understanding of how to operationalize and integrate DEI agendas in Jamba Juice, the global smoothie chain. As their CEO and Chairman, James made the company a model of strong performance built on a foundation of a diverse, anti-racist culture. In the world, we have seen many horrific instances of racist incidents leading to deaths as well as in many cases mayhem and unrest for months. Leaders made promises to drive actions to institute fairness and educate the masses in making our environment more diverse, equitable and inclusive. James White succeeded in driving practical techniques in empowering leaders by asking themselves: What can I do?

The United States of America has regularly seen incidents of discrimination and / or racism. Statistics support the theory that discrimination is a prominent and critically important matter in American life. *The findings of the 2017 study developed by the Harvard T.H. Chan School of Public Health, Robert Wood Johnson Foundation and National Public Radio (NPR), reveal widespread experiences of discrimination across many groups in America, and the significantly different manifestations and experiences of discrimination across different groups*[6]. The status has not dramatically improved or changed in 2022. The survey interviewed 3,453 people, including African Americans, Latinos, Asian Americans, Native Americans, Whites, and LGBTQ adults, as well as men and women seeking their response whether they had faced institutional or individual discrimination. The results indicated the appalling situation. Whether you are applying for a job, interacting with police, getting paid lesser for the job you do, going to the doctor and experiencing slurs every day, people have experienced negative assumptions or insensitive/ offensive comments. *Overall, the reports portray a complex experience of discrimination across different areas of life and different groups in America. They demonstrate that, rather than isolated incidents, these experiences reflect a larger, systemic pattern of discrimination in America, with significant implications for the health of both individual Americans and the nation as a whole*[6].

Let us look at the United Kingdom. It should not come as a surprise that major ethnic and racial inequalities exist in the same areas as the USA. The government data supports the fact that all ethnic groups (other than white), have been at the receiving end of unfair treatment for employment, at work, housing, the justice system and the police[7]. Non-white employees in the model organisation, National Health Service have experienced discrimination and harassment at some points in their career. Muslims in the society are victims of Islamophobia. Blacks are at equal risk of facing discrimination when searching for jobs or finding homes in the UK. Field experiments have supported the wide discrimination faced by ethnic groups across the UK.

It is 2022, and in the modern world it is strange to find out that white Britishers believe that some races are born less intelligent than them and some races or ethnic groups are born harder working than others. British citizens with Muslim, African or Indian names were less likely to get a response for a job than a white applicant. However, let us give credit to former British prime minister, Theresa May[8], who pledged to tackle the burning injustices in 2016 and gave directions to create the government's pioneering ethnicity facts and figures website which brings together in a single accessible format the hard evidence on ethnic disparities. The only way to introduce corrective measures has been best explained in the words of Professor S Michael Griffin, President of The Royal College of Surgeons of Edinburgh. *"Equality and diversity is not just a commitment– it is about living and breathing inclusion of all our people. Supporting the qualities of one another that make us different and those that bring something new to the table. We must listen, learn and act to encourage everyone to feel comfortable and confident as the person they truly are. We will only succeed in delivering the best in Patient Safety if our people reflect the world's complete diversity of individuals, beliefs, and approaches to their life in and out of the workplace. Making a difference for all is Making it Inclusive for all.*[8]"

Canada is a land of immigrants, but sadly it also has its fair share of discrimination. The government of Canada on February 16, 2022 has published a detailed 2019 survey report[9] on discrimination in the society. In Canada, discrimination based on race, national or ethnic origin, colour, religion, age, sex, gender identity or expression, sexual orientation, marital status, family status, disability, or conviction for an offence which has been pardoned are formally prohibited by law. Even then discrimination against Indigenous, Blacks and the minorities continue to take place. *Discrimination was more common among the*

Indigenous population than among populations who are both non-Indigenous and non-visible minority (33% versus 16%). More specifically, 44% of First Nations people had experienced discrimination in the 5 years preceding the survey, as had 24% of Metis and 29% of Inuit[9]. Canadians are famous for being polite but, they are not as benevolent as people think they are. Incidents of anti-Black racism and police use of force has brought Canada into the public scrutiny at par with the USA. Even though police killings have not been limited to the United States – Rodney Levi and Chantel Moore died in New Brunswick, Ejaz Choudhry in Ontario – there's been pushback over the idea the two countries struggle with the issue to the same degree. There needs to be constant check and review of systemic discrimination so that work can be successfully done to achieve an anti-racist community.

Need of the Hour

What is it that you must do differently to remove systemic discrimination, address people's thoughts which are not aligned to inclusive behaviours, educate the general masses that race is not a predictor of success? The requirement is to adjust resources, transform systems and remove obstacles to create fair and just opportunities and outcomes for Black, Indigenous, and other people of color (BIPOC) so that they are supported toward success. It takes just one person to change a community. Kimm Campbell, an assistant county administrator at Broward County Government in Florida in USA, is a sparkling example of how to support anti-racism efforts in her county[10]. Kim is adopted from the child welfare system by White parents and has seen and experienced the fight for racial equality throughout her life. Learning from her experience, the following basic interventions are recommended.

1. Racial Equity Training beyond unconscious perceptions and implicit bias
2. Identify systemic defects and implement corrective measures
3. Focus away from individual cases of bigotry. You cannot correct them.
4. Have common assessment measures and communication language
5. Craft new rules, services, policies, and procedures using an antiracist lens.
6. Build an infrastructure of support to implement the learning
7. Encourage meeting between different race groups to deepen their analysis on racism and race equity work

Accepting that racism exists within our society is the important first step, we cannot solve for a problem when we do not adequately identify the problem in its entirety. The current state is an accumulated ripple effect of years of racist and discriminatory practices. Understanding what has been experienced by the marginalized groups is a critical reflection in understanding the issue. Racial discrimination is complex defect requiring a three-dimensional lens to analyze the experience of other race and culture. To drive the change, understanding the past incidents, gathering the knowledge is required to build a strong foundation to fight the injustice. Let us not forget that speaking against such atrocities challenges others to speak up because talking about racism is no easy task. Bringing conversations by those who have suffered instills a sense of belongingness in them and binds communities together. Everyone in the community has an active role to play and education is the weapon to effectively defeat racism and discrimination. There will always be the utopian desire of having inclusiveness in the diverse communities we exist in today. It is said by many astronauts and pilots that when they are up in the sky, countries and nations appear to be one. The human families seem to blend into one perfect entity.

Diversity vs Inclusion

"Diversity, or the state of being different, isn't the same as inclusion. One is a description of what is, while the other describes a style of interaction essential to effective teams and organizations." – Bill Crawford, Psychologist (Source: Leading Differently). Diversity and inclusion is most often interchangeably used. Diversity can be measured while inclusion is even difficult to define, let alone being measured. Inclusion is invisible as it can only be experienced. Paolo Gaudiano in his article in the Forbes magazine has stated that inclusion is significantly more important than diversity[11]. He advises organisations to focus on inclusion rather than diversity. He also explains why focus should be on inclusion.

1. Diversity is about numbers and to do that one needs to label people.
2. Diversity identifies people as Blacks, Chinese, Indians – further alienating them.
3. Diversity therefore encourages stereotyping.
4. Diversity is in defining differences rather than highlighting commonalities.
5. Diversity is result of the categories existing, not something that can be controlled directly.
6. There is no forecast on how long it will take to increase diversity.
7. Diversity seems like a zero-sum game. Hiring more blacks means hiring some other categories of races less.
8. Diversity leads to fear in some cases, fatigue in some others and backlash in yet some more. It becomes yet another mistrust game.

The value of inclusion alleviates the problems in diversity. Focusing on similarities can decrease the discomfort and tension between people, and it can debunk stereotypes. Sundar Pichai, CEO of Tablet, has said, *"A diverse mix of voices leads to better discussions, decisions, and outcomes for everyone."* (Source: Quartz at Work) He and many leaders drove the point that an equal world is an enabled world. Each one of us must actively choose to fight bias, broaden perceptions and clarify that their beliefs are wrong about other races. *Collectively, each one of us can help create an equal world where opportunities are not distributed on discriminatory basis rather accept and embrace diverse needs of the new-age workforce.* (Source: People Matters). What is important to note is that the result that we are looking for is inclusion: an equal world. After fatal incidents in several western countries, there is has been an increase on diversity initiatives in the corporate world as well as governments. But less success has been seen in inclusion and equity initiatives as the organisation risk is high in the short term due to mistakes in the initiatives. Eventually we lose our most important resource – people. We see failures in implementation due to the lack of understanding of inclusion as a tool to improve culture. We fail to accept and embrace each individual and celebrate each attribute to make cultures stronger. It takes ownership at the senior level and co-ownership at the employee level in restructuring resources to focus

on equity, inclusion, and diversity in increasing the feeling of belongingness in each employee. Today employees are looking to work in organizations that believe in equality of all employees and have programs to prove their claim. Employers recognise this choice candidates and employees are making to work in inclusive environment and experience fairness and equality at work. Employers have been actively taking actions or in preparing to make concerted decisions and creating programs to make their companies culture inclusive. There is a sense of urgency in becoming more intentional and methodical address and correct diversity issues. It has been understood is that leaders and decision makers are required to be honest with themselves and their values. Mistakes will continue to happen. The difference now is in accepting the errors and immediately implementing corrective measures.

Employees everywhere expect and deserve fairness, respect, and safety. Organizations that put diversity, equity, and inclusion (DEI) at the center of their growth strategies are the organizations that lead[12]. Being inclusive is beneficial to everyone and should be seen as a win-win situation: making someone feel more included is not going to detract from anyone else's experience. Companies that embrace inclusion will find itself naturally becoming more diverse, and at the same time it will enjoy happier employees, which in turn will yield greater productivity and an increase in overall company performance. Accepting differences in all can go a long way toward reducing biases in the workplace, making people from diverse backgrounds feel more included and engaged. Inclusion does not lead to any problems which are encountered when driving diversity. However, "good" intentions are not enough when working towards inclusive environment. Organisations must be careful in evaluating their culture and practices which may lead to painfully experiences for some.

Siemens Energy[12] recently used an internal social channel to invite feedback about the experiences of its employees around the globe. The candor and bravery of some responses came as tough medicine. But some representative comments yield guidance to building DEI strategies to make workforce happier, healthier, and stronger for everyone. Gender balance in the leadership can indicate understanding of employee needs. Having a broad balance of ethnic, racial, religious, or other cultural representation helps companies make good decisions for their workforce and customers and achieve greater innovation and faster production. It is advisable to work against inherent biases and employees' honest feedback on how they experience gender, ethnicity, sexual identity, age, and physical and neurodiversity. The inputs can help organizations prove their commitment to DEI as you listen, learn, improve, and heal.

Selfish Reasons

Each member of the community must understand that structural issues, including racial discrimination and non-inclusive behavioral patterns, directly impacts enough people in a community, and it cannot be ignored. Everyone needs to take a lead in initiating change. Humans while empathic at a personal level, are still ill-equipped to handle larger problems where in potential benefits are in the future and abstract. We see this play out when tackling climate change as well - *characterized by high abstraction and uncertainty, people are prone to remain pessimistic about other people's willingness to contribute to reducing climate change, even if in the future such willingness becomes much stronger than it is at present*[13]. The solution, in such cases, is defining the problem, how the problem affects them – individually, and as a community, and how a solution of the problem is in their best interest. I posit that much like climate change creating a diverse, and inclusive environment is in humanities selfish best interests to do so. Hear me out: since the time Homo Sapiens moved from being hunter gatherers to living in communities, to then making cities, and kingdoms, and then onto industrial revolution, what have we, as humanity done – that we exploit natures resources to the maximum. We are well versed with being selfish when we see an end goal. For humanity, time and again, one thing has been clear – apart from natural resources human resources are equally critical. Being diverse and inclusive ensures that all folks can do what they are best at, and this best "selfishly" is incrementally best for others around him/ her. To differentiate based on creed, race, color, caste only ensures that the potential of everyone is not exploited to the maximum. A diverse, fair, equitable, inclusive is not only advisable – it is required, not for the benefit of only the marginalized, but for everyone. So that in the end we, humans, get the best out of us, all humans. We have one world, we are one people, till such time as we encounter aliens from outer space, we only have ourselves to rely on, our differences are superficial – the sooner we realise this, the better it is for all of us.

