YUVADERMA
E-BULLETIN

May 2018, Vol. 1, Issue. 5

THE ESSENCE

The artwork reflects the essence of Yuvaderma, where young minds are nurtured and moulded into the building blocks of tomorrow.

It represents the journey to the key of enlightenment and success via the road of knowledge, team work, dedication and perseverance.

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THE EDITORS NICHE

Here we are, bringing out our YUVADERMA bulletin, issue no. 5! It has been a wonderful 3 years since the beginning of our journey and watching our magazine grow and reach out to so many residents has been nothing but pure joy. Being part of the team has been an amazing learning experience for all of us at the editorial board. In our new edition, we showcase diverse aspects of Dermatology, Venereology and Leprosy and we also portray fun ways to easily grasp, learn and understand our field of expertise better.

This wouldn't be possible without the support of IADVL KN to whom we have an immense gratitude for providing this incredible platform where residents have the freedom to express and showcase their clinical, literary and creativity skills.

We kickstart our issue by glancing into the life of the discoverer of Mycobacterium leprae- G.H.A Hansen. He was a revolutionary who demystified the theory of hereditary transmission of leprosy as the primary mode of transmission and made many strides in uncovering the hidden depths of this mutilating disease at a very young age. We follow this up by getting candid with Dr. Vidya T.S.???? Hope you have a great read with this fun-loving discussion. Next, we bring about a gripping debate between two enthusiastic residents, who will win books or e-books, you decide. We then move on to refresh your mind with our derma notes where we explain phototherapy simplified, easy pneumonics for those rapid-fire viva rounds that we go through daily as well as during our final round of MD exam and then a walk through the memory lane of stains.

Are your brains stimulated? If so head on down to our next section- the brain teaser which I'm sure you'll be able to crack with ease. We then move on to the humble beginnings and heart-warming experiences of a fresh resident which reminds us of the beauty of our field and that we have the blessing of giving the most contentment to our patients by visibly making skin lesions disappear.

In the next segment, we explore all possible beans in Dermatology including syndromes, diseases and appearances. Next is a treat for those with a keen eye for art and creativity, immerse yourselves in our galleria crafted by our talented young residents. For the next section, let's

put on our nerd caps as we head onto the case files of a common tropicaldisease-actinomycetoma. We end our issue by enumerating common dermatoses that occur as a result of various religious traditions practiced by masses of our population that we have to keep in the back of our minds while examining potential cases.

We are immensely proud of this issue and elated with the overwhelming response from many residents being eager to contribute to our E-bulletin. This has always been a great platform to express creativity and love for our specialty and we encourage more readers to get in touch and portray their work, case files and experiences. Our brilliant editorial team has formulated the current issue after countless discussions and we could not be happier with the turn out.

Hope you have a great read!

Signing off

Dr. Shweta Bhadbhade

Dr. Vaishnavi Gopal

Treasury

PRESIDENTS PREAMBLE

Dear Residents and colleagues,

Warm greetings from executive committee of KN IADVL.

I am pleased to know that the next edition of YUVADERMA E bulletin is ready to go online. Congratulations to the team lead by Dr. Shweta and Dr. Vaishnavi.

The association conducts innumerable number of activities for residents and post graduates mainly through sister societies across the state, but it is disheartening to note that the attendance from residents and post graduates is not up to the expectation. Each of these programs is designed and crafted keeping in mind the interest of you people. Similarly I have also noted poor participation from you with respect to patient oriented programs rolled out by the association in the interest of public education. You are the future leaders of the association, you need to be in the forefront and get groomed yourselves to take on the mantle for the better future of the association.

It is increasingly coming to my notice and observation that the residents and post graduates are getting more inclined towards Cosmetology and Aesthetics putting clinical dermatology to the back seat. This is not a good trend and if continues jeopardizes the patient care. Please remember clinical dermatology is the basis for any sub specialty / super specialty, if roots are not strong the tree will not lost long. You need to have strong foundation to deliver optimal results in whatever the sub specialty you opt for. It's my humble suggestion to you to concentrate on clinical dermatology, later on you have ample of opportunities to learn and master your area of interest.

The research and publication sector of dermatology needs a big boost. I urge upon you to get in to the habit of publicizing. Publication is the most important criteria for your future academic career. All of us know how dermatology is shaping up and evolving itself as the most sorted after subject by medical students. Let us bring more pride to the specialty by dedicating our time and energy.

Warm regards and Best wishes

Dr. B.S. Chandrashekar
President KN IADVL

FOREWORD

HON. GENERAL SECRETARY SPEAKS

Ever since its inception, YUVADERMA has always been a source of pride to IADVL Karnataka. For me, YUVADERMA is also a source of inspiration for its innovative designs, high quality content and the enthusiasm of the entire team.

Continuing with this legacy, chief editors Dr Shweta Bhadbhade and Dr Vaishnavi Gopal under the guidance of the past Editor Dr Saloni Katoch have done a wonderful job in this issue.

I would like to see YUVADERMA exploring new horizons in the forthcoming issues with the addition of topics on Soft skills development, medico legal issues and practice management issues to guide the residents in their future carrier. Also, YUVADERMA can become a platform for our residents to showcase their talents, hobbies and interests with a dedicated section for the same.

Before signing off, I would like to advice all the residents to participate actively in IADVL activities at various capacities even after you pass your post graduation. The first step towards this would be upgrading your Provisional membership to Life membership immediately after you complete your post graduation.

Long live IADVL.

With warm regards

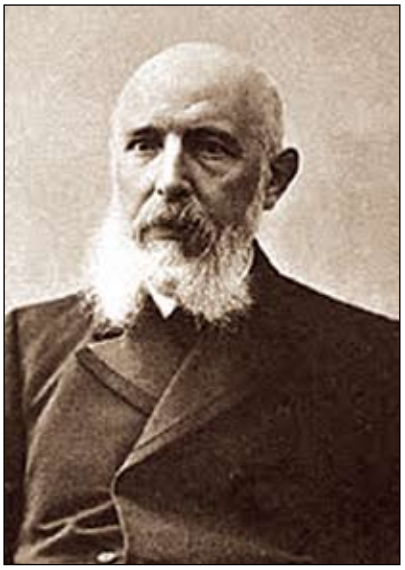
DR. MANJUNATHA R
Honorary secretary general,
IADVL Karnataka.

FOREWORD

PIONEERS IN DERMATOLOGY

GERHARD HENRIK ARMAUER HANSEN (1841-1912)

In 1880 Dr. Neisser - published his research without giving credit to Dr. Hansen. Soon the term Neisser's bacterium was in use while Hansen was busy in Bergen fighting his court case for violating medical ethics for human experimentation. The court found him guilty for failing to obtain consent from the subject and he was removed from his post as resident physician of the Bergen leprosy hospital in 1880.



G.H.A. Hansen, a Norwegian scientist, discovered Mycobacterium leprae as the causative organism for leprosy, defying the hereditary affliction theory of the disease.

He was born in Bergen, Norway in 1841 to a Danish family, and was 8th of fifteen children to Mrs. Elizabeth Concordia Schram and Mr. Claus Hansen, on July 29th.

In 1859, he went to the University of Christiania to study medicine.

In 1866, he acquired his degree with honours. After completing his internship, he served as a community doctor in Lofoten, a small Norwegian fishing village in northern Norway for a year.

In 1868, Hansen returned to his people in Bergen and met Dr. Daniel Cornelius Danielssen and Dr. Carl Wilhelm Boeck, the two celebrated stalwarts of ancient leprosy research, who gave the theory of hereditary transmission of leprosy.

Under Dr. Danielssen, Hansen travelled with him all across Norway to study the disease, collect pathological samples from the lepers and research relentlessly to finally come to a revolutionary conclusion that challenged Dr. Danielssen's theory of hereditary transmission.

In 1869, in his first published work, he described the pathological alterations in leprous tissue. But his technique of staining bacteria was exceedingly primitive and furthermore his poor equipment complicated his work.

In 1870, a grant allowed Dr. Hansen to travel to Vienna for advanced training in staining and histopathology, which enabled him to strengthen his research technique.

In 1873, when he was merely 32 years old, he concluded his successful attempt at identifying the infectious substance in leprous material and published his historic work. Same year he married his Chief Dr. Danielssen's daughter Stephanie Marie, and lost her to tuberculosis within a year of their marriage. Two years later, he went on to become the chief of the tuberculosis hospital in Bergen.

In 1875, he was made physician-in-chief for all the lepers in Norway.

In 1879, a young German bacteriologist Albert Neisser (discovered the organism of gonorrheoa), a pupil of Robert Koch. On a research trip

In 1873, when he was merely 32 years old, he concluded his successful attempt at identifying the infectious substance in leprous material and published his historic work. Same year he married his Chief Dr. Danielssen's daughter Stephanie Marie, and lost her to tuberculosis within a year of their marriage. Two years later, he went on to become the chief of the tuberculosis hospital in Bergen.

to Norway to study leprosy, he had the opportunity to meet Dr. Hansen and have a look at his research work. He succeeded in attempts to stain them better to yield more convincing results.

In 1880 Dr. Neisser - published his research without giving credit to Dr. Hansen. Soon the term Neisser's bacterium was in use while Hansen was busy in Bergen fighting his court case for violating medical ethics for human experimentation. The court found him guilty for failing to obtain consent from the subject and he was removed from his post as resident physician of the Bergen leprosy hospital in 1880.

But once the news of Albert's claim reached Bergen, the entire medical fraternity of Norway defended Hansen's stand and prove Neisser's deliberate attempt at plagiarism. The conflict was officially addressed in a Lepra Congress held in Berlin where Hansen was recognized as the true discoverer of the lepra bacilli.

This also marks the world's awakening and acceptance of the contagion theory and changed the way leprosy as a disease was approached.