References:

1. Inclusion, and exclusion myths in India, Online View, Mint E-Paper, August 18, 2013, https://www.livemint.com/Opinion/fig1oVC5mX6n1IzqzZANnM/Inclusion-and-exclusion-myths-in-India.html
2. Chaturvedi Ankur, Diversity, and Inclusion - the India Story, LinkedIn, January 21, 2020, https://www.linkedin.com/pulse/diversity-inclusion-the-india-story-ankur-chaturvedi
3. Hirwani Peony, Opinion Contributor, Religious conflicts, caste, and racial discrimination have officially shattered India, Business Insider, February 7, 2021, https://www.businessinsider.com/religious-conflicts-caste-racial-discrimination-has-broken-india-into-pieces-2021-1?IR=T
4. Fosslien Liz and Duffy Mollie West, Culture Chapter, No Hard Feelings: The Secret Power of Embracing Emotions at Work, Penguin Random House, February 2019
5. White James D and White Krista, Anti Racist Leadership: How to Transform Corporate Culture in a Race-Conscious World, Harvard Business Review, March 22, 2022
6. Online Survey Results, Discrimination in America, Robert Wood Johnson Foundation, October 2017, https://www.rwjf.org/en/library/research/2017/10/discrimination-in-america--experiences-and-views.html
7. King Jacob, How racist is Britain today? What the evidence tells us, The Conversation, July 01, 2020, https://theconversation.com/how-racist-is-britain-today-what-the-evidence-tells-us-141657
8. Equality, Diversity and Inclusion, The Royal College of Surgeons of Edinburgh, https://www.rcsed.ac.uk/professional-support-development-resources/equality-diversity-and-inclusion
9. Cotter Adam, Experiences of discrimination among the Black and Indigenous populations in Canada, 2019, Canadian Centre for Justice and Community Safety Statistics, February 16, 2022, https://www150.statcan.gc.ca/n1/pub/85-002-x/2022001/article/00002-eng.htm
10. Campbell Kimm, How We're Working Toward Becoming an Antiracist Community, Culture of Health Blog, May 13, 2021, Robert Wood Johnson Foundation, https://www.rwjf.org/en/blog/2021/05/how-were-working-toward-becoming-an-antiracist-community.html
11. Gaudiano Paolo, Eight Reasons Why We Need To Focus On Inclusion Rather Than Diversity, Forbes, January 22, 2019, https://www.forbes.com/sites/paologaudiano/2019/01/22/eight-reasons-why-we-need-to-focus-on-inclusion/?sh=c31a424148d5
12. Siemens Energy, To Drive Diversity and Inclusion, Ask Tough Questions and Listen to Tough Answers, Howard Business Review, March 04, 2022, https://hbr.org/sponsored/2022/03/to-drive-diversity-and-inclusion-ask-tough-questions-and-listen-to-tough-answers?autocomplete=true
13. Lange Paul A M Van, Joireman, Jeff, Milinski Manfred, Climate Change: What Psychology Can Offer in Terms of Insights and Solutions, Current Directions in Psychological Science, July 12, 2018, https://journals.sagepub.com/doi/full/10.1177/0963721417753945

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Diversity & Inclusion in Surgery in the NHS

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Introduction

I find myself at a crossroad thinking where have I come from and what have I achieved? I was born and trained in India and came to the UK in late 80s and have served the NHS for more than 33 years, the last 23 as a Consultant. Do I like what is happening in the present day NHS? Do I quietly choose the route to peace and slip away or do I take the route to rebel, shout and raise the increasing issues of discrimination, differential attainment and frustration with the perception bias of the regulatory bodies. I have chosen the latter. I am retired now but I retain my interest in teaching and training. I want to see the trainee surgeons supported no matter what their gender, ethnicity or background.

I come from a land where "diversity" is the norm and was already ingrained in me with people coming from all different backgrounds, religion, colour, languages and even different facial features. However, there was one common binding factor. We all belonged to the same race. In the UK for the NHS, "Diversity" is a necessity. All the factors I mentioned, including race and ethnicity sets up a unique combination of characteristics coming together with one objective and that is to serve the NHS.

It is 2022. There is a generational shift in expectations when it comes to diversity, inclusion and belonging. Many teenagers in the UK entering medical school now have grown up with identity politics; including exploration of class, disability, gender, race, sexuality and identity and challenging attitudes to individual and collective responsibility. It is hard to conceive how this generation will have the patience for a slow, evolutionary approach to change in institutions like the NHS. That is why I wish to talk about it.

What is Diversity?

It basically is about who is in the team showing a heterogeneous group with differing characteristics. What are those characteristics? It's to do with gender, race, colour, religion, belief, sexual orientation, and disability. If we talk about Diversity in Medicine in general then there is another factor, which is "class". It has been shown that those coming from lower socio-economic background do not choose medicine as a career because of cost issues. For "diversity in Surgery" the major factors are ethnicity and gender.

The topic of diversity has been there since the Equality Acts were introduced in 1960s and 70s. The focus is to introduce fairness at work backed by legislation designed to address unfair discrimination based on membership of a particular group.

What is Inclusion?

This is about inviting everyone to contribute – it's about listening, collating, respecting everyone's ideas from a diverse group. Diversity can be easily measured but inclusion can't be, as it signifies behaviour. It comes from a philosophy of acceptance. Inclusion involves providing opportunities to those individuals who might otherwise be excluded or marginalized, groups such as women and racial and ethnic minorities, individuals with different socio-economic status, physical abilities, cultural practices, or gender and sexual identities.

That leads to a third equally essential term, " Belonging". This is an inner expression from each individual for the team, a sense of being valued and welcomed. It's about creating space for everyone and appreciating the richness that comes from different perspectives and experiences. This is a culture, which needs to be developed and remains missing in large parts of the NHS including in Surgery.

What are the benefits of Diversity & Inclusion?

Teamwork: This creates a culture of respect & equity. There is a learning environment. It comes from all directions. There is increased creativity and problem solving. You learn from each other's experiences and share different perspectives. You understand the needs of each other in your team.

Retention: Providing early mentorship and looking after the junior's needs creates an atmosphere of belonging. Flexible training is already here but we must provide equitable leave policies. The rota management must be fair. Educational needs may need to be individualised to address diverse learning needs. Every attempt should be made to respect and address the physical and cultural needs of the trainees. All these measures improve retention, which in turn will reflect on more applicants wanting to work in the place, therefore better recruitment. Clinical and Educational Supervisors must provide time to listen to their trainees and guide them in the right direction.

Leadership Development: A place, which respects individuals, juniors and trainees produces better doctors for tomorrow with adequate leadership qualities.

Ttransfer of Skills: Medicine in general working as a team is about transferring the skills and knowledge of the senior to the junior member of the unit. This is far more important in the surgical units. In a unit, which respects everyone and adopts the ethos of

inclusion and belonging these skills are better learnt by the trainees, who are our future seniors.

Better patient care: A team with close network ties within the whole unit will lead to better patient care.

Productivity increases manifold. This is well proven by work statistics in the industry (Table 1). This could be replicated in the NHS environment. The drawback here is the bureaucracy of management and funding.

- Companies that have more diverse management teams have 19% higher revenue.*
- Inclusive companies are 1.7 times more likely to be innovation leaders in their market.**
- Racially and ethnically diverse companies outperform industry norms by 35%***

** Boston Consulting Group (BCG) ** Josh Bersin Research *** McKinsey*

Table 1: Impact of Diversity & Inclusion initiatives in the industry on Productivity.

How do I look at Surgery as a specialty?

I speak from my own experience as an Orthopaedic Surgeon. Surgery is very special. It's a combination of both science and art. It gives you the ability to perform tasks, which exhibits the skill of your hand and eye co-ordination. As a surgeon it gives you the ability and opportunity to rectify the issues in the human body to make it better. You can replace non-functioning organs, painful joints, remove clots or tumours and have the ability to remove any nasty unwanted harmful things to make an immediate difference to the life of an individual. It is an enormously satisfying branch of medicine.

A surgeon needs a good team preferably a happy one to make it work to accomplish a satisfying and fulfilling outcome. This will only be achieved by having a deep understanding of diversity, inclusion and belonging.

What are the issues of diversity and inclusion in surgery in the NHS? Why do we need to talk about it now?

The NHS has perhaps the most diverse workforce serving the population of the UK. This is rapidly changing with more doctors and nurses coming in from overseas. I strongly believe that since the inception of the NHS, the migrants are the architects and pillars of the NHS. The migrants are referred to as BAME (Black, Asian and Minority Ethnic) or BME. The NHS workforce is also gradually shifting with the increased entry of females in medical schools.

Women in Surgery

There is an issue in surgery when it comes to attracting female and Black-British doctors in particular[1].

In surgery, over a third of all trainees are female (34.8%). This compares against the broader population of trainees where just over half are female (56.6%). Despite the increased number of female trainees, surgery remains a male dominated specialty[2].

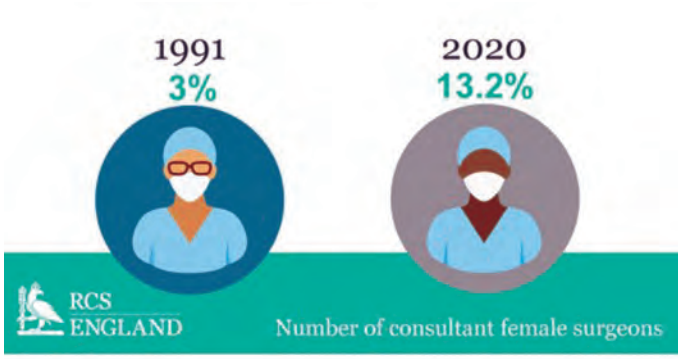

Fig 1: Statistics RCS, England – Number of consultant female Surgeons

Fig 2. Statistics RCS England – Consultants female surgeons in Surgery.

The proportion of consultants in Surgery, who are females increased from 9% in 2012 to 14% in 2020 (Fig 1 & 2)). In comparison, the proportion of consultants who are female increased from 31% in 2013 to 37% in 2020.

The programmes in 2020 with the highest proportion of female doctors in training are paediatrics (53.0%) and plastic surgery (39.1%). The lowest proportions are seen in oral and maxillo-facial surgery (20.0%) and trauma and orthopaedic surgery (18.2%)[3].

International Medical Graduates and locally-employed doctors

The surgery specialty has a slightly lower proportion of international medical graduates (IMGs) than the average (21.3% compared to 27.5% of all licensed doctors)[4].

In career progression we talk about medical students, Trainees and consultants but we often forget about the non-trainees, the Specialty doctors or Staff Grade doctors. We tend to forget their wealth of experience and knowledge and their contributions. Quite a lot of surgeons may choose this career for a respectable work life balance. Majority of them are IMGs. In my opinion, there exists a huge issue of "belonging" for this group.