It was the fruit of his untiring work that the amended act of 1885 was passed, which ordered health authorities to allow lepers to live in precautionary isolation, away from the unaffected section of the community, which led to quick and steady decline in the leprosy disease burden in Norway.

After an episode of a stroke at a very early age, Hansen started experiencing symptoms of heart disease in his fifties, which nearly confined him to bed. Undaunted, he continued to travel around the country on official inspection tours.

In February 12, 1912 at Floro, a little town on the western coast, he breathed his last. The cause of his illness was revealed and history tells us that he suffered from syphilis and which probably caused the stroke and subsequent heart disease.

Dr. SANJAY THEJASWI R,
PG-2, KIMS, HUBBALLI

CANDID WITH DR. VIDYA T S

1. Maa'm, at this very moment right here you are sitting and about to share your experiences and advise young dermatologists out there…how do you feel?

I am very happy because you are all youngsters who started this. It feels good and I will be even more happier if I could contribute to some extent that will encourage you all.

2. Why did you choose Dermatology?

Dermatology was my first choice, I had love towards surgical branches but somehow dermatology impressed me a lot. It is vast, tricky and challenging. There was a professor in my college who had put interest and love for dermatology in me.

3. What is the most rewarding thing about being a dermatologist?

Seeing a satisfied face after my consultation and with the degree of contentment they come with for further follow ups, I think that's a reward I can get for being a dermatologist.

4. Everyone knows you as a renowned cosmetologist and dermatologist, but our readers want to know more about who you are as a person: about your childhood ? Parents? MBBS ? PG? Hobbies?

As a child I was a happy go lucky girl, simple life style, I think I was satisfied with everything, most of the time, I did what I wanted to do. My parents were very encouraging, stood by me in all my decisions. I have tried many things (jack of all trades), I was a dancer and at some point my parents thought I would become a professional one, I was part of NCC, and was the leader of my school too.

5. Is that how you got your leadership skills?

May be, but given a task I used to do completely with all my heart and soul put into it. I had represented Karnataka at the REPUBLIC DAY PARADE in Delhi, and most of all , I got my MBBS seat through NCC quota (all these paid off). NCC as a part of life brought me different friends, better and an organised life & overall changed my entire outlook. I started my medical journey in KIMS Bengaluru, I wasn't a book worm, friends were everything to me and even we used joke around saying that we learnt medicine after we left college. I got married after my final year exams, studied for entrance in my internship, I was pregnant then. When I got my MD Dermatology in BMC I was on cloud nine, my daughter was 13days old then. Initially it was very difficult & hectic to manage, my father passed away in the first few months into my PG days. He was an inspiration all the way and very close to me. Skin department in BMC was strict, I could get a months leave. Once I was back after a month's leave things started falling in place, we used to see 100 male and 100 female opd cases, 25 STD and at least 25 leprosy cases daily. Now imagine the variety and experience one can get there. After 3 years I was a dermatologist from the esteemed Bangalore Medical College and was proud of myself. When we were doing MD we were not supposed to do any cosmetology procedure without permission so I used to carry chemical peels, ear piercing gun etc in my car, when I used to go for meetings in the evening my husband used to tell "don't worry you are safe as you have acid and a gun with you in the car!! (laughs). I did like teaching but not completely, then I joined KIMS (back to home turf) as a senior resident worked there for about 2years, then gave birth to my 2nd child. Within a month I was asked to look after a clinic of a

senior dermatologist, he was Dr Satish who had a roaring practice at that time, I had not met him at that time but had just seen him in couple of conferences, so when he called and asked me look after his clinic I felt it was an achievement in my life. I looked after his clinic for about 3 months, later I looked after Dr. Govindappa's clinic (yet another senior dermatologist) for 6 months so basically I had the exposure to wide range of cases of these senior Doctors and in cases of need I would never hesitate to pick up the phone to clarify any doubts with my seniors/ juniors. These experiences gave me confidence to start on my own and from then on there was no looking back. Initially I started as residence cum clinic. I also started working as co-consultant with Dr Satish, at Sagar Hospitals and this went on for next 13 years. One fine day I got a call from Dr Sacchidanand, he said that they are starting fellowship in BMC and wanted me to apply. It was almost 15 years since I finished post graduation. It was a tough call for me to think about again joining as a student when you have an established clinic, not only that if your in the first batch of fellowship it will be hectic but Dr Sacchidanand encouraged me further. He was a great teacher and had also helped us in PG final year. He used to fire questions at us which helped for our exams. I started practising in the evening at my clinic as I would be in BMC in the mornings for my FRGUHS in Aesthetic dermatology. I used to go to BMC in the morning, afternoon to Sagar Hospital, then Dr Satish clinic and get back home and study so for 1 year it was quite hectic for me but I thoroughly enjoyed it. My husband and children are always very understanding and supportive which encourages me to do a lot of things that interest me. I finished my fellowship in 2009 (first batch of Aesthetic dermatology). Slowly I started reducing the no of places I used to visit for consultation and started introducing my junior colleagues to the places I consulted. And I always believe in two way learning when I have doubts I have never hesitated calling anybody be it a junior or senior. To be frank I have learnt a lot from them, seeing these young dermatologists at conferences/CMEs how they present a case the amount of homework they do for that, pushes me to always to be in the learning curve.

6. You were associated with Bengaluru dermatology society at various levels (joint secretary/secretary/president) 2009-2017… for quite a long time…how did u balance your practice and BDS responsibility?

When I started attending BDS meetings they used to collect Rs 10 at the end of the meetings (I still wonder how they used to manage with that). We used to go to different hospitals for BDS meets. Slowly things changed and we started having meetings at one fixed place. When I was asked to take up the post of Joint secretary (JS), I was happy (not much work as most of the things were taken care by President and Secretary). After 2 years of being a JS I felt I can handle the post of Secretary, knowing the fact that BDS is a very busy, successful, most envied and a meticulous society. We had many energetic and highly talented dermatologists in BDS and many other dermatology societies look up to us and live up to all these expectations. It was a tough a call but I was sure with the seniors help I could handle it. Bengaluru Dermatology society is rich and encouraging. We started actively involving PGs in the society activities with presentations, best thesis awards, research grants, journals, DERMAPEN, hand outs, poster presentations, rural camps etc and it was all so impressive. Took a 2 year break from these activities but later members told I should take up the post of president and they instilled confidence in me and I took up the post. So that was 6yrs in BDS at all levels & I totally loved my tenure, every single bit of it. As a president I started this non dermatology talks where we asked an investment banker, a yoga teacher, physiotherapist, motivational speaker and auditors to give talks. I always tried to emphasize the importance of that and I don't know how far I was successful, but I am sure it made a difference. I am also involved in activities of DERMCON

2019 (was involved in organizing WCOCD 2018). When you ask me how you managed all of this, I would say- I plan and I have a zeal to finish a given job efficiently.

7. Your success mantra for a resident to become a successful dermatologist?

Accept the reality, don't expect things to grow on a single day. Have patience and trust in yourself. This makes you more confident & success follows (when asked about practice) if you are confident enough you can start off on your own from day one. If you like teaching then medical colleges are always an option.

8. Do you think clinician (Dermatologist) and cosmeto logist are different from each other… your view on this?

You should first be a Dermatologist. A person shouldn't call himself a cosmetologist without being a dermatologist so I would say they aren't different but specialized or upgraded with procedural dermatology. I can equate this to a Surgeon and MCH urologist.

9. Any mentor in your life whose centripetal force brought you here?

Dr. MG Gopal prof at KIMS Bengaluru, my under graduate teacher was an inspiration for me to love dermatology. As a PG, Dr. Sacchidanand channelized me and of course Dr Satish instilled confidence in me as a dermatologist.

10. Quackery is a menace in the present days …role of residents in preventing this?

Orient the pharma company against marketing combination creams and training community health workers with minimum knowledge how to identify basic dermatology conditions and to refer cases which cannot be or should not be treated by them to dermatologists and also about steroid abuse to be reported to a dermatologist.

11. Your future plans… how do you want to carry your successful journey further?

Lately I have developed interest in Community dermatology where we are helping those patients as well as training doctors out there in rural health care. It was started by BDS where we used to give modules and conducted tests to assess how well they take it. By doing this I feel quackery will be reduced to a significant level. Adopting more villages and training doctors there with a clear demarcation of cases- what to treat and what to refer. In future I look forward to involve myself in community dermatology activities.

12. Now a days dermatologists are being associated with many wellness centres for money and fast growth (lucrative) how do you want these young dermatologists to make wise decisions?

I would say a big no to that, to people out there, we should be clear in what we want from life. We should never put money ahead of our profession. In cases where we aren't aware of such places make sure you will be having a contract with them clearly defining your role and limitations over there. Overall at the end of the day you have to answer your heart ARE YOU DOING JUSTICE TO YOUR PROFFESSION?

13. What would be your most satisfying achievement since the beginning of dermatology journey?

Being a DERMATOLOGIST

14. Pearls of wisdom to Derma youngsters?

Don't be in a hurry, trust yourself, don't hesitate to learn from others even though it's a junior (permeable membrane for knowledge), don't stoop low for money and start from day one.

RAPID FIRE ROUND

Nicknames in your childhood/UG/PG days?

You asked me for my nickname… My friends call me "Mamu", meaning a DON. They think I silently manage my responsibilities and

get things done without being too strict but by being firm.

Movie you would cherish all your life?

Actually many but among the recent ones its Hichki about Tourette syndrome

Song that lifts your spirit?

Again I would say plenty but most of Rajesh Khanna songs.

Place on earth you would love call it eternal?

Alone at home… HOME ALONE (laughs) and Switzerland

Favourite cuisine?

Indo-Chinese

One thing that's inseparable from you?

My smile I guess (laughs)

When do you call it a day of contentment?

To be frank every day, I do things what I want and I can't force myself to do things which I dislike.

Dr. MANOJ SRINIVAS
Senior Resident,
Dept. of Dermatology,
East Point Medical College,
Bengaluru

NOTE FROM MY NOTES

COLLOID BODIES
5L DG
L - LICHEN PLANUS
L - LICHEN NITIDUS
L - LP LIKE KERATOSIS
L - LUPUS ERYTHEMATOSUS
L - LICHENOID ACTINIC KERATOSIS
D - DRUG REACTION
G - GVHD

CAFE AU LAIT MACULES
NEWS BAG FL(E)D
N - NEUROFIBROMA, NOONAN SYNDROME, NEIMANN PICK DISEASE, NEVUS SPILUS
E - EPILOIA
W - WATSON SYNDROME
B - BLOOM SYNDROME, BASAL CELL NEVUS SYNDROME
A - ATAXIA TELANGIECTASIA
G - GAUCHER'S SYNDROME, GASTROCUTANEOUS SYNDROME
F - FANCONI'S SYNDROME
L - LEOPARD
D - DYSKERATOSIS CONGENITA

DRUGS INDUCING LICHEN PLANUS PEMPHIGOIDES
CRAP
C- CINNARAZINE, CAPTOPRIL
R- RAMIPRIL
A- UV A

Dr. PREETHI B NAYAK,
PG-3,
K.S. Hegde Medical Academy,
Mangalore.

NEVUS OF OTA SYNDROMES
Nothing Much KISS
N - NEUROFIBROMATOSIS
M - MULTIPLE HEMANGIOMAS
K - KLIPPEL TRENNAUNAY SYNDROME
I - IPSILATERAL DEAFNESS
S - STURGE WEBER SYNDROME
S - SPINOCEREBELLAR DEGENERATION

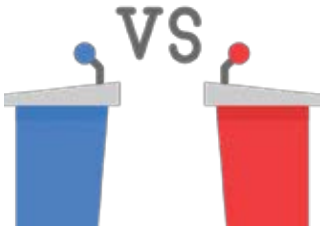
D/D FOR INTRACRANIAL CALCIFICATION
Best CHaTS
B - BASAL CELL NEVUS SYNDROME
C - CONGENITAL TOXOPLASMOSIS, CYTOMEGALOVIRUS INFECTION
Ha - HYALINOSIS CUTIS ET MUCOSAE
T - TUBEROUS SCLEROSIS
S - STURGE WEBER SYNDROME

DRUGS ASSOCIATED WITH PYODERMA GANGRENOSUM
PIG
P - PROPYLTHIOURACIL
I - ISOTRETINOIN, INTERFERON α2 B
G - GCSF, GEFITINIB

DRUGS CAUSING SEBORRHEIC DERMATITIS
CMC
C-CIMETIDINE
M-METHYL DOPA
C-CHLORPROMAZINE

Dr. DHARAM KUMAR,
PG-3,
RRMCH,
Bengaluru

BOOKS V/s E-BOOKS : THE SHOWDOWN



Dr. SUMAN B S,
PG-1, MIMS, Mandya.

Dr. GAGANA B,
PG-1, MIMS, Mandya.

Suman : Books do not need any introduction. They are almost 1000+ years old; they started with handwritten content and end with printed content. They have been considered as "man's best friend" since times unknown. Not to forget, the whole concept of digitalization and technology rooted from the books.

Gagana : In the present era, education is not just about having the best information but about having the right information at the right time. That is when e-books and online reading come into play; where access to unlimited information is just one click away. E-books have become our 911 call when stuck in a knowledge crisis.

S : Traditional book reading has its own values. Nothing can beat the feel of reading a book. The lovely fragrance of a new book and the way you keep it close with tender care and love is just beyond e-books. Apart from this, books also carry sentimental values attached with the reader.

G : The best thing about e-books is that they are portable. You can carry a whole library of hundreds of books with you; on a CD, in a laptop, notebook or any e-book reader and read them anywhere & everywhere. On the contrary, it is physically impossible to carry around that number of books. Wherever you go, your e-books follow you.

S : Books are available everywhere. Be it the book shop at the corner or the stall near the station, you can easily get a book near your location. On the other hand, not every book has got an e-book version.

G : E-books are delivered almost instantaneously. You can purchase, download and start reading them within minutes, without leaving your chair. You neither have to go to a bookstore to buy them, nor wait for them for days, weeks and sometimes more to arrive in the mail.

S : You can always get second hand good quality books at almost half the price of the original books. They have several shops exclusively for selling such books.

G : E-books are cheaper than their printed counterparts. Also, it is one time investment. And the fact, that E-books can be implemented without the need for expensive print jobs, is attracting a number of publishers to switch to electronic publishing, rather than conventional printing. Needless to say, no trees

are required to manufacture paper for the pages of e-books. So it's indirectly helping to save trees.

S : Reading a book causes lesser ocular problems compared to an e-book. If you are reading a book with correct posture and at a right distance, it does not strain your eyes much.

G : Dry eyes caused by constant staring at the screen can be prevented by artificial tears or frequent blinking or intermittent breaks in the reading session. The risk of myopia is the same as with the books.

S : You don't need much care for books as you need with e-books. You can place them anywhere, can play ball with them and you can even sleep with them.

G : I think e-books are more durable than books; just the way it was on the day you purchased. You will not face any kind of maintenance problem. All you need is sufficient battery. On the other hand, books get torn and wear out with time and rough handling.

S : When you are reading an e-book, you get easily distracted. You feel the urge to ping or call someone. While reading books you will immerse yourself into whatever you are reading. Also, there are not many distractions in the form of pop-ups or ads. However, while using an e-book you are constantly subjected to distractions, which can sometimes be unsafe and misleading for children as well as adults.

G : Where there is a will there is a way. E-books can be read even without internet connection. So by turning off the internet, you isolate yourself from the social media and focus on the reading. Also, when you are in search of a particular topic, you just have to type it out and the page is all yours. Whereas, you have to waste your time and energy to manually search through the pages, in case of printed books.

S : How good does it feel when you give your book to your friend and later they thank you for lending such a wonderful book. Well, e-book deprives you from this joy. Sharing e-books through mails and Facebook will not give the same feel.

G : Sharing e-books is very easy and convenient for both the giver and the taker. It can just be sent on email or share-it and you need not have to worry about the book being damaged due to careless handling or about book being lost.

S : I feel reading a book is definitely more interesting. You get to enjoy the feel of the paper, the pictures given and make tiny handwritten notes on the side. But, reading from an e-book can be inconvenient and uncomfortable because of the smaller screen.

G : Fonts in e-books can be resized, zoomed in, making it easier to read. E-books can be interactive and have audio, video and animations, which can enhance the message that the author is trying to convey. This is especially beneficial among the kids. Instead of static pictures printed in the books, grasping and retention of the information is better with the animations.

S : Books offer authentic and reliable information but few e-books may give false information.

G : That is not entirely true. Online reading fetches you latest and updated version of information unlike the printed books which need a lot of resources and time to update themselves. Due to which, many books remain outdated.

S : To sum up, I say books are undoubtedly better than e-books. For all the relevant and reliable information it provides, for the attachment it creates with the readers and the focus it brings in one's mind. That is why the saying goes- "a room without a book is like a body without a soul".

G : To conclude, I would like to quote John Dewey, who rightly said "If we teach today as we taught yesterday, then we rob our children of tomorrow". Instead of sticking to the sentimental values, we need to explore and adapt to newer technologies that are available and use it more efficiently. E-books are marking their territory in the current generation, by allowing the educational world to fly farther and faster than ever before.

THANK YOU!

PHOTOTHERAPY

INTRODUCTION : Ultraviolet radiation (UVR) is used as a very popular dermatological therapy in a multitude of skin disorders. Sunlight itself is a very rich source of ultraviolet radiation, though not in a controlled manner.

Phototherapy refers to the use of ultraviolet (UV) radiation (UVA or UVB) without using an exogenous photosensitizer for the treatment of various dermatoses whereas photochemotherapy refers to the usage of a sensitizer (like psoralens) in addition to UVR.

UVR is a component of the electromagnetic spectrum ranging from 200-400nm. The UV spectrum is further divided into UVC (200-280 nm), UVB (280-315 nm) and UVA (315-400 nm).

HISTORY

The beneficial effects of sunlight on the skin have been known for many centuries. The treatment of vitiligo with psoralen extract from seeds in combination with sunlight is recorded in ancient Egyptian, Indian and Chinese manuscripts. The father of modern phototherapy, Niels Finsen, demonstrated the effectiveness of UV therapy for lupus vulgaris at the end of the 19th century.

Niels Finsen - The father of modern phototherapy

In 1923, Alderson suggested that a mercury quartz lamp be used to treat psoriasis.

combination of tar and UVB therapy for psoriasis was promoted by Goeckerman in USA in the year 1925, and the combination of UVB and dithranol (anthralin) for the same by Ingram in England in 1953.

MECHANISM OF ACTION

UVB phototherapy has anti - inflammatory, immunosuppresive and cytotoxic properties. Exact mechanism of action is unclear, but includes :

- Depletion of Langerhans cells
- Altered antigen presentation
- Decreases NK cells activity
- Apoptosis of T lymphocytes & keratinocytes.

In PUVA, there is :

- Cross-linking of DNA by psoralen photoadducts.
- Inhibition of DNA replication.
- Langerhan cell depletion
- Immunosuppressive effects on T-lympocyte function.
- igration and restoration of Th17/ regulatory T-cell imbalance in psoriasis.

UVA-1 phototherapy penetrates deep into the dermis and induces interstitial collagenase and several cytokines causing softening of sclerotic skin. Also causes reduction in tumour necrosis factor α (TNF-α) in the skin.