Intersecting Identities

There is another group about which very little has been written. These are 'intersecting identities', the LGBT medics, which result in some being impacted by a layering of social justice problems. For example, the issues faced by a white woman from the LGBT+ community cannot be looked at as being the same as those faced by a Black woman from the LGBT+ community. They report higher incidence of abuse and harassment and only about 25% tend to report the incidents[4].

Disabled Medics

Very little has been mentioned in the Royal College plans about disabled medics and a surgical career. However, they have noted this and steps are likely to be taken.

What's the word in Medical Schools?

Some students aspire to be surgeons from quite early on as they enter medical school. They would say, "I am skilful and love to do practical things". They aspire to be surgeons.

However, there are some perceptions. If somebody comes from a family of doctors, in particular surgeons, they are assumed to be familiar with the pathways and choices. These students are universally conscious of their backgrounds and the associated advantage or disadvantage. This is to do not just about family background but also whether they come from a state school or a public one or their social background.

Some of the concerns raised in the report in the Royal College of Surgeons of England report make interesting reading[4].

- *"I want to be a surgeon, and I'm female, that's not the same as wanting to be a 'female surgeon' is it?"*
- *"I felt like I had to change my accent – I felt judged all the time – and I had to work so much harder – or I thought I did – just to prove I wasn't 'some kind of a thug' when I showed up in theatre".*
- *"When I [a fourth year medical student] speak to Black surgeons they emphasise how hard it is... I've never heard a Black surgeon say anything different. It worries me because I think I know how hard you have to work to be a surgeon without having to work even harder because I'm Black".*
- *"I am sticking at it because I am stubborn and surgery is what I want to do, but I can't exactly say I am encouraged [as a Black female medical student]".*
- *"It's very hard to address things without seeming accusatory – if I as a Black male medical student say 'this isn't right' it's as though I don't quite have the right to say it... People are scared..."*

It is presumed that interest in surgical careers tends to drop off as medical school progresses. However, I believe that those who enter med school have a special aptitude to often overcome these barriers.

Participating in Royal College of Surgeon's activities and being part of the Cutting Edge Surgical Society are important steps. Those who have that special aptitude and foresight should plan their elective in a surgical unit.

It is proven that awards funded research or travel to national meetings, electives or placements referred to a third- or fourth-year rotation that provided exposure to surgery, and workshops were hands-on skills sessions for learners[5]. These together with mentoring programmes are the most effective interventions for increasing UIM and female representation among surgical trainees.

The Covid-19 pandemic

This hasn't helped with increased death and infections among the BAME community as well as health care workers, including doctors. This has highlighted the acute health inequalities in the BAME population. It has brought us to discuss misconceptions like: "the medical profession] believed that Black patients have higher pain tolerance, thicker skin, need less recovery time after injuries

Education is the key to dispel the ramifications of discrimination and the imbalance, which prevails in medicine (Table 2).

- **Understanding discrimination and racial harassment in the NHS AMEE Guide Teaching Diversity to Medical Undergraduates***
- **BMA's 'Charter for Medical Schools to Prevent and Address Racial Harassment'****
- **'Mind The Gap' (guidance on clinical signs on black and brown skin, founded by Malone Mukwende, a St. George's medical student)*****

* *https://pubmed.ncbi.nlm.nih.gov/26642916/*

** *https://www.bma.org.uk/media/2030/bma-med-school-charter-implementation.pdf*

*** *https://www.blackandbrownskin.co.uk/mindthegap*

Table 2: Education – Training on Health Inequalities

Why is there such an imbalance in the surgical specialities?

What do trainees and surgeons coming from the BAME background tell us.

Let me quote some of the reflections entered by trainees surgeons, some of which I have taken from the Royal College document[4].

- *" As a trainee working in a Professorial unit, in almost every ward round I felt as if I didn't exist."*
- *"I was not listened to during my assessments. My concerns went unnoticed. Do they not care?"*
- *"I feel [as a Black surgeon] that I suffer a different level of scrutiny from other surgeons – and have access to much less support – and it can be very frightening".*
- *"It's very subtle, it's the way you're ignored completely – you go to a meeting and you're the only Black person there. You're left asking 'shall I force my way into the conversation?' but you leave it because you don't feel welcome and you're just ignored".*

Yes, there is an issue

The first step is that we need to acknowledge and accept the problems. In my view, acceptance of the unconscious bias towards students and trainees with protected characteristics is the first step towards balancing the equation.

How do we, as surgeons, create and sustain a more diverse, equitable, and inclusive profession? A medical student's first impression of the surgical learning environment, often through student placements and electives, influences whether they perceive

themselves as "the kind of person who can be a surgeon".

Diversity is already present. What are we missing? Equity and inclusion are critical adjuncts to diversity in the surgical learning environment. Equity means being fair and impartial through assurances of equal access to the same opportunities. Equity is distinct from equality, which means treating everyone the same and is based on the unrealistic assumption that each individual is starting from the same point.

How do we bring inclusiveness?

There are various measures, which create an atmosphere of inclusion and belonging[4].

1. ***Mentorship & Sponsorship:*** A mentor provides guidance and acts like a role model. It is recommended to maintain the mentorship relationship. Quite often it enhances opportunities later on. Did you know that it works both ways? Mentors have been shown to undergo cognitive changes that allow them to see their mentees as protégés who are deserving of advancement, rather than viewing their mentees on the basis of race or gender.
2. ***Sponsorship*** is important as well. A sponsor provides more active support by presenting juniors as candidates for promotion, awards, committee positions, and other career advancement opportunities. Your sponsor would be the Royal Colleges, BAME organisations like the BIDA, APPNE, BAPIO and others.

   We are aware that Orthopaedics has the least number of female trainees. In the USA, between 2005 and 2012, the Nth Dimensions/American Academy of Orthopaedic Surgeons ran the Orthopaedic Summer Internship Program for which 118 medical students were enrolled[7]. Following this pipeline initiative, there were 35% more applications from females and 31% for Under-represented minorities medical students.
3. ***Role Models***, in particular seeing surgeons from similar backgrounds serve as role models. Do you know about Dame Clare Marx, an Orthopaedic Surgeon became the President of the RCS of London and then Chair of the GMC? Relating to and seeing yourself in your leaders can motivate individuals to strive for those positions. However, we accept that one of the obstacles facing surgical trainees is the relative paucity of diverse role models in academic surgery with very few women or surgeons from the BAME group who achieve the status of Professorship or a Royal College Lead.
4. ***Fairness in Recruitment:*** Critical to increasing diversity in surgery is a recruitment process that is standardized and free of explicit or implicit bias. The interviews should be structured with reliance on simple standardised tests. I was involved in the recruitment process of Orthopaedic trainees in Wales for nearly ten years and found it very fair for all groups.
5. ***Provision of Flexible Training*** is already helping many in maintaining work-life balance and limited flexibility in training. This is a step in the right direction for an increasing number of women who enter surgery. At present, there is better understanding and some uniformity in policies regarding parental leave and access to childcare. These policies have significantly improved to maintain a culture of diversity and inclusion during training.
6. ***Multimodal Educational approach:*** At present, surgical education relies heavily on textbook readings and traditional didactic lectures combined with sufficient clinical exposure to ensure competence. We must consider a multimodal educational approach that includes visual presentations, audio recordings, written outlines, anatomical models, and simulation. Surgical training programs should address multiple learning style preferences, as well as individual needs. For example, trainees with visual and auditory impairments as well as learning disabilities have been shown to benefit from a diversified educational approach. The Royal College of Surgeons of England is now looking into these avenues.
7. ***National initiatives*** like Women in Surgery (WinS) is dedicated to encouraging, enabling and inspiring women to fulfil their surgical career ambitions.

Conclusion

The NHS is charged with an atmosphere of bullying, harassment and prejudice. During my years as a trainee, I experienced these. Most times it was subtle bias and it has taken me years to understand this. Will there ever be a sense of belonging?

Surgery is changing with more females and more ethnic minority doctors coming forward to join in. Surgery shouldn't be what you look like or what you sound like. Surgery is hard work, dedication and patient welfare and safety.

How do we tackle these issues of Equity & Inclusion in Surgery?

1. Mentorship
2. Sponsorship*
3. Role Models
4. Fair recruitment process.
5. Provision of flexible training
6. Multimodal Educational approach
7. National initiatives

* *Can a Strategic Pipeline Initiative Increase the Number of Women and Underrepresented Minorities in Orthopaedic Surgery? Mason BS et al CORR 2016 Sep;474(9):1979-85.*

References:

1. Bellini MI et al. A woman's place is in theatre: women's perceptions and experiences of working in surgery from the Association of Surgeons of Great Britain and Ireland women in surgery working group. BMJ Open. http://dx.doi.org/10.1136/bmjopen-2018-024349
2. Statistics – Royal College of Surgeons Statistics - Royal College of Surgeons. https://www.rcseng.ac.uk › women-in-surgery › statistics
3. Moberly T. A fifth of surgeons in England are female. BMJ 2018;363:k4530 doi: https://doi.org/10.1136/bmj.k4530
4. The Royal College – Our Professional Home. An independent review on diversity and inclusion. March 2021. https://www.rcseng.ac.uk/about-the-rcs/about-our-mission/diversity-review-2021/
5. Hemal K et al. Diversity and Inclusion: A Review of Effective Initiatives in Surgery. J Acad Surg. Sep-Oct 2021;78(5):1500-1515. doi: 10.1016/j.jsurg.2021.03.010. Epub 2021 Apr 18.
6. Williams RL et al. Shoring up the pipeline: Increasing diversity in surgery by enhancing equity and inclusion in the surgical learning environment. Bulletin of the ACS. Published Jan 8, 2021 Shoring up the pipeline: Increasing diversity in surgery by... https://bulletin.facs.org › 2021/01 › shoring-up-the-pip.
7. Mason BS et al. Can a Strategic Pipeline Initiative Increase the Number of Women and Underrepresented Minorities in Orthopaedic Surgery? CORR 2016 Sep;474(9):1979-85. doi: 10.1007/s11999-016-4846-8.

Recent advances in Neuro-Oncology

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Abstract

Malignant gliomas are known for having the worst prognosis among all brain tumours. Nevertheless, survival for patients with glioblastoma, the most aggressive type of gliomas has improved over the last decade mostly due to improvement of their diagnosis through modern imaging modalities, better understanding of the behaviour of each type, and advanced surgical facilities.