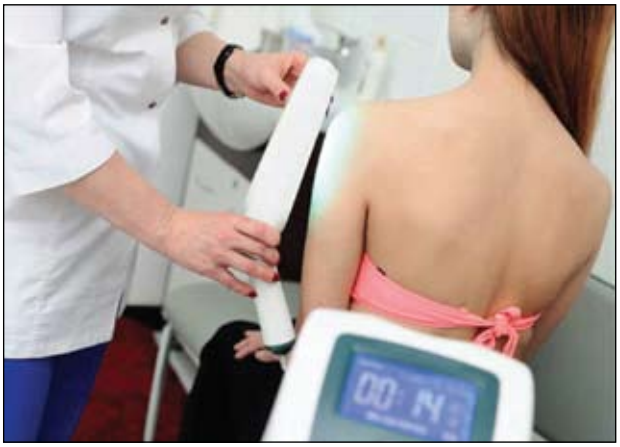
DELIVERY OF PHOTOTHERAPY

Phototherapy can be delivered through :

1) Photochemotherapy PUVA
2) Broadband UVB therapy
3) Narrowband UVB therapy
4) UVA1
5) Targeted Phototherapy
6) Photodynamic therapy

PUVA Photochemotherapy

Psoralen plus ultraviolet A (PUVA) photo chemotherapy combines the use of psoralen and long-wave ultraviolet A (UVA) radiation. Psoralens are tricyclic furocoumarin compounds, present in fruits and vegetables such as limes, lemons, figs and parsnips. 8-methoxypsoralen (8-MOP) and 5-meth oxypsoralen (5-MOP) are naturally occurring psoralens and 4, 5, 8-trimethyl psoralen (TMP, trioxsalen) is a synthetic psoralen primarily used for Vitiligo. Psoralens can be administered topically or orally. There are Various protocols for PUVA -



BATH PUVA

- Bath PUVA therapy involves the immersion of the entire body in psoralen solution for 15-20 minutes followed by exposure to UVA.
- Concentrations of 8-meth oxy psoralens ranging from 0.5 to 4.6 mg/L have been used.
- Mainly used in Psoriasis.
- Avoids side effects of oral 8-MOP like nausea
- Safer in patients
- Avoids laborious applications of ointment, creams and lotions.

PUVASOL

- PUVASOL stands for psoralen and UVA obtained by solar light as sunlight is a rich source of UVA.
- PUVASOL is advised for those patients who cannot visit the hospital for phototherapy.
- 8-MOP in the dose of 0.6 mg/kg body weight is administered after breakfast.
- Nearly 1.5-2 hrs later, sun exposure is advised for 10 min.
- Treatment is carried out 2-3 times/week and time of exposure is increased by 5 min every week till a maximum of 30-45 min.
- Use of eye protective glasses and avoidance of further sun exposure for the next 8hrs is to be followed to prevent eye toxicity and darkening of the normal skin.
- Disadvantage is that UV light cannot be quantified and UVB in sunlight can increase the thickness of epidermis and makes the sun-exposed skin leathery and may interfere with the effectiveness of light therapy.

BATHING SUIT PUVA

- A bathing suit of flannel material is dipped for 5 minutes in a bucket of water containing 8-MOP.
- Patient has to wear this bathing suit and and a raincoat over it for 15 minutes and then expose to UVA.

TURBAN PUVA

- A cotton absorbent cloth is soaked in 8-MOP solution (3.75 mg/L) which is squeezed and applied on head for 5 minutes and repeated 4 times and then exposed to UVA or sunlight.

SOAK PUVA

- Hand and/or feet are soaked in 8-MOP solution (3.75mg/L) in a basin or tub for 20 mins and then patted dry.
- Then the part is exposed to UVA in a hand and foot unit.

ORAL PSORALEN THERAPY

- In oral PUVA, 8-MOP is administered orally (0.6 to 0.8 mg/kg bodyweight) 1 to 3 hrs before exposure, depending on the absorption characteristics of the particular drug brand.
- Dosage of 5-MOP is 1.5 to 1.8 mg/kg.
- UVA dose can be determined by Minimal Phototoxic dose (MPD) testing and eye protection with B2 torrid glasses is required for that day.

UVB Phototherapy

There are two types: BB-UVB (290-315nm) and NB-UVB (311-312nm). An MED (Minimal Erythema dose) testing prior to starting UVB phototherapy is helpful in determining the starting effective dose.

BB-UVB is more erythmogenic and carcinogenic as compared to NB-UVB.

Though BB-UVB has an advantage of rapid clearance in case of NB-UVB.

After the introduction of the Philips TL-01 lamp with an emission spectrum (311-312 nm) NBUVB is now the gold standard for the treatment of skin disorders.

Indications –

Vitiligo

Psoriasis

Atopic dermatitis

Other dermatoses

UVA-1 Phototherapy

UVA-1 is mainly used in atopic eczema, sclerosing skin conditions (morphoea and scleroderma) and various subtypes of lupus erythematosus. UVA1 phototherapy utilizes long wave UVA radiation (340-400nm) while filtering out the erythematogenic UVA and UVB wavelengths (290-340 nm).

Different dosage regimens UVA1 phototherapy: low dose (10-20 J/cm 2 per single dose), medium dose (50-60 J/cm 2 per single dose), or high dose (130 J/cm 2 per single dose).

High dose UVA1 irradiation is useful in the treatment of patients with acutely exacerbated atopic dermatitis. Medium UVA1-phototherapy is effective in the treatment of moderate severity atopic dermatitis and sclerotic disorders and 15-30 treatments are given. Despite all the benefits of UVA1, little data exists on potential long-term safety risks such as photodamage and skin carcinogenesis in humans, particularly of the high-dose regimen.

Photodynamic Therapy

Photodynamic therapy (PDT) aims to destroy the desired target selectively, thereby minimizing damage to vital structures. The photodynamic reaction consists of the excitation of photosensitizers (mainly porphyrins) by visible light in the presence of oxygen, resulting in the generation of reactive oxygen species, particularly singlet oxygen. This results in a direct or indirect cytotoxic effect on the target cell. Topically active agents are preferable for PDT in dermatology and 5-aminolaevulinic acid is the main agent used.

Targeted Phototherapy

Targeted phototherapy delivers a high amount of UV rays over a small area and is used for the treatment of smaller lesions and for lesions resistant to whole body phototherapy using UV chamber. Targeted ultraviolet B (UVB) phototherapy is an effective, safe, and convenient treatment modality for the treatment for localized variants of psoriasis. The most common and extensively implemented mode of delivery is the 308-nm excimer laser. Apart from excimer lasers 308 nm excimer nonlasers and nonexcimer light sources delivering UVB light are also used as targeted phototherapy.

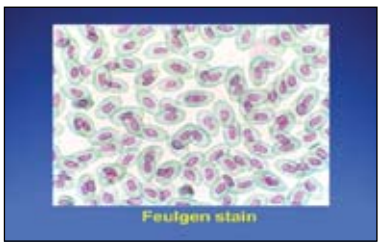
CONCLUSION

Phototherapy is one of the important treatment modalities in Dermatology as mono as well as combination therapy. Basic knowledge of phototherapy is a must for beginners. In India, PUVA and Narrow Band-UVB are most widely used. Vitiligo and Psoriasis are amongst the common diseases for which phototherapy is used. It can also be used for alopecia areata, atopic dermatitis, prurigo nodularis, GVHD etc. UVA-1 phototherapy and photodynamic therapy are relatively expensive modalities of treatment.

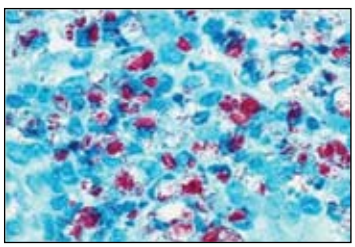
Dr. SHIBANI BHATIA,
PG-1,
KMC, MANIPAL

EPONYMOUS STAINS IN DERMATOPATHOLOGY

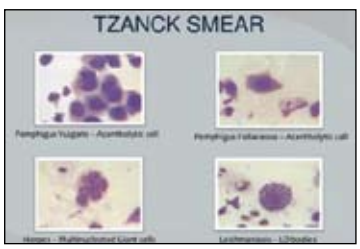
Staining is a technique used to increase the contrast and highlight structures in the microscopic image of a biological tissue. Special stains are used to stain specific structures in the skin. The most common stains used in Dermatopathology are Haemotoxylin and Eosin. Here are a few important stains used in Dermatopathology, named after a person.



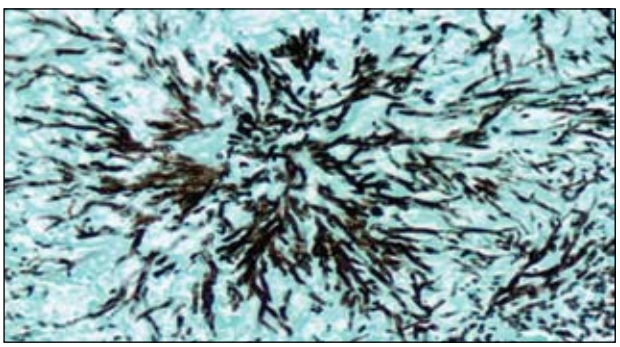
1. FEULGEN STAIN : It stains DNA and is named after Robert Feulgen (1884-1955), who was a German physician and chemist. He was a pioneer who developed this staining method for DNA in 1914.



2. FITE-FARACO STAIN : This stain is mainly used to identify partially acid fast organisms such as Mycobacterium Leprae, atypical Mycobacteria and Nocardia. The stain was named after George Liddle Fite, an american pathologist (1933-1993).

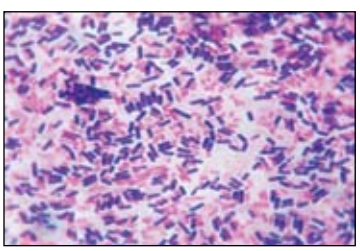


3. GIEMSA STAIN : This stain is mainly used in cytogenetics. It was developed by a German chemist and bacteriologist Gustav Giemsa (1867-1948). Giemsa's solution is a mixture of Methylene blue, eosin and Azure B. It is specific for the Phosphate groups of DNA and used in giemsa banding also called as G banding to identify chromosomal aberrations. It is mainly used in the demonstration of parasites such as Plasmodium,Trypanosoma, Chlamydia, and Trichomonas vaginalis. It is used to demonstrate acantholytic cells and inclusion bodies. Giemsa stain is a classic blood film stain for bone marrow specimens and peripheral blood smears.



4. GOMORI'S METHENAMINE SILVER STAIN : It was named after George Gomori (1904-1957), who was a Hungerian –American physician who later became famous as histochemist.

This stain is used for histologic visualization of fungi, basement membrane and some opportunistic organisms such as Pneumocystis carinii. This stain also visualizes Actinomyces, Nocardia asteroids and few encapsulated bacteria. The mucopolysaccharide component of the fungus cell wall are oxidized to release aldehyde group, they react with the silver nitrate, reducing it to metallic silver, making them visible. Fungi & Pneumocystis carinii take Black colour, whereas mucin appears Grey.



5. GRAM'S STAIN : It is a method of staining which differentiates bacteria into Gram-positive and

Gram-negative. This was named after Hans Christian Gram (1853-1958), who was a Danish bacteriologist. Gram-positive bacteria have a thick cell wall made of peptidoglycan, retain crystal violet and appear purple, whereas gram-negative bacteria have a thinner layer and does not retain purple color and are counter stained with Saffranin.

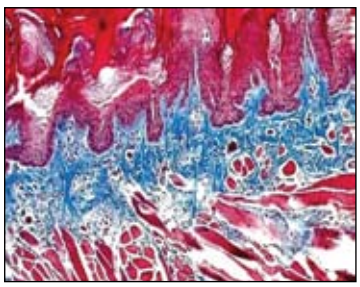
Method :

1. Applying a primary stain (Crystal Violet) to a heat fixed smear.
2. The addition of Iodide which acts as a mordant, binds to crystal violet and traps it inside the cell.
3. Rapid decolorization with ethanol or acetone.
4. Counter – staining with Safranin or Carbol Fuschin.

INTERPRETATION :

Gram-positive bacteria : violet

Gram-negative bacteria: pink



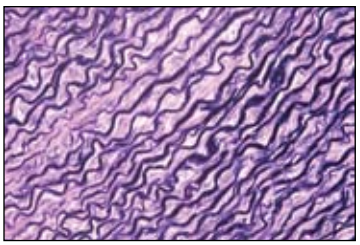
6. MASSON'S TRICHROME STAIN : It was named after French born Canadian pathologist Claude L. Pierre Masson (1880-1957). Masson's trichrome is a three color staining technique used in dermatopathology. The trichrome stain is prepared by immersing fixated sample into Weigert's iron hematoxylin. Weigert's hematoxylin is a sequence of three solutions namely Ferric chloride in diluted hydrochloric acid, Hematoxylin in 95% ethanol & Potassium ferricyanide solution alkanised by sodium borate.

INTERPRETATION :

Collagen- blue or green

Keratin and muscle fibers – red

Cell nuclei- black



7. VERHOEFF-VAN GIESON STAIN : It was developed by Verhoeff (1874-1968) who was an American ophthalmic surgeon and pathologist. Thompson Van Gieson (18661913) was an American neuropsychiatrist and pathologist in 1908. It is mainly used to demonstrate normal or pathologic elastic fibers.

8. VON – KOSSA STAIN : It was developed by Von Kossa in 1901. This stain is used to visualize calcium deposits in tissue sections.

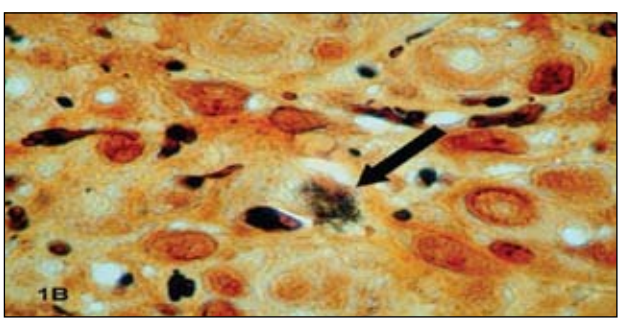
It is based on the principle of precipitation reaction where the addition of silver nitrate solution leads to deposition of silver by replacing calcium reduced by the strong light. It is not specific for calcium.

INTERPRETATION :

Calcium- black

Nuclei – red

Cytoplasm- light pink



9. WARTHIN-STARRY STAIN : It was first introduced in 1920 by two American pathologists, Aldred Scott Warthin (1866-1931) and Allen Chronister Starry (1890-1973) for the detection of spirochetes. It is a silver-nitrate based staining method. Used for identifying Helicobacter pylori, Legionella pneumophila, Spirochetes & Bartonella henselae which stain black.

REAGENTS :

- Haemotoxylin
- Lugol's iodine
- Iron chloride
- Van Gieson's stain
- Picric acid
- Acid Fuschin
- Sodium thiosulfate

INTERPRETATION :
Elastic fibres- Black
Collagen fibres- Red
Cytoplasm- Yellow

10. ZIEHL –NEELSEN STAIN : It is also called as acid-fast stain, which is used to identify acid-fast bacteria. It was first described by two german doctors, Dr Franz Ziehl (1857-1926) and Friedrich Carl Adolf Neelsen (1854-1898).

It is a differential stain used to identify acid – fast organisms, mainly mycobacteria.

COMPONENTS :

1. Primary stain: 0.3% Carbol Fuschin
2. Decolorising agent – Sulphuric acid
3. Counter stain – 0.3% methylene blue or malachite green.

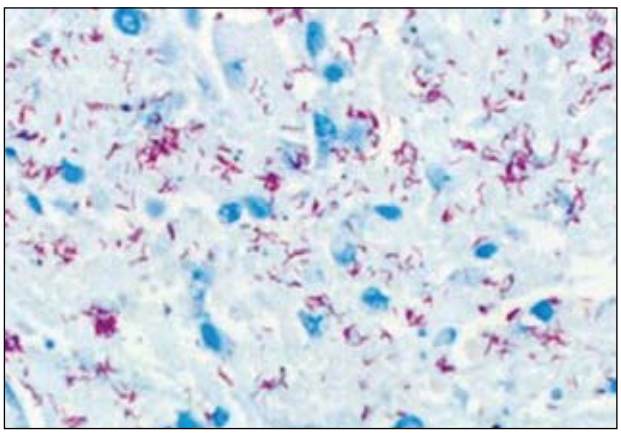
PROCEDURE :

1. Make a thin smear and heat fix by passing the slide 3-4 times over the flame. Place the slide on staining rack and pour carbol fuschin over the smear and heat gently by placing a flame until fumes appear.
2. Rinse smears with water until no color appears in the effluent
3. Pour 20% sulphuric acid
4. Wash well with clean water
5. Cover the smear with methylene blue or malachite green stain for 1-2 min
6. Wash off the stain with clean water. Allow it to air dry and observe under oil immersion field.

MODIFICATIONS :

1. Use of alcohol as secondary decoloriser- To specify M. Tuberculosis which is both alcohol and acid fast.
2. Use of acid- alcohol -3% Hydrochloric acid in 95% alcohol can be used in differentiating M. Tuberculosis.
3. Modifications in percentage of sulfuric acid.

a. <5% - M.Leprae
b. 1%- Actinomyces
c. 0.5% - Nocardia
d. 0.25-0.5%-spores and oocysts of cryptosporidium and Isospora.



INTERPRETATION : Acid-fast bacilli appears red, straight or slightly curved rods, occurring singly or in small groups and may appear beaded.

REFERENCES :

1. Al Abound K, Al Hawsawi K, Ramesh V. Eponyms in dermatology. Skinmed 2004; (3): 11-2.
2. Al Abound K, M Pahwa, Ramesh V. Eponymous laboratory stains in dermatology. Journal of Pakistan association of dermatologists 2008; (18): 167-70.