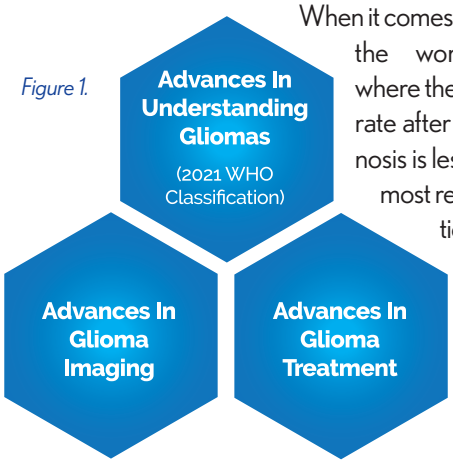
We would like to share these advances as follows:

1. The most recent 2021 WHO classification of CNS tumours
2. Advanced imaging modalities:
   a) Magnetic resonance perfusion (MRP)
   b) Magnetic resonance spectroscopy (MRS)
   c) Diffusion tensor imaging (DTI)
   d) Functional MRI (fMRI)
3. Surgical facilities:
   a) Neuronavigation
   b) Intra-operative ultrasound (US) and Magnetic resonance imaging (MRI)
   c) Intra-operative fluorescence
   d) Intra-operative Neurophysiology and Awake craniotomy (AC)

Introduction

The annual incidence of primary brain tumours is around 21.5 per 100,000 population1. Gliomas are considered the most common malignant brain tumours as they represent 24% of all primary brain and CNS tumours with varying histological grades of malignancy. Age, gender, and ethnicity along with other environmental factors have very strong influence on the incidence and prevalence of Gliomas. For example, pilocytic astrocytomas are more common in children, oligodendrogliomas are more common in the 30s, while Glioblastoma multiforme (GBM) is more common in the 70s. When it comes to prognosis, GBM has the worst prognosis, where the 5 year survival rate after the initial diagnosis is less than 5%. The most reliable prognostic factors are the age at diagnosis, Karnofsky performance status and the extent of resection. The aim of glioma treatment is to increase the survival, and this has been proven to be positively correlating with the extent of surgical resection[2]. Advances in Neuro-oncology over the last decade have contributed to this. These advances can be divided into three categories (Figure 1): advances in understanding the nature of gliomas, advances in imaging, and advances in treatment.

Figure 1.



Advances in understanding Gliomas

Evolution of the WHO Classification

Over the last 20 years, the understanding of gliomas of has changed and this has resulted in updating the previous (2007) WHO classification of CNS tumours twice in 2016 and 2021. The first edition relied more on histological features (Table 1), whereas the latest two implemented a layered approach combining histological and molecular characteristics (Table 2) as the IDH mutation status and the 1p/19q co-deletion status (Figure 2, 3), allowing better understanding of the behaviour of these tumours and consequently their expected prognosis.

Table 1.

Grade	Histological Features
Grade 1	Low proliferative activity Low chance of recurrence
Grade 2	Low proliferative activity Infiltrative in nature Can transform to grade 3 and 4
Grade 3	Nuclear atypia Mitotic activity Most cases need adjuvant treatment
Grade 4	Nuclear atypia Mitotic activity Necrosis Widespread infiltration and cranio-spinal dissemination Fatal outcome.

Table 2.

Understanding the Nature of Gliomas	
2007 WHO Classification	Used histological grading as a means of predicting the biological behavious of gliomas
2016, 2021 WHO Classifications	Integrated histological and molecular features allowing more precise diagnosis

Figure 2: WHO 2016 Classification

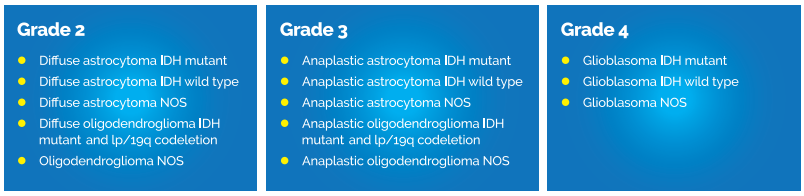
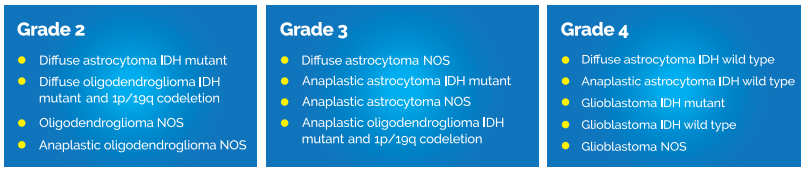


Figure 3: WHO 2021 Classification

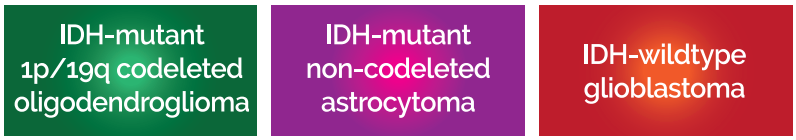


Isocitrate dehydrogenase (IDH)/ 1p/19q co-deletion

IDH 1 and IDH2 mutated genes are commonly seen early in gliomas. It was found that gliomas can be classified into IDH mutant type and IDH wild type as they have different phenotypes and genotypes. The presence of these mutations suggests a better prognosis and it has also been suggested without a predictive value that chemotherapy gives better response to IDH mutant type compared to the wild type.

Gliomas were divided into three groups based on the presence or absence of IDH gene mutation and 1p/19q co-deletion. The first group has both the IDH gene mutation and the 1p/19q co-deletion and have histological features of an oligodendroglioma. The second group has only IDH gene mutation and have histological features of astrocytoma. The third group has neither and has histological features of glioblastoma (Figure 2).

Figure 4:



Methylation

It was noticed that in many patients with GBMs, methylation of the MGMT (The O6-methylguanine-DNA methyl-transferase) gene was seen. After this observation, the hypothesis that methylated gliomas are more sensitive to chemotherapy in comparison with non-methylated gliomas was suggested by the Stupp trial[3] as an attempt to aid in prolonging the survival of these patients. Later on the RTOG0525 trial proved that the methylated gliomas have a higher median survival (21.2 months) in comparison with non-methylated gliomas (14 months) due to their higher sensitivity to chemotherapy[4].

Advances in Glioma Imaging

Classic MRI Sequences

Maximal safe resection can only be achieved after identification of the extent of glioma infiltration through various imaging sequences, which was found to be very challenging.

Classically used MRI sequences for diagnosing gliomas and identifying their anatomical relations include T1-weighted images, showing gliomas as hypointense lesions, post-contrast T1-weighted images with irregular peripheral enhancement, T2-weighted images, showing gliomas as hyperinense lesions, T2W gradient echo, and fluid attenuated inversion recovery (FLAIR) images showing the extent of surrounding vasogenic oedema.

There are radiological features that may indicate a lesion with an aggressive course as peripheral enhancement, haemorrhage, and necrosis surrounded by significant vasogenic oedema. Also, a lesion crossing the midline through the corpus callosum suggests a highly aggressive infiltrative GBM. There have been many studies trying to establish a relationship between contrast enhancement and high-grade gliomas. One study demonstrated that low grade gliomas can enhance, while high grade gliomas do not always enhance[5].

It was demonstrated that the T2-FLAIR mismatch sign, where there is homogenous high signal on T2 weighted images and a hypointense signal on the FLAIR sequence, highly correlates with the IDH-mutant, 1p/19q-non-codeleted molecular subtype[6].

The downside of these classically used sequences is their inability to differentiate with any certainty gliomas from radiologically similar lesions as metastasis, low grade from high grade gliomas, and post-treatment changes from recurrent gliomas.

The recent advances in glioma imaging allow better pre-operative understanding of the underlying pathophysiological behaviour, more detailed description of the extent of infiltration, and response to treatment. The new imaging modalities include diffusion weighted images (DWI), MR perfusion, MRS, DTI, and fMRI.

Diffusion weighted images

Diffusion weighted images are based on MRI sensitivity to water molecules movement. A signal is generated by the water molecules that do not move, whereas those who move fail to produce a signal thereby restricted diffusion appears bright. The apparent diffusion coefficient can be calculated by measuring the degree of signal change with varying gradient strength. More restricted diffusion correlate with lower apparent diffusion coefficient values, whereas free movement of water molecules in necrotic and cystic areas result in less restricted diffusion and a higher apparent diffusion coefficient values. The apparent diffusion coefficient (ADC) value can indirectly measure the cellularity of solid gliomas because in these gliomas the ADC is affected mainly by the size of the extracellular space which means that a highly cellular glioma will have a relatively smaller extracellular space and consequently a lower ADC.

MR Perfusion

As the rate of tumour growth exceeds its metabolic demands, hypoxia occurs and results in the production of factors by the tumour that promote angiogenesis leading to a poorly organized vascular network of tumoral blood vessels, allowing the use of advanced MRI imaging techniques as MR perfusion to identify this neovascularization process which indicates tumour progression and at the same time providing a method of grading gliomas since high grade gliomas tend to have increased angiogenesis as compared to low grade gliomas.

The passage of the contrast thought these abnormal blood vessels create signal changes that are used to estimate the cerebral blood flow and volume. The relationship between cerebral blood volume and tumour grade has previously been proven[7]. On the other hand, cerebral blood flow was found to be less accurate in differentiating between low- and high-grade gliomas[8].

MR Spectroscopy (MRS)

MRS is a non-invasive method that has a role in grading of brain tumours by measuring the concentration of metabolites as choline, N-acetylaspartate, lactate, and lipids in tissues through measurement of signals emitted by proton nuclei as (1H). MRS results are expressed in a graph form showing the signal intensity with respect to its frequency (Figure 5)

The concentration of these metabolites changes with malignant transformation (Table 3), (Figure 6, 7).

Choline is a marker of cell integrity. The intensity of its signal differs in different brain regions[9]. Its concentration increases in developing

Table 3:

Grade of Gliomas	MRS Findings
Grade I	High Cho/NAA and Cho/Cr ratios
Grade II	Decreased NAA peak
Grade III	Decrease NAA from the periphery to the centre of the lesion
Grade IV	Areas of necrosis and consequently the presence of high levels of lactate and lipids.

Figure 5:

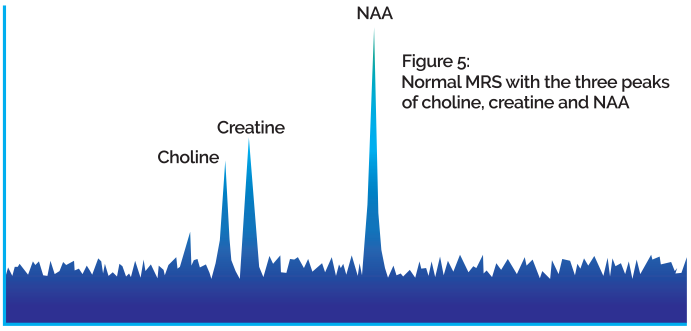


Figure 5:
Normal MRS with the three peaks of choline, creatine and NAA

Figure 6:

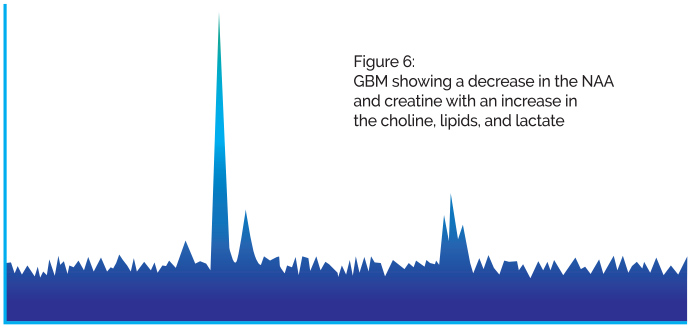


Figure 6:
GBM showing a decrease in the NAA and creatine with an increase in the choline, lipids, and lactate

Figure 7:

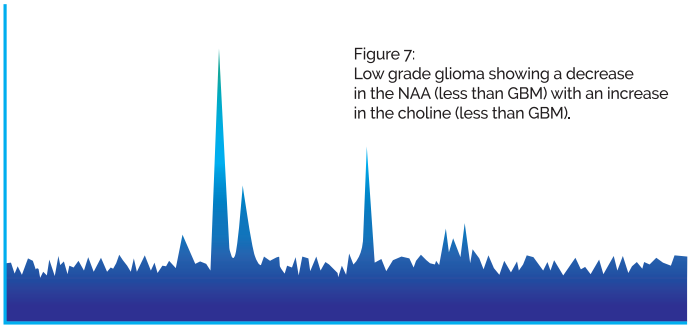


Figure 7:
Low grade glioma showing a decrease in the NAA (less than GBM) with an increase in the choline (less than GBM).

brain and with inflammatory changes, while decreases with demyelination and ischemia. During malignant transformation Choline is converted to phsophocholine, under the influence of choline kinase, which can be detected by MRS. The Choline/Creatine ratio usually high in gliomas as there is an increase in the levels of choline with a relatively constant level of creatinine. It is worthy to mention that some studies showed gliomas without an increase in the Choline/Creatine ratio.

In high grade glioma N-acetylaspartate is produced and stored in neurons with a higher concentration in the white matter compared to the grey matter. Its concentration decreases with neuronal damage as in ischemia and multiple sclerosis. It has been reported that the higher the grade of glioma, the more neuronal damage and consequently a greater decline in the level of N-acetylaspartate, therefore high levels of N-acetylaspartate can be predictive of a good prognosis[10].

Diffusion tensor imaging (DTI) / Functional MRI (fMRI)

Maximal safe resection of gliomas and consequently a longer survival can be very challenging because gliomas can displace, infiltrate, or disrupt eloquent brain cortex and white matter tracts. Trying to preserve these functional areas will improve quality of life post-operatively, therefore an imaging modality was needed to visualize both, white matter tracts and functional areas with delineation of their relationship to the tumour in order to facilitate surgical planning and allow maximal safe resection with reduction in post-operative neurological deficits[11].

DTI allows visualisation of eloquent white matter tracts with demonstration of their morphology. It relies on the fact that the type, integrity, and architecture of different tissues influence the diffusion of water molecules thereby giving information about its orientation and quantitative anisotropy[12] and creating a map of the axonal brain network.

Functional MRI allows visualization of eloquent brain cortex. It relies on the fact that when performing a certain task, there will be activation of the responsible brain cortex with an increase in the blood oxygen level to that region, allowing the use of the oxy-hemoglobin to deoxyhemoglobin ratio as a contrast agent to indirectly detect neuronal activity and thereby the functional area.

Advances in Glioma Surgery

Neuronavigation

Image guided neuronavigation is a very popular tool that is used by most neurosurgeons, maximizing the benefit of preoperative planning, which allows understanding the relationship between the glioma and the surrounding structures as the displaced white mater tracts[13]. It also allows guidance in planning the craniotomy, the surgical approach, trajectory and localizing the glioma with identification of its margins. This is beneficial as there are individual neuroanatomical variations with anatomical distortion by the mass effect of the glioma and the associated vasogenic oedema.

Combining Neuronavigation with diffusion tensor imaging (DTI) and fMRI produces a brain map that allows identification of both structural and functional regions, guiding the surgeon in performing a maximal safe resection of the glioma.

Intraoperative Ultrasound (US) and MRI

Intra-operatively, the precision of CT or MRI guided neuronavigation is reduced due to brain shift after draining CSF. It has been demonstrated that despite the surgeon's perception of maximal glioma resection, there are still residual tumour that could have been resected[14] as it often can be very difficult to differentiate healthy brain tissue from gliomatous tissue under the microscope, so instead of waiting for the postoperative imaging that might demonstrate residual tumour, resulting in a possibility of a second operation, we can overcome this obstacle by using real time image guided neuronavigation in the form of intraoperative US, giving the surgeon the chance not only to operate under direct guidance, but also to repeatedly monitor the resection cavity for any residual tumour, aiming for maximal safe resection and a better prognosis.

Intraoperative US also has the advantage of being cost-effective with no increase in the intra-operative time as it does not interrupt

the surgical work flow. Its main drawback is that interpretation of the images relies on the surgeons experience with US, which has a long learning curve.

Intraoperative MRI is another method that can be used to avoid the brain shift phenomena, which makes neuronavigation inaccurate. It has also been demonstrated that there is level 2 evidence that using intraoperative MRI can increase the extent of resection and prolong the survival of glioma patients[15]. Its main drawback is its cost and prolongation of the operating time.

5-aminolevulinic acid (5-ALA)

Another method to improve the extent of resection is preoperative oral administration of 5-aminolevulinic acid (5-ALA), a haem precursor metabolized by glioma cells, resulting in the accumulation of the fluorescent protoporphyrin IX, which peaks 6 hours after administration and continues to be high for 12 hours during which it can be excited by violet-blue light of the microscope resulting in a red fluorescence that delineates the glioma margins allowing maximal safe resection.

The introduction of 5-ALA in glioma surgery resulted in an increase in the rate of maximal safe resection (from 3 to 65%), an increase in the 6 months progression free survival (from 21.1% to 41%)[16], and an increase in the overall survival (from 11.8 months to 16.7 months). It has been reported that its use can result in an increase in post-operative neurological deficits (from 14.5% to 26.2%), but luckily these neurological deficits are not permanent as the percentages are almost similar 6 months postoperatively (19.6% with the use of 5-ALA compared to 18.6% without)[17].

Direct Cortical Stimulation (DCS) and Awake Craniotomy (AC)

Intra-operative DCS, through interruption of local cortical activity, is considered the most accurate method to localize eloquent functional areas[18] allowing better understanding of the relationship between the glioma and the eloquent areas and providing guidance to maximal safe resection. A bipolar electrode with 1 mm tips with a 5 mm distance in between both tips is applied to the cortical surface. A frequency of 60 HZ and amplitude from 2 to 12 mA is commonly used. The stimulation parameters can be increased with caution as there is a fine line after which there is risk of inducing seizures and prolonging depolarization with reduction in the response to the next stimuli. As developing seizure is a risk from DCS, continuous EEG monitoring by using an eight-point platinum-electrode strip helps in early detection of seizure activity.

Since the first description of awake craniotomy, where the patient is able to respond throughout the whole procedure, by Horsley almost 120 years ago, many techniques have been attempted to localize functional brain areas[19] yet awake craniotomy is only used in 22% of glioma surgery[20] due to the complexity of the procedure, stimulation induced seizures, and failure rates up to 6.4%[21]. Combining DCS with awake craniotomy allows the surgeon to easily identify functional eloquent areas during surgical resection of the glioma and consequently maximal safe resection with less postoperative neurological deficits. In the literature there is no randomized controlled studies proving that awake craniotomy is superior to surgery under general anaesthesia with regards to glioma surgery currently, but there is an ongoing randomized controlled trial, the SAFE-Trial (NCT03861299), comparing awake craniotomy to surgery under general anaesthesia in glioma surgery.

Summary

Gliomas are the most common malignant brain tumours as they represent 24% of primary brain and CNS tumours and unfortunately they have the worst prognosis especially with higher grades. Nevertheless, over the last decade, the prognosis has significantly improved with an increase in the 3-year survival from 4% to 10% due to advances in neuro-oncology. These advances include our ability to understand the behaviour of different types of glioma, to see them clearly with better appreciation of the relationship between the glioma and the surrounding functional structures, and to be able to perform maximal safe resection with low risk of causing permanent neurological deficits.

References:

1. Ostrom QT, Gittleman H, Xu J, et al. CBTRUS statistical report: primary brain and other central nervous system tumors diagnosed in the United States in 2009-2013. Neuro Oncol 2016;18 (Suppl 5):v1–v75
2. Brown TJ, Brennan MC, Li M, Church EW, Brandmeir NJ, Rakszawski KL, Patel AS, Rizk EB, Suki D, Sawaya R, Glantz M (2016) Association of the extent of resection with survival in glioblastoma: a systematic review and meta-analysis. JAMA oncology 2:1460–1469.
3. Hegi ME, Diserens AC, Gorlia T, et al. MGMT gene silencing and benefit from temozolomide in glioblastoma. N Engl J Med 2005; 352:997-1003.
4. Gilbert MR, Wang M, Aldape KD, et al. Dose-dense temozolomide for newly diagnosed glioblastoma: a randomized phase III clinical trial. J Clin Oncol 2013; 31:4085-91.
5. Upadhyay N, Waldman AD. Conventional MRIevaluation of gliomas. Br J Radiol 2011;84:S107–11. [PubMed: 22433821]
6. Broen MPG, Smits M, Wijnenga MMJ, Dubbink HJ, Anten MHME, Schijns OEMG, Beckervordersandforth J, Postma AA, van den Bent MJ.Broen MPG, et al. Neuro Oncol. 2018 Sep 3;20(10):1393-1399. doi: 10.1093/neuonc/noy048.Neuro Oncol. 2018. PMID: 29590424
7. Hourani R, Horska A, Albayram S, Brant LJ, Melhem E, Cohen KJ, Burger PC, Weingart JD, Carson B, Wharam MD, Barker PB (2006) Proton magnetic resonance spectroscopic imaging to differentiate between nonneoplastic lesions and brain tumors in children. J Magn Reson Imaging 23(2):99–107. https://doi.org/10.1002/jmri.20480
8. Brendle C, Hempel JM, Schittenhelm J, Skardelly M, Tabatabai G, Bender B, Ernemann U, Klose U (2017) Glioma grading and determination of IDH mutation status and ATRX loss by DCE and ASL perfusion. Clin Neuroradiol.
9. Y. Wang, S.J. Li Differentiation of metabolic concentrations between gray matter and white matter of human brain by in vivo 1H magnetic resonance spectroscopy Magnetic Resonance in Medicine: Official Journal of the Society of Magnetic Resonance in Medicine/Society of Magnetic Resonance in Medicine, 39 (1998), pp. 28-33
10. K.E. Warren, J.A. Frank, J.L. Black, R.S. Hill, J.H. Duyn, A.A. Aikin, et al. Proton magnetic resonance spectroscopic imaging in children with recurrent primary brain tumors Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology, 18 (2000), pp. 1020-1026
11. Potgieser AR, Wagemakers M, van Hulzen AL, de Jong BM, Hoving EW, Groen RJ. The role of diffusion tensor imaging in brain tumor surgery: a review of the literature. Clin Neurol Neurosurg (2014) 124:51–8.10.1016/j.clineuro.2014.06.009
12. Chenevert, T. L., Brunberg, J. A., and Pipe, J. G. (1990). Anisotropic diffusion in human white matter: demonstration with MR techniques in vivo. Radiology 177, 401–405.
13. Duffau H (2006) New concepts in surgery of WHO grade II gliomas: functional brain mapping, connectionism and plasticity– a review. J Neurooncol 79:77–115
14. Orringer D, Lau D, Khatri S, Zamora-Berridi GJ, Zhang K, Wu C, et al. Extent of resection in patients glioblastoma: limiting factors, perception of resectability, and effect on survival. J Neurosurg. (2012) 117:851 9.
15. Black PM, Alexander E 3rd, Martin C, Moriarty T, Nabavi A, Wong TZ, Schwartz RB, Jolesz F (1999) Craniotomy for tumor treatment in an intraoperative magnetic resonance imaging unit. Neurosurgery 45:423–431
16. Stummer W, Pichlmeier U, Meinel T, et al. Fluorescence-guided surgery with 5-aminolevulinic acid for resection of malignant glioma: a randomised controlled multicentre phase III trial. Lancet Oncol 2006;7:392–401.
17. Ontario Health (Quality). 5-Aminolevulinic Acid Hydrochloride (5-ALA)- Guided Surgical Resection of High-Grade Gliomas: A Health Technology Assessment. Ont Health Technol Assess Ser 2020;20:1–92 http://www. ncbi. nlm. nih. gov/ pubmed/ 32194883
18. Prabhu VC, Vargas C, Benedict W, Owen K, Jellish WS. Cortical mapping in the resection of cerebral gliomas – Anesthetic considerations. Contemp Neurosurg. 2007;29(1):1–6.
19. Prabhu VC, Benedict W, Primeau M, Blodgett-Dycus C, Macken M, Hacein-Bey L, et al. Cortical mapping in the resection of cerebral gliomas – Surgical considerations. Contemp Neurosurg. 2007;30(2):1–6.
20. Chang SM, Parney IF, Huang W, Anderson FA Jr, Asher AL, Bernstein M, et al: Patterns of care for adults with newly diagnosed malignant glioma. JAMA 293:557–564, 2005
21. Nossek E, Matot I, Shahar T, Barzilai O, Rapoport Y, Gonen T, et al: Failed awake craniotomy: a retrospective analysis in 424 patients undergoing craniotomy for brain tumor. J Neurosurg 118:243–249, 2013

Medical Quiz

1 A 65 year-old lady with past medical history of type 1 diabetes presents with an itchy lump on her vulva. The lump is a sore white plaque on examination. The patient does not have a family history of significant medical conditions. What is the most likely diagnosis?