Dr. NAVYA,
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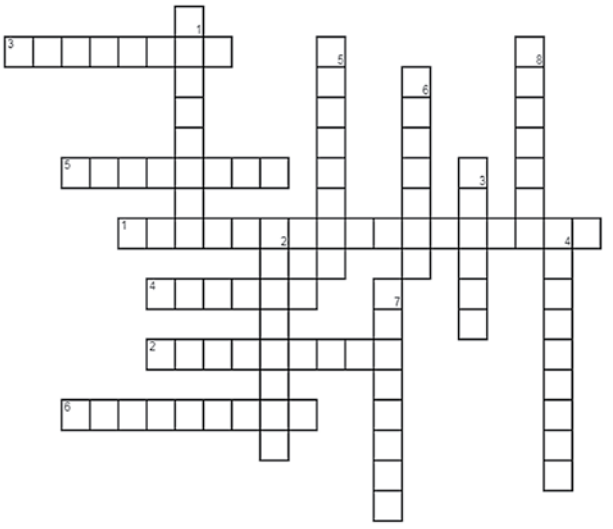
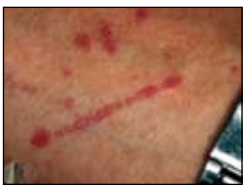
Brain - Teaser : PHENOMENA IN DERMATOLOGY



ACROSS

1. This term is derived from repositioning of the king with the rook in chess, describing the rare paradoxical hair growth observed on the untreated scalp side in patients receiving topical contact sensitizer treatment on the contralateral side.
2. The phenomena where Immediate pigment darkening is seen after exposure to long-wave UVB, UVA and, to some extent, visible radiation
3. An uncommon clinical condition that is characterized by an eczematous halo surrounding a pre-existing melanocytic nevus.
4. A very peculiar type of reactional state, characterized by distinct clinical and histopathological features, classically seen in patients with undiagnosed and untreated, non-nodular, diffuse, lepromatous leprosy.
5. The brownish coloration of the nails seen in Psoriasis due to subungal hyperkeratosis (occurs due to collection of parakeratotic columns in the nail bed)



6. Unusual cutaneous phenomenon observed in newborn infants as transient, benign episodes of a sharply demarcated erythema on one half of the body, with simultaneous contralateral blanching

DOWN

1. Identify this phenomena seen in Psoriasis as a result of trauma, scratching, etc.
2. The phenomena of occurrence of a different or unrelated dermatological disease at the site of the healed disease (commonly herpes zoster) is termed as?
3. Phenomenon where subepidermal hemorrhage occurs on careful scraping of a classical lesion of lichen planus
4. A phenomenon described by Sir Wilhelm Lutz, seen in Pemphigus Vulgaris where the superficial layer of the epidermis is felt to move over the deeper layer, and instead of immediately forming erosion, a blister develops after some time.
5. A Phenomena where heavy neutrophlic infiltrates or pustular reaction develops at the site of non-specific trauma, is seen in Neutrophilic dermatosis like Behcet's disease.
6. Psychotic symptoms arising as a complication of treatment with procaine penicillin presenting as anxiety/panic and hallucinations have been termed as
7. It is a vasospastic disorder characterized by episodic changes in blood flow in the cutaneous vasculature, and is clinically characterized by triphasic color change of pallor, cyanosis and hyperaemia on exposure to cold
8. A false-negative serologic test in which very high antibody titres interfere with the Ag-Ab lattice network necessary to visualize a positive flocculation test in venereal disease research laboratory/treponema pallidum haemagglutination assay (VDRL/TPHA)

Dr. SHILPITHA S,
PG-2,
Navodaya Medical College, Raichur

MY RENAISSANCE

Days passed, she completed 3 pulses with 50% resolution of her lesions. It was her 4th pulse when she came to OPD, this time at sharp 11am with a cover containing two coconut burfis and the loveliest smile on her face. She headed toward me, held my hand, I floated into her blessing shower. She wiped all her tears, and won over her fear, fed me the sweet and kissed my forehead and said, "God bless you my dear." My heart skipped a beat, as I fell to touch her feet.

Hello everyone,

I would like to share my experience as a first year Dermatology postgraduate.

It began in the year 2017, at HASSAN INSTITUTE OF MEDICAL SCIENCES, popularly known as HIMS, HASSAN located in the southern belt of Karnataka, sharing and experiencing joy with its neighboring districts, the cultural heritage of Karnataka- Mysore, blooming itself from its neighborhood IT hub, the IT capital Bangalore, and adapting the smell of coffee from its sister district Chikmagalur.

Then comes a day far in North Karnataka when clock hits nine, a message in my mobile shines. I flip the screen, and to the sky I scream.

It was written, "Congratulations MD Dermatology stream". All I knew was that Hassan is cool and calm, but I never knew it would welcome me with so much of love and warmth. Dressed in a

new apron, embracing a new beginning, I stepped into the outpatient department. I still remember the first case I saw was tinea corporis. The patient described the itching as the most intense sensation he has felt all his life. All the while I thought that am I underestimating his symptoms, or that he must be over reacting to the symptoms. Then to teach me a lesson came my next patient, a case of scabies who he proved not underestimate the power of an itch. I then realized that I'm bound to marry this word.

Happily wedded to it, I saw my next patient. My first question was, "DO YOU HAVE ITCHING?" The lesion gave an invisible slap with the patient telling me, madam I have Pityriasis versicolor and I have very less itching. From then on days passed asking itching? no itching? less itching.... Then came the second Saturday of the month, when with exhilaration we would close our OPD at 1:00pm. I was checking my watch as it danced around at 12:50pm. All of a sudden, I heard a voice at the entrance of OPD. A lady stood there with a loose dress, her face covered with tears rolling down from her sad eyes and repeating the words, "The curse of Lord has hit me, kindly save me from this agony."

My left cerebral hemisphere sings, it's one by the clock, wind up duty and turn in your white coat. But the right hemisphere gave a harder knock and told remember you took the Hippocratic oath and you are sailing in that promise boat.

My heart just pumped with that feel. I cursed my eyes, how could you just seal. Took the patient to examination room, undressed she

She gave me a voice to pronounce myself as doctor, but alas an unfortunate turn of events took away her voice and her smile. Few days ago, she had a fall which resulted in a cerebral hemorrhage. She is bedridden and fighting for her life along with an exacerbation of pemphigus lesions. All I can do today is fold my hands in prayer for her healthy recovery and I request all of the readers to give a small prayer to relieve her agony. I hope to see her smile again.

stands with a foul odor emanating. With age of 45, she spreads her arm for help and lays her belief, I begged my lord pardon, and asked the strength to bring her relief.

She narrates it appeared as a small bulla over chest few months ago which later spread to involve the whole body. She had taken treatment for few months but later discontinued as she was poverty stricken. The disease took its fury and she presented to us with flaccid bullae and erosions with secondary infection and crusting all over the body, oral cavity, genitals and scalp. Then, I realized I am not here to treat only acne and scar, I bear responsibility to bring life and relief to those in agony. We admitted the patient who was started on systemic antibacterials. Investigations confirmed the diagnosis of Pemphigus Vulgaris. We initiated on dexamethasone cyclophosphamide pulse, and prayed for her speedy recovery.

Days passed, she completed 3 pulses with 50% resolution of her lesions. It was her 4th pulse when she came to OPD, this time at sharp 11am with a cover containing two coconut burfis and the loveliest smile on her face. She headed toward me, held my hand, I floated into her blessing shower. She wiped all her tears, and won over her fear, fed me the sweet and kissed my forehead and said, "God bless you my dear." My heart skipped a beat, as I fell to touch her feet.

I flipped my pages, and found a boldly written note, I had just read it before, now my heart told "My dear today you understood that hippocratic oath". So, here it is, my story of my renaissance from just a read promise to feeling the essence of keeping that promise.

She gave me a voice to pronounce myself as doctor, but alas an unfortunate turn of events took away her voice and her smile. Few days ago, she had a fall which resulted in a cerebral hemorrhage. She is bedridden and fighting for her life along with an exacerbation of pemphigus lesions. All I can do today is fold my hands in prayer for her healthy recovery and I request all of the readers to give a small prayer to relieve her agony. I hope to see her smile again.

Here, I stand as a 1st year post graduate with bundle of questions, understanding the scenario where on one hand people spend tens of thousands to beautify skin, whereas on the other hand people have no money to save their skin. In search of answers I sign off with a hope to bring justice to my profession and promise.

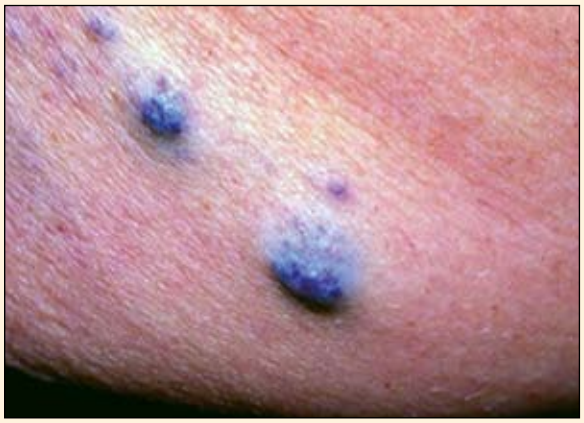
ITS MY RENAISSANCE

Dr. GOUHARE AFSHAN,
PG-1,
HIMS, HASSAN

SPILL THE BEANS

BEANS - a lentil that is not just a good source of protein but also mimics morphology of various lesions in dermatology

BEAN SYNDROME



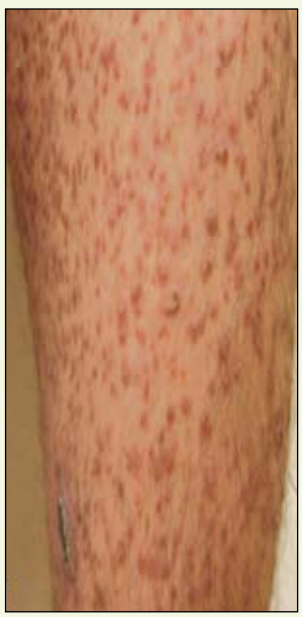
SYN : Blue Rubber Bleb Nevus Syndrome

This is a congenital venous malformation, characterized by small, rubbery, dark blue lesions. These are frequently seen on palms and soles, gastro intestinal tract; mostly in small intestine causing intussusceptions, volvulus and infarction.

PERSISTENT BEAN SHAPED HYPERKERATOSIS:

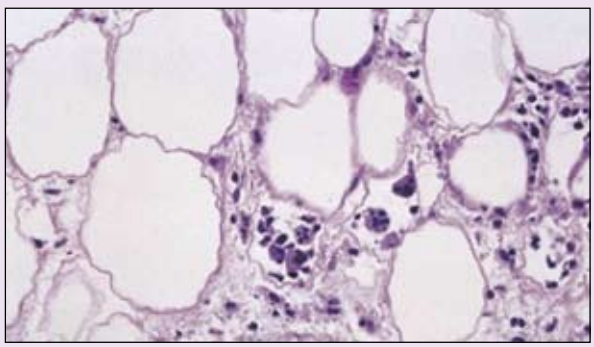
SYN : FLEGEL'S DISEASE

It is an autosomal dominant condition characterized by red verrucous keratotic bean shaped papules with thick scales located predominantly over dorsum of feet and legs.