A) Eczema
B) Vuval squamous cell carcinoma cancer
C) Lichen Planus
D) Lichen Sclerosus
E) Psoriasis

2 A 28 year-old patient is brought in to ED following a road traffic accident. His observations are abnormal. His heart rate is 138, his blood pressure is 91/64 mmHg and his respiratory rate is 24/min. He has Bilateral air entry to the lungs and chest sounds clear on auscultation. His GCS is 14/15. His heart sounds are muffled on auscultation. Which treatment should be urgently arranged for this patient?

A) Administer IV adrenaline 1 mg
B) DC shock
C) Chest drain insertion
D) Administer IV Beta-blockers
E) Pericardiocentesis

3 A 68 year-old male patient presented to emergency department (ED) with central chest pain radiating to his jaw, neck and left arm. He has a medical background of hypertension and is receiving Ramipril and Amlodipine for treatment of hypertension.
He has had an ECG since being admitted to the ED. ECG has shown ST segment elevation across leads V1-V4. He is then transferred urgently to a PCI centre. Which artery is most likely to be blocked?

A) Right Coronary Artery
B) Circumflex Artery
C) Aorta
D) Left Anterior Descending Artery
E) Right Anterior Descending Artery

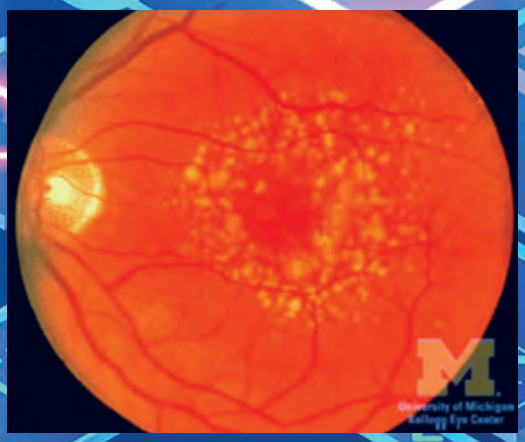
4 A 58 year-old female patient presents with sudden loss of hearing in her left ear. She does not have any personal or family history of hearing loss. On examination, tympanic membrane appears normal on otoscopy with normal ear canal on inspection. Weber's test and Rinne's test have been performed and indicate she has presented with a sensorineural hearing loss. According to NICE guidelines, what is first line treatment for this lady?

A) Steroids
B) Steroids + Oral Antiviral medications
C) Antiviral medications
D) Ear syringing
E) Topical steroids

5 Age related macular degeneration (ARMD) results in loss of precision in vision. The following picture (right) shows the retina for a patient with ARMD. What is the name of the characteristic lesion on the retina to suggest this patient is suffering from ARMD?

A) Cotton wool spots
B) Drusen
C) Blot haemorrhages
D) Retinal haemangiomas
E) Silver wiring

Answers on page 27



"Oh! Do not retire, please!"

Nikhil Kaushik F.R.C.S. Consultant Ophthalmologist, Wrexham Maelor Hospital, BCUHB, Wrexham, North Wales LL13 7TD

Abstract

Faced with increasing demands and monumental waiting lists the government has urged elderly doctors to come out of retirement and persuade others to postpone their retirement to help staff hospitals.

Mr Nikhil Kaushik, a Consultant Ophthalmologist, himself at the estuary of work and retirement, reflects on the opportunities and challenges for the NHS and the valuable role that the elderly worker can play.

Article

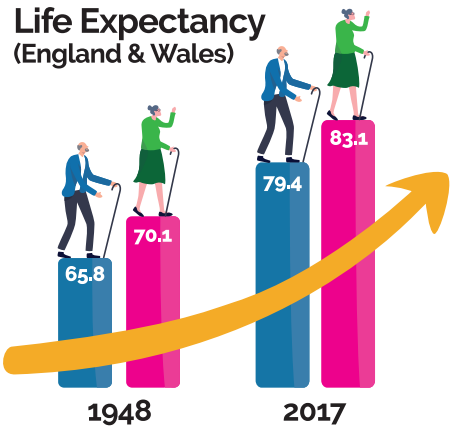
Of the animal kingdom, human species alone can stand up on its two feet. This has allowed humankind to engage its free hands to create and preserve, with preservation of thought in the form of writing being the ultimate tool for all human creation and achievements. Much of our understanding of pre-Renaissance world is based upon our interpretation of the relics of the past. The modern world is in constant evolution due to our preserved history and accumulated wisdom.

In addition to food, we must find clothing and shelter for our basic survival, and this drives us to engage in activities beyond our immediate biological needs. This has been the basis of all civilisations to various grades. As civilisations have progressed, we have learnt to share resources, and everyone has had to work until they die.

In early modern age, life expectancy was short. For instance, in 1721 in the UK it was just 32 years.

It is humbling that our ancestors with limited resources and a much shorter life expectancy created much of that glorious past. Gradually through the years, life expectancy has increased so much so that in 1991 it had risen to 73 years for men and 78 for women and is continuously rising. Baby boys born in the UK in 2020 can expect to live on average to age 87.3 years and girls to age 90.2 years, taking into account-projected changes in mortality patterns over their lifetime. This is laudable but our physical and mental abilities cannot keep pace with increased life expectancy. These decline as we age.

Therefore, societies have had to evolve the art of living with a reduced ability to work and earn while still retaining a sense of dignity. A share



and care, family and societal approach initially achieved this but a reliance on the mercy of others carries a risk of exploitation. Addressing these concerns formed the basis of retirement and pension.

Centenarians in 1952: 255
Centenarians in 2015: 14,450

Germany became the first country to introduce retirement benefits as recently as 1889. The simple aim was for its citizens to live with dignity and feel empowered with money in their own pockets. Other countries followed including the USA and the UK.

In the United Kingdom, provision of retirement pension is primarily a state responsibility which is funded out of general taxation. We are also free to have additional work related, as well as other private pensions.

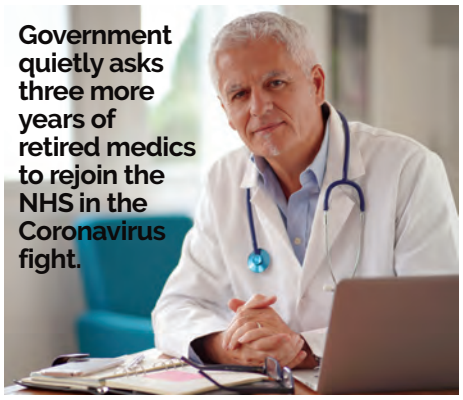
If we for a moment look at life as described by Shakespeare being a gather of seven ages with each stage lasting for seven years, then that resulted in a balanced society - all segments contributing and caring for others fairly. However, with evolving technology and better health care, a shift has taken place in these stages, with infancy, schooling, teenage years, and youth squeezed into an early entrance into the middle age that again rapidly makes way for a disproportionately long old and extreme old age. We see this reflected in a declining age support ratio, the main factors contributing to this are a falling birth rate and rising life expectancy, the world now has more grandparents than grandchildren.

We should rejoice the fruits of mechanisation and technological advances resulting in long life.

However, we should, now focus on achieving this long and healthy survival with minimal medicinal support.

It is concerning that, 75% of older adults take one or more prescription medication, with 25% of older adults taking 5 or more medications on a regular basis; and then there are over the counter (OTC) drugs and several health supplements. The joy of a long healthy life seems to be drowning under the burden of Illness.

Human beings have the ability of rising to any challenge; our emergence from the coronavirus pandemic is the current testimony to this. We should recognise that there are many older citizens, who are still able and willing to work albeit at a reduced pace. Societies must not neglect this capable, wise, and valuable workforce. This is particularly important and desirable for the NHS workforce. The senior doctors, nurses and other technical staff should have opportunities to contribute as much as or as little as they can.

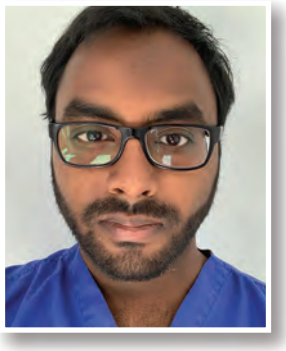


The Government's plea to the retired and other senior staff to come forward and help staff hospitals should urgently be matched by revisiting some of the policies that have affected pensions, and other job planning issues that are leading many a doctor to seek early retirement.

The NHS just cannot afford to waste this extremely valuable resource!

Ocular Toxicity with Hydroxychloroquine:

Clinical features and Recommendations for Monitoring



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Introduction

Hydroxychloroquine is a treatment used in autoimmune diseases, generally initiated by specialist physicians such as rheumatology and dermatology, with recently oncology starting to use the drug.[1] It works through inhibition and modulation of immune responses, as well as inhibition of autophagy, in order to get the desired effects. It generally has good efficacy among conditions like systemic lupus erythematous and rheumatoid arthritis.[2] Additionally, it has a favourable systemic safety profile, which rarely causes complications with hepatic and renal function, musculoskeletal muscles and cardiotoxicity.[1] However, it can cause retinopathy, leading to irreversible damage with structural and functional changes. There is generally a growing number of cases at risk of developing retinopathy, particularly with increasing long term (sometimes suggested for lifelong) use of Hydroxychloroquine.[2] Early detection of ocular toxicity and subsequent cessation of the drug, can lead to less severe impact on vision and less likely to progress, thereby preserving vision. Therefore, the aim of the guideline is to detect early signs of pre-symptomatic toxicity.