BEAN BAG APPEARANCE :

This is a classical appearance in the histopathology of Subcutaneous Panniculitis like T-cell Lymphoma. Clinically presents as erythematous subcutaneous nodules and plaques mostly over lower limbs. It maybe associated with fever, arthralgia, weight loss and elevation of liver enzymes.



Histology mimics lobular panniculitis where the fat lobule is infiltrated by atypical lymphocytes having hyperchromatic nuclei. The epidermis and dermis are spared. Macrophages with cytophagic activity containing lymphocytes, neutrophils and nuclear debris is called BEAN BAG APPEARANCE

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DERMA ART GALLERIA

Dr. KIRTI KATWE,
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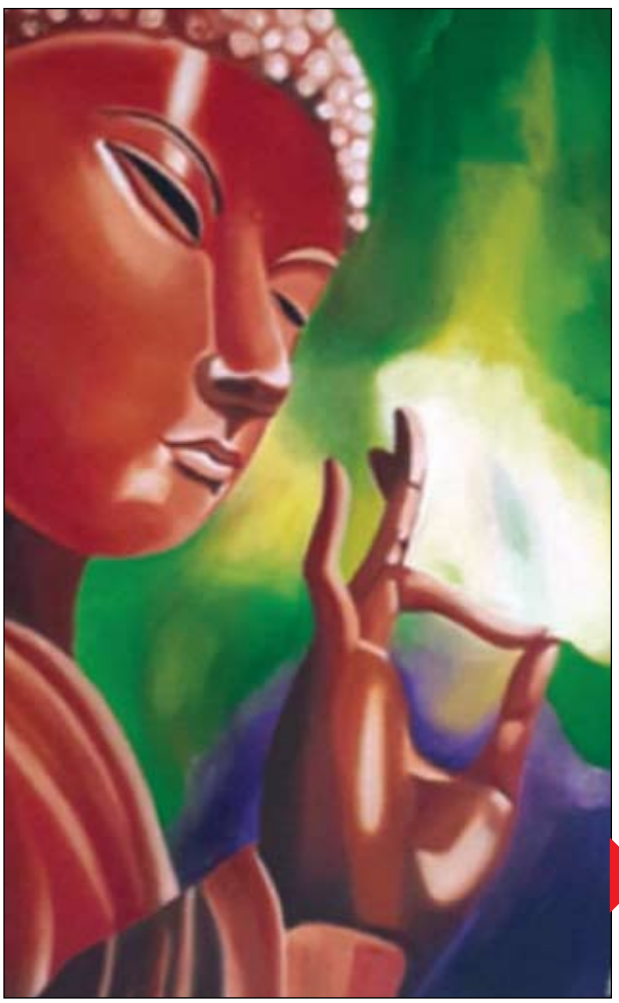
MIMS, Mandya



"The mind is everything. What you think, you become"

- Gautama Buddha

ART BY :
Dr. SHILPITHA S

A CASE OF ACTINOMYCETOMA TREATED EFFECTIVELY

INTRODUCTION : Mycetomas are chronic infections of the skin and subcutaneous tissue that may be caused by true fungi (eumycetoma) or by filamentous bacteria (actinomycetoma). Actinomycetoma are more common than eumycetoma worldwide and around 75% of mycetomas in India are actinomycotic.1 Actinomycetoma and eumycetoma have the same clinical picture; the affected part, usually an extremity, demonstrates swelling, induration and sinuses that discharge pus with or without granules composed of colonies of the organism. Treatment of mycetomas can be difficult. Eumycetoma may be unresponsive to antifungal therapy.2 Actinomycetoma respond to antibiotic therapy but prolonged treatment is necessary.3

CASE REPORT : A 36-yr-old male, farmer by occupation came to our OPD with complaints of multiple discharging sinuses on his left palm since 3 months. The lesion started as a firm painless nodule which gradually progressed to form multiple papules and pustules. They broke down to form multiple discharging sinuses with whitish grains coming out of them. Lesions were not associated with pain nor any other symptoms. The patient also gave past history of trauma to the site with bamboo stick 3 Months back, which healed without any complications.

Cutaneous examination showed multiple draining sinuses measuring 2mm to 5mm present over palmar aspect of left hand extending from proximal end of flexor retinaculum upto metacarpophalangeal joints (Fig 1).

Based on history and examination a provisional diagnosis of Actinomycetoma was done.

Complete hemogram, liver and renal function tests, urine examination were within normal limits. Digital X-ray of affected part showed no bony involvement. Skin biopsy showed presence of hyperplasia, parakeratosis and sulphur granules in epidermis. Dermis showed dilated capillaries with sulphur granules, neutrophils, lymphocytes and plasma cells. PAS stain was positive (Fig 2 & Fig 3). Gram staining of grains and discharge showed Gram positive filamentous mycelium of bacteria. Ziehl–Nielson stain and KOH preparation were negative.

TREATMENT : After baseline investigations patient was treated with oral Dapsone 100 mg OD for a period of 3 months and oral Trimethoprime/Sulphamethoxazole 160/800 mg twice daily for 3 months.

FOLLOW UP : Patient responded to the treatment given. As seen in Fig 4 response seen after 1 month shows reduction in no. of sinuses and size of sinuses. Response after 3 months is shown in Fig 5 with complete resolution of lesions.

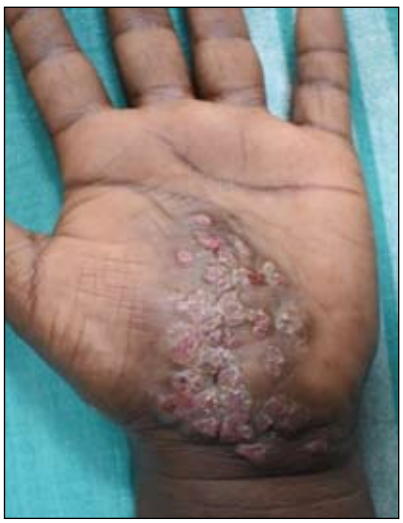


Fig 1 : Multiple draining sinuses over palmar aspect of left hand.

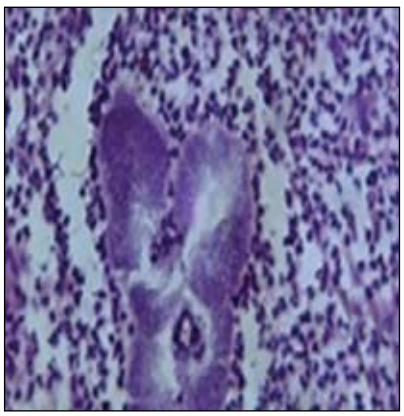


Fig 2 : H & E report showing dilated capillaries with sulphur granules, neutrophils, lymphocytes and plasma cells in dermis

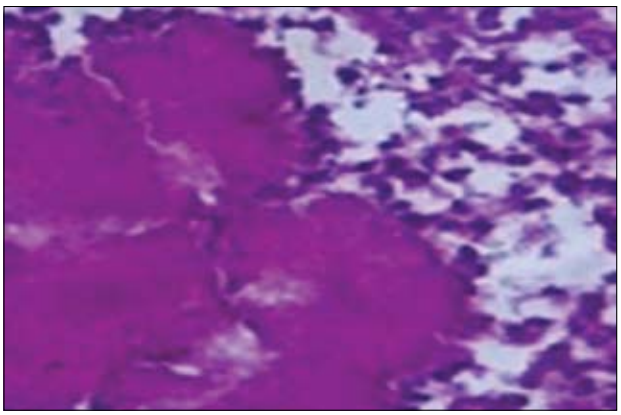


Fig 3 : PAS Stain showing filamentous structures

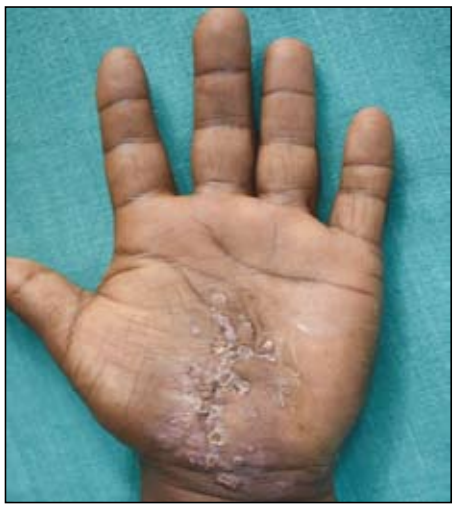


Fig 4 : One month post treatment

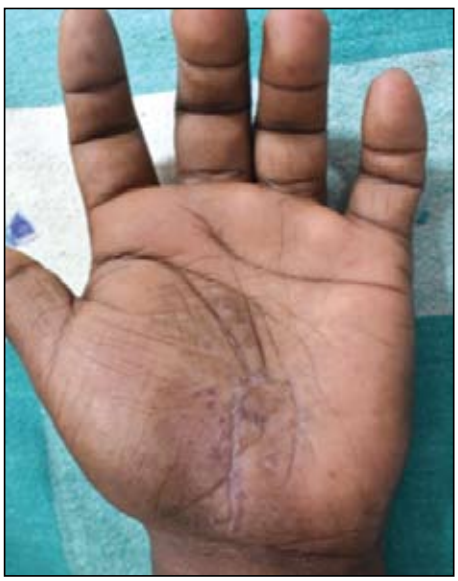


Fig 5: Resolution of sinuses
3 months after treatment

DISCUSSION : Mycetoma is a chronic granulomatous inflammation of the subcutaneous tissue and usually occurs as a result of traumatic implantation of soil organisms. There are of two types: eumycotic and actinomycotic. The disease is largely confined to tropical and subtropical climates, mostly among agricultural workers.4 Both have the same clinical picture- swelling, induration and discharging sinuses mostly over exposed parts of extremities. It is difficult to differentiate eumycetoma and actinomycetoma clinically. Some features which help to differentiate these two are:

Colour of grains : black or colourless in eumycetoma, red in actinomycetoma.