Summary of the current Royal College of Ophthalmology guidelines (2020 issue)[1]

The guidelines for Hydroxychloroquine are designed to provide best practice recommendation and reduce risk of sight loss by early detection of toxicity. This applies to all genders over 18 years old. Among paediatric cases, there were no reports of retinopathy, however long-term users should still be referred for monitoring. The prevalence of toxicity for long-term use is ~7.5% and it can be up to 20 – 50% in those using this for over 20 years.[1] The suggested effective monitoring tools in detecting pre-symptomatic disease and reduce risk of progression of visual loss are automated central static visual fields (VF) test, spectral-domain optical coherence tomography (SD-OCT) and fundus auto-fluorescence (FAF).[1] Figure 1 shows a summary of the monitoring pathway for Hydroxychloroquine.[2]

1. Who should initiate monitoring?

The prescribing physician should initiate the referral to ophthalmology for monitoring. However, if the patient is no longer under that physician's care, then the responsibilities lie with the person issuing the repeat prescriptions, which is usually the GP.[1]

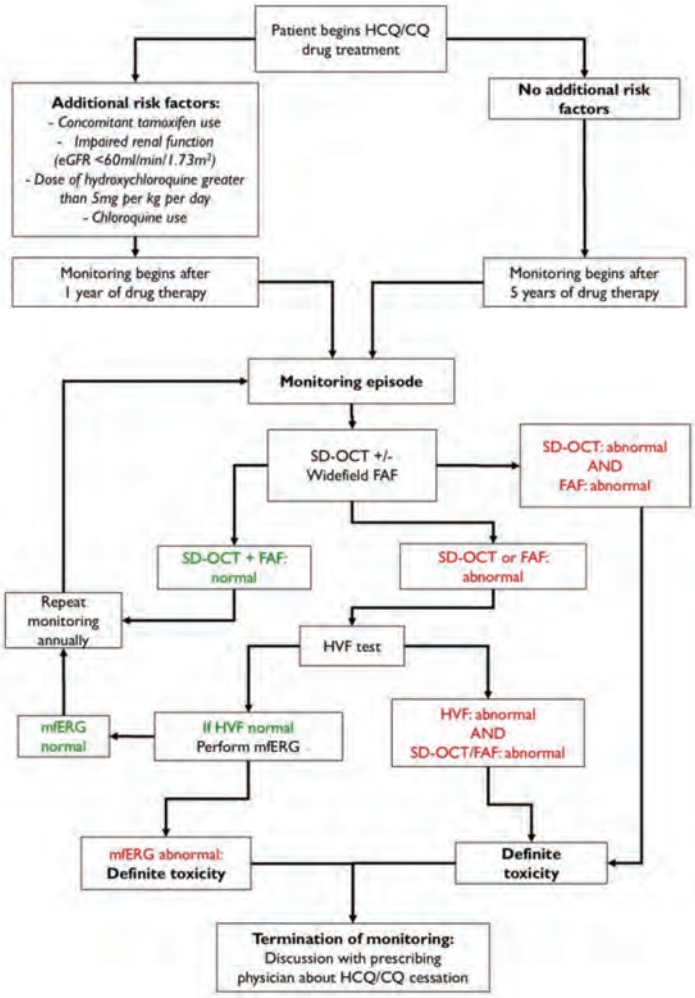


Fig. 1: Summary of Hydroxychloroquine monitoring.[3]

2. Which patient requires monitoring, when and how often?

The usual daily consumption of Hydroxychloroquine is 4-5mg/kg. The prevalence of toxicity is <2% within the first 10 years, with a low risk for the first 5 years. This increases to 20% when using the medication for >20 years or when using a higher dose of >5mg/kg.[1] The risk is also higher among those with renal impairment (eGFR <60) and concomitant tamoxifen use.[1]

Generally, monitoring should begin after 5 years from commencement of treatment, followed by annual monitoring. No sooner is required as toxicity usually develops slowly. Those among the high-risk category should initiate monitoring within 5 years of commencement, with subsequent annual monitoring.[1]

3. *What information is required to be provided by referring clinicians?*

Patient demographics:

- Name
- NHS number (+/-hospital number)
- Date of birth
- Consultant in charge of care and email address
- GP details

Clinical details:

- Indication for Hydroxychloroquine use
- Date Hydroxychloroquine commenced (including any known intervals without treatment)
- Daily dose of Hydroxychloroquine
- Body weight (kg)
- Other medications
- Tamoxifen use (including past or present)
- Renal function: last eGFR result and date
- Any known eye problems (genetic/AMD)

4. *Where should monitoring occur?*

At a hospital eye service setting, and these can be monitored via virtual clinics. It is inappropriate for the referring physician, including community optometrists, to monitor. [1]

5. *What tests that should be performed for monitoring?*

Baseline assessment is no longer required for initiators of Hydroxychloroquine, although this was recommended in the original 2018 guidance.[2] It is suggested that visual acuity, fundal examination or fundus colour photo, colour vision, Amsler's testing, and electrooculography (EOG) are considered overly subjective or insufficiently sensitive for the purpose of monitoring.[1]

For monitoring, SD-OCT and FAF should be done for all patients. VF testing (usually 10-2) should be carried out if there are structural abnormalities in SD-OCT or FAF. Multifocal electroretinogram (mf-ERG) should be undertaken if there are abnormalities in SD-OCT or FAF, with a repeatable normal VF testing. However there is limited availability of this test.[1]

OCT may show damage in the parafoveal area, where it usually affects the inferotemporal region initially. Disruption to the ellipsoid zone and thickening of the retinal pigmented epithelium (RPE)-Bruch's membrane are seen in early toxicity. Later stages, there can be accompanying changes in the outer nuclear layer, inner plexiform layer and external limiting membrane.[4] (Fig 2)

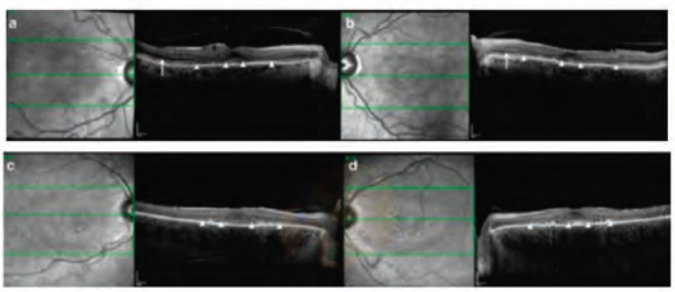


Figure 2: SD-OCT highlights bilateral parafoveal damage. Images a and b shows disruption to the photoreceptor layer and ellipsoid zone (between white arrow heads) in both eyes. The white arrow points to the external limiting membrane, which is not visible in the parafovea. Images c and d also shows thinning of photoreceptor layer and ellipsoid zone (between arrow heads) with corresponding RPE changes. (Courtesy of Latasiewicz et al, Eye, 2017)[5]

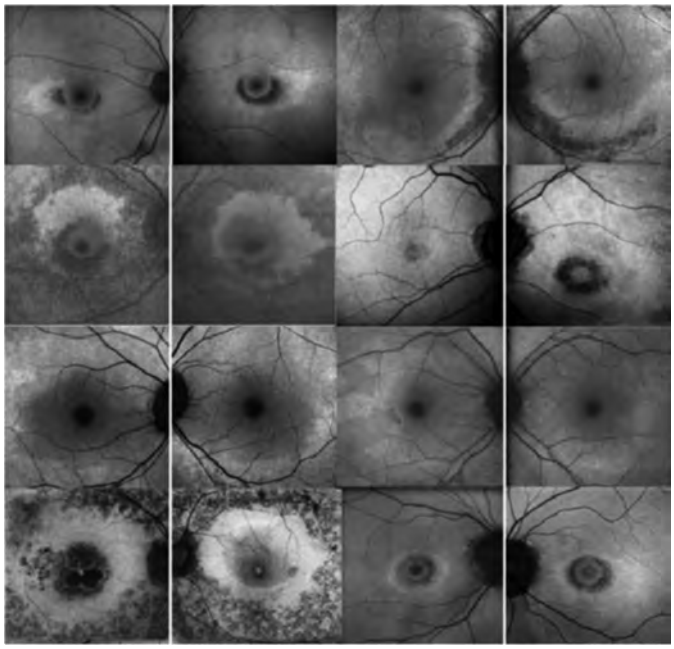


Figure 3: FAF images showing various patterns and severity of Hydroxychloroquine retinopathy. At the macula region, areas of hyperfluorescence (lighter areas) indicate RPE stress, and areas of hypofluorescence indicates RPE loss. (Courtesy of Dr Ronald Melles M.D.) [1]

FAF will highlight areas of auto-reflection of lipofuscin within the RPE in the parafoveal or pericentral region. Hyperflourescence indicates RPE stress, and hypofluorescence indicates RPE loss.[1,4] (Fig 3 & 4).

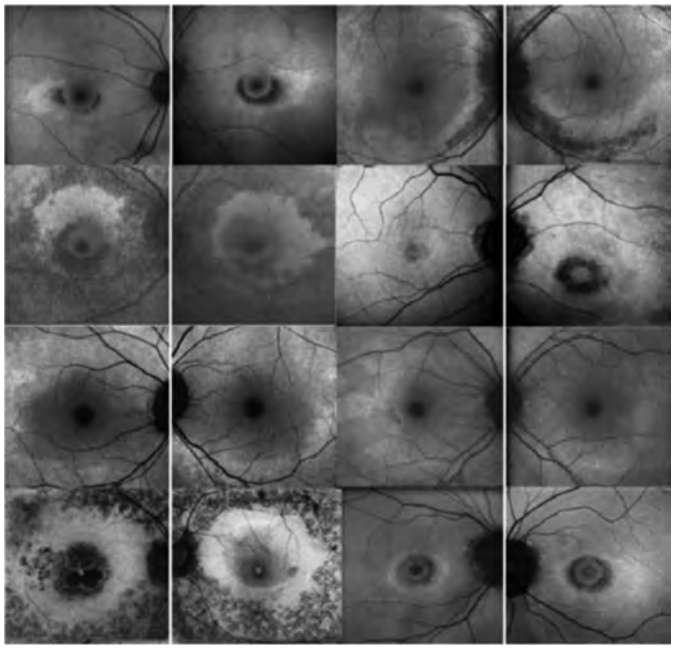


Figure 4: Another FAF images showing Hydroxychloroquine retinopathy with images a and b showing bilateral increase in hyperfluorescence, and images c and d showing areas of hypofluorescence. (Courtesy of Latasiewicz et al, Eye, 2017)[5]

mfERG may show depression in the parafoveal or pericentral area in early retinopathy.[4]

VF 10-2 can identify parafoveal damage with the classic complete or incomplete ring scotoma. However, early toxicity initially affects the supero-nasal quadrant, which corresponds to the infero-temporal retina.[1] VF 30-2 will identify those with pericentral field defects.[3] (Fig 5)

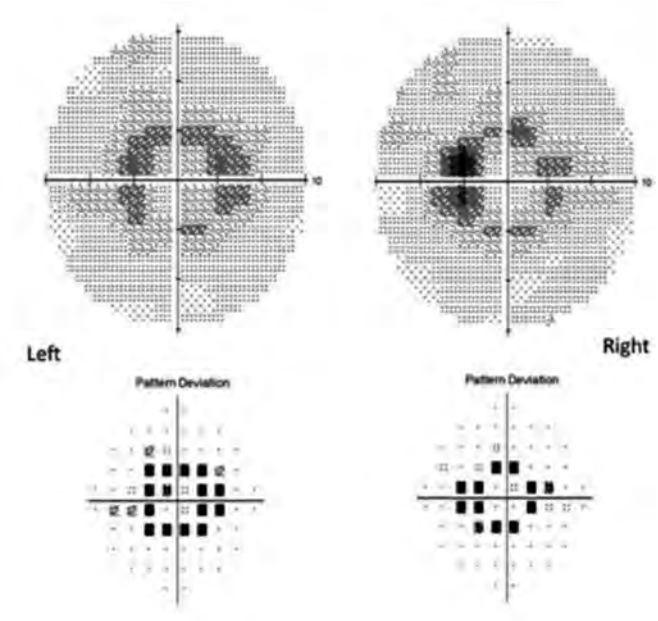


Figure 5: VF 10-2 showing the classic ring scotoma in Hydroxychloroquine retinopathy. (Courtesy of Dr Ron Melles) [1]

Possible toxicity is when there are structural abnormalities on the OCT or FAF, but with normal VF test and mf-ERG. With definite toxicity there are structural abnormalities in both OCT and FAF, or OCT/FAF with corresponding VF/mf-ERG defect.[1] Table 1 summarises the findings for each monitoring tool, along with features for each severity level.

Severity	Visual field (10-2)	Fundus autofluroscene	Spectral domain OCT
Mild	Non-specific visual field deficits/ focal visual field loss PSD <3dB	Subtle increase signal in parafovea or pericentral distribution	Subtle outer retinal changes
Moderate	Incomplete ring scotoma PSD 3-10dB	Significant increase in signal in parafovea or pericentral distribution. RPE loss (reduced signal) may also be present in less than 2 quadrants.	Significant outer retinal structural changes with thinning
Severe	Complete ring scotoma with or without loss of sensitivity at fixation PSD >10dB	Reduced signal in more than 2 quadrants indicative of RPE damage	Disruption of outer retina and RPE, with diffuse retinal thinning and outer retinal debris. Epiretinal membrane and cystoid macular oedema may be present.

Table 1: Summary of findings for VF, FAF and OCT, with corresponding Hydroxychloroquine retinpathy features for each severity level.[1]

6. *What action are to be taken for patients with Hydroxychloroquine retinopathy?*

Those with definite toxicity can be removed from monitoring at point of detection, although local follow up clinics (with face-face consults) may be more appropriate if follow up is considered necessary for any case. The consultant ophthalmologist should then inform the GP and prescribing physician of the test results, with the recommendation for urgent review by their physician. The ophthalmologist should not stop the medication as it is up to the physician to discuss with the patient the risk vs benefits. If the retinopathy is mild and the treatment is providing excellent systemic response, the patient and physician may decide to continue Hydroxychloroquine therapy. However, with severe retinopathy, the patient may decide to stop and discuss alternatives with their physician.[1]

If there are visual deficits, ancillary services can be involved such as the Low Visual Assessment (LVA) and the Eye Care Liaison Officer (ECLO). In addition, the patient should stop driving until they have had an Estermann VF test that is consistent with driving standards, and the patient should also inform the DVLA.[1]

Conclusion

The benefit of this updated guideline is to help identify early Hydroxychloroquine toxicity, at a pre-symptomatic level, with the aim to preserve sight and reduce the risk of irreversible visual loss as a result of Hydroxychloroquine retinopathy. The recommended tool for monitoring is SD-OCT and FAF as first in line, with the addition of VF and mfERG if required. There is no longer a requirement to carry out baseline assessment. Monitoring should begin 5 years after commencement of drug, followed by annual monitoring, unless for those at high risk where monitoring should begin sooner. If toxicity has been identified, patients can be removed from monitoring, with subsequent discussion regarding cessation of the drug with the prescribing physician.

References:

1. Hydroxychloroquine and chloroquine retinopathy: recommendations on monitoring. Published by The Royal College of Ophthalmologists, 2020.
2. Yusuf, I.H. et al. The Royal College of Ophthalmologists recommendations on screening for Hydroxychloroquine and chloroquine users in the United Kingdom: executive summary. Eye. 2018;32:1168–73.
3. Yusuf, I.H. et al. The Royal College of Ophthalmologists recommendations on monitoring for Hydroxychloroquine and chloroquine users in the United Kingdom (2020 revision): executive summary. Eye 35, 1532–1537 (2021).
4. Marmor MF. Comparison of Screening Procedures in Hydroxychloroquine Toxicity. Arch Ophthalmol.2012;130(4):461–469
5. Latasiewicz M, Gourier H, Yusuf I H, Luqmani R, Sharma S M, Downes S M. Hydroxchloroquine retinopathy: an emerging problem. Eye (London, England). 2017;31(6):972-6.

BIDA members making the news

Prestigious awards for BIDA members

Prof S Raj Murali MBE

We are delighted to congratulate Raj on this very well deserved honour. We are extremely proud of his achievements. Prof S Raj Murali is a consultant orthopaedic surgeon based at Wrightington Hospital. He has received an MBE for services to International Doctors.

He developed a postgraduate training programme for overseas doctors with a team at Edge Hill University, which allows experienced international clinicians, who have higher postgraduate qualifications, to come to the UK and study for a Masters Degree, while gaining further clinical experience in the NHS.

BIDA would like to take this opportunity to congratulate all other International healthcare workers who were included in Queen's Honours List.

Mr Sai Ram Pillarisetti

Sai was honoured with ***The Diana Award*** for going above and beyond in his daily life to create and sustain positive change. Whilst studying Medicine in the UK, Sai recognised a gap in the representation of international medical students like him and Founded the 'BIDA Student Wing'– the very first organisation to represent international medical students studying in the UK.

In less than 2 years, the BIDA Student Wing has grown into an organisation with hundreds of student members studying medicine in the UK and who come from more than 38 different countries.

Sai was also recognised for his work with India based 'Ushalakshmi Breast Cancer Foundation' in developing the South Asia's first mobile app on breast health in English as well as 11 commonly spoken Indian Languages.

Dr Sunil Sapre

Congratulations to Dr Sunil Sapre, who has been selected as "Team Leader" for the Table Tennis Venue at the forthcoming Birmingham 2022 Commonwealth Games.

The Games start with the opening ceremony on Thursday 28 July, and the sporting action gets under way the next day. Table Tennis will feature in 20 sessions, across every day of the Games, with standing and wheelchair para classes being played alongside team, singles and doubles competitions. It promises to be a busy time for Sunil, with the first medal matches being on Monday 1 August, with the competitions building to a climax on the final day of the Games on Monday 8 August.

Remembering...

We would like to offer our sincere condolences to the families of the following BIDA members who have recently passed on.

Dr. Murtaza Ali Hussaini
Ex-Consultant Cardiologist,
Tameside General Hospital

Dr. Shreedharan
Ex-General Practitioner,
Brunswick Health Centre

President's Cup 2022

It is exciting to watch our Divisions' cricket teams showing immense enthusiasm when participating in this year's President's Cup 30-over Cricket Tournament.

The first match between North Wales and Wolverhampton Division took place on the Llay Cricket Club ground near Wrexham. Both teams achieved high scores of 204 for Wolverhampton and 229 for North Wales. The mildly moist cricket ground with its undulating surface played tricks on the fielders.

Above: The victorious North Wales Division team following their First Round victory

North East Division players and supporters

The second match on 19th June was between North East Division and Stoke on Trent. The North East Division played host. They won the game comfortably with Stoke Division scoring 151 all out and North East scoring 153 for the loss of just one wicket. Congratulations to Yuvaraj Chauhan, the "Man of the Match".

Left: Yuvaraj Chauhan receives his "Man of the Match" Award.

Wigan Division had beaten Blackburn Division to reach the finals by getting a bye, by virtue of being the Champions last season.

North East and Stoke Divisions players and supporters

Having thumped Stoke Division, North East Division then met their match in the semi-finals when they travelled to Wrexham to play against the North Wales Division. This was played at Llay Cricket Club's ground, and turned out to be a really enjoyable, closely-contested match. North East Division scored a competitive 158, but North Wales Division batted well to reach 162 for 4 wickets (one retired hurt).

We'd love to see a huge turnout of supporters at the Final on Sunday 7 August!

North Wales and North East Divisions players and supporters at their semi-final meeting.

Above: The victorious North Wales Division team following their semi-final success against North East Division.

The President's Cup Final

Sunday 7 August 2022

North Wales DIVISION vs Wigan DIVISION

Appleton Cricket Club, Lyons Lane, Warrington, Cheshire WA4 5JG

What3words: formed.rested.engage

BIDA Tweets

Divisional News

Southport & Ormskirk Division

Following a gap of 2 years, Southport and Ormskirk Division organised a F2F educational meeting. A presentation on ***'What more can we do for elevated lipids'*** was delivered by Dr. Ravish Katira.

North Wales Division

The monotony of Zoom and other online meetings was finally broken by a face-to-face meeting of the North Wales Division, held at the Memorial Hall in Wrexham on the June 14 2022.

It was an opportunity to catch up with colleagues, exchanging notes on the impact the pandemic has had on the NHS, with concerns expressed about the lengthening waiting lists and pressures caused on doctors' lives.

The Division Chairman, Dr JP Nankani, expressed his delight at seeing many younger members and hoped that the BIDA activities would continue to benefit the members and the profession.

Other Divisions...

Rochdale Division held a hybrid meeting in May 2022.

Wigan and Blackburn Divisions have both recently held face to face meetings.

Healthy Temperatures

The optimum air temperature according to the World Health Organisation for the body is between 18°C and 24°C. Any hotter and the risks rise. When the temperature gets to 35°C, accompanied by high humidity, health is put at danger. Once 40°C is reached, it can be dangerous even with low humidity levels.

While people living in hotter countries like India and the Middle East regularly cope with 40°C and above, their bodies are accustomed to extreme heat and their daily life alters according to the weather. Britons are not and are therefore at greater risk.

Those more susceptible to extremes in heat are the elderly, infants and children, pregnant women, outdoor and manual workers, athletes and the poor. People with chronic conditions such as heart or breathing problems are also much more at risk. Rising temperatures will result in more violent assaults, suicides and thousands of excess deaths, according to scientists who are warning about the significant impact heat waves have on physical and mental health.

Keep hydrated and keep cool!

Medical Quiz Answers

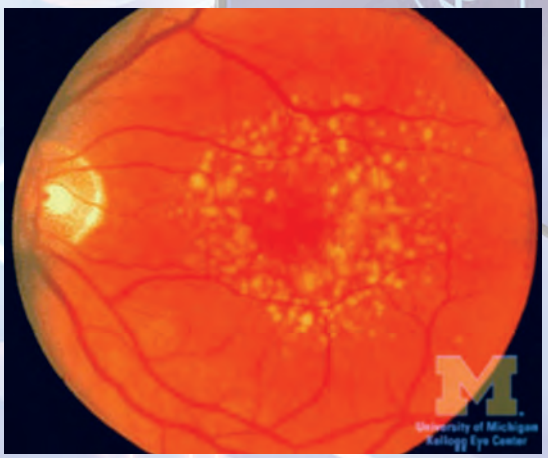
1 **D) Lichen Sclerosus.**
It is inflammatory condition that usually affects older females. White plaques form which are tender on palpation.

2 **E) Pericardiocentesis.**
The patient has developed tamponade after being involved in a Road Traffic Accident (RTA). Urgent treatment of cardiac tamponade can potentially be life-saving for this patient who is clinically unstable with low blood pressure and raised heart rate.

3 **D) Left Anterior Descending (LAD) Artery.**
According to the ECG findings the patient has suffered from Anterior Myocardial Infarction which is commonly caused by a blockage in LAD. Usually ST elevation is seen across V1-V4 leads (anterior heart wall).

4 **A) Steroids.**
NICE guidance recommends use of steroids for cases of idiopathic sudden sensorineural hearing loss.

5 **B) Drusen is a yellow lesion and characteristic for ARMD.**
Cotton wool spots, silver wiring and blot haemorrhages are seen in diabetic retinopathy rather than ARMD.



Reference for image: Kellogg.umich.edu. 2022. Retinal Drusen : Ophthalmoscopic Abnormalities : The Eyes Have It. [online] Available at: <http://kellogg.umich.edu/theeyeshaveit/opticfundus/retinal_drusen.html> [Accessed 22 June 2022].

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It will help you define your aims with the help of an expert and formulate a personalised plan.

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