Cutaneous lesions are more inflammatory, destructive and rapidly progressive in patients with actinomycetoma, while slowly progressive and encapsulated for a long time in eumycetoma.5

Radiologically eumycetoma presents as few, larger lytic lesions, whereas multiple, smaller lytic lesions are seen in actinomycetoma.6

DIFFERENTIAL DIAGNOSIS : Chronic osteomyeitis of bacterial or tuberculous origin, Eumycotic mycetoma, Botryomycosis, Scrofuloderma, Atypical mycobacterial infection.

TREATMENT : Treatment of choice for Actinomycetoma is Dapsone 100-200mg/day and TMP/SMX 160/800mg twice daily for several months. Treatment should be continued for 2 years to prevent recurrence.

CONCLUSION : All the regimens mentioned need parenteral administration and hospital admission of the patient. Since the disease was limited without bone involvement TMP/SMX with Dapsone was chosen. As it can be given on OP basis with relatively lesser side effects this approach was thought ideal. Patient should be continued on the treatment for a period of 2 years as recurrence is common in actinomycetoma.

Table 1 : Common causative agents of actinomycotic mycetoma and characteristics of their grains			
Agent	Color of grains	Approx diameter (mm)	Histology(H&E)
Nocardia asteroides	White	0.5	Small, round, oval or vermiform; homogeneous loose clumps of filaments, partially stained by haematoxylin
N.brasiliensis	White	0.2	Same as above
Actinomadura madurae	White	2.0	Large, round or lobulated; center eosinophilic, amorphous; dense basophilic mantle peripherally
A. pelletieri	Red or pink	1.0	Small, round or irregular with denticulate edge; homogeneous matrix staining deeply with haematoxylin; no clubs

TABLE 2: Common causative agents of eumycotic mycetoma and characteristics of their grains			
Agent	Color of grains	Approx diameter (mm)	Histology(H&E)
Madurella mycetomatis	Black -to-brown	1	Large, dark brown, lobulated Compact type: with even distribution of brownish cement intersected by a network of hyphae Vesicular type: With peripheral localization of brown cement around hyaline hyphae and chlamydospores, brown pigment particles in hyphal cells
M.grisea	Black -to-brown	1	Small, oval or lobed; hollow centre with loose hyaline hyphae, dark coloured periphery with a network of hyphae and chlamydospores embedded in brown cement; brown granule of intracellular pigment absent
Leptosphaeria senegalensis	Black	1	Small, irregular, tubular, or hollow; central core of hyaline hyphae, periphery dense with black hyphae and large vesicular cells imbedded in back cement
Pseudallescheria romeroi	Black	1	Small, tubular, central network of hyphae with a thick band of chlamydospores in the periphery, dark swollen cells in the outer edge surrounded by an eosinophilic zone
P. jeanselmei	Brown-to-black	1	Small, vermiform crescent shaped; hollow centre; hyphae and chlamydospores; brown cement absent
P.boydii	White-to-pale yellow	1	Large, round or lobulated; broad septate hyaline hyphae with numerous swollen hyphal cells (>20 lm)
Acremonium spp.	White-to-yellow or black	1	Small; irregular; hyaline hyphae with numerous swollen cells (<12 lm) surrounded by an eosinophilic zone

TABLE 3 : Various regimens used for treatment of actinomycetoma		
REGIMEN	INTENSIVE PHASE	CONTINOUS PHASE
Welsh regimen3 (1987)	Amikacin 15 mg/kg/d IM 12 hourly in two divided doses + Tab sulfamethoxazole (35 mg/kg/d) and trimethoprim (7 mg/kg/d) equally divided in 3 doses for 21 days constituting one cycle. One to three such cycles are given at the interval of 15 days during which tablet sulfamethoxazole trimethoprim is given in same dose	Tab sulfamethoxazole-trimethoprim in same dose 2 weeks after last cycle.
Ramam regimen (2000)	Crystalline penicillin 10 lakh units IV 6 hourly + Gentamicin 80 mg IV 12 hourly + Tab cotrimoxazole(80/400) two tablets twice daily for 5 to 7 weeks	Tab cotrimoxazole(80/400) two tablets twice daily + Tab amoxicillin 500 mg thrice daily
Modified two step Ramam regimen5 (2007)	Step1- Gentamicin 80 mg IV 12 hourly + Tab cotrimoxazole (80/400 mg) two tablets twice daily for 4 weeks	Step-2- Cap doxycycline 100 mg twice daily + Tab cotrimoxazole (80/400 mg) two tablets twice daily till 5–6 months after complete healing of all sinuses)
Modified Welsh regimen (Damle et al. 2008)	Amikacin 15 mg/kg/d in two divided doses +Tab sulfamethoxazole-trimethoprim 35 + 7 mg/kg/d + Cap rifampicin 10 mg/kg/d for 21 days constituting one cycle. One to three such cycles are given at interval of 15 days during which tab sulfamethoxazole-trimethoprimin and cap rifampicin are given in same doses.	Tab sulfamethoxazole-trimethoprim 35 mg/kg/d + Cap rifampicin 10 mg/kg/d after last cycle for 3 months

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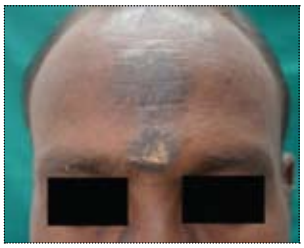
RELIGIOUS PRACTICES IN INDIA : A BOON OR BANE?

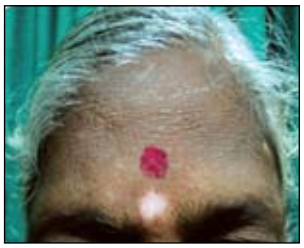
A wide prevalence of certain religious practices among the people of India has led to various skin diseases as its consequence. Hence as dermatologists, it is important for us to keep in mind the commonly practiced rituals & their dermatological manifestations.

KUMKUM/BINDI: Kumkum is usually applied to the centre of the forehead, on the hair parting or occasionally dusted on the front of the neck whereas bindi is worn only between the eyebrows in Hindus.

Dermatological effects : Pigmented contact dermatitis, lichen planus pigmentosus, llergic contact dermatitis, photoallergic contact dermatitis, contact leukoderma & granuloma formation.



Kumkum induced Lichenoid lesion over the forehead [1].



Bindi leukoderma[2]

Hyperpigmented plaque over the central part of the forehead.

PRAYER NODULES : Prayer nodules are callosities formed over the forehead, knees, ankles & dorsa of the feet of Muslims due to repeated friction & pressure over the skin during prayer where they adopt certain positions & touch their forehead on a prayer stone.

Dermatological effects : Lichenified nodules over forehead (especially medial aspect of eyebrows), knees, ankles and dorsa of feet, with or without comedones.

A. Hyperkeratotic nodule on the left foot with surrounding hyperpigmentation & lichenification

B. 'Julus' posture during prayer with foot touching & rubbing against the floor

TURBAN : Turban (dastaar, pagri) is an item of headgear which is important part of sikh culture. The scalp hair is tied into a tight knot on the vertex area of scalp over which turban is worn & beard hair is twisted into knot under the chin. This leads to chronic pull over the hair & it can cause pressure over the pinna.

Dematological effects : Band like alopecia over frontal scalp and beard region, initially non-scarring, later scarring alopecia, chondrodermatitis of lower pinna.

Traction alopecia due to pull on the frontal hair & beard hair due to tying of the hair in a tight knot.

HOLI DERMATOSES : Holi is also known as 'festival of colors' in which people symbolically smear dry powdered colors & spray water soluble colors on each other. These colors contain various toxic chemicals, heavy metals & alkalis.

Dermatological effects : Irritant contact dermatitis, allergic contact dermatitis, mechanical abrasions, sunburn, aggravation of pre-existing dermatoses, eye and respiratory problems.

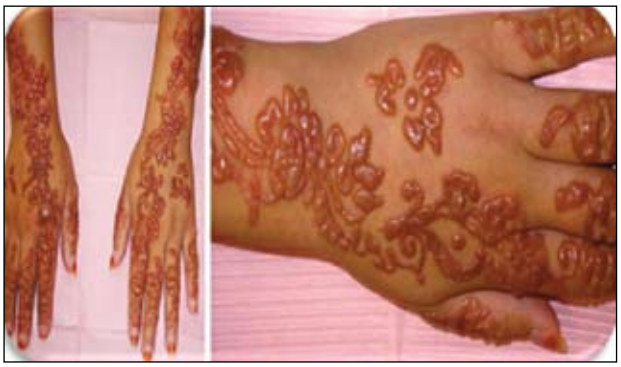
TAWIZ : A tawiz is an amulet or locket worn by muslims to protect them from evil eyes.

Dermatological effect : Allergic contact dermatitis.

HENNA : In Muslim & Hindu weddings, it is tradition to have a henna party where the paste made from dried henna leaves are used to paint intricate patterns on the hands & feet of bridal party.

Dermatological effects : Immediate-type hypersensitivity with urticaria, rhinitis, conjunctivitis and bronchial asthma. Vesicular

EMF-like reaction, contact angioedema, severe bullous contact dermatitis, pigmentary changes, hypertrichosis, lichenoid reactions and keloids can also occur rarely



Bullous contact dermatitis to the allergen present in the henna.

FIREWALKING : Firewalking is an act of walking barefoot over a bed of hot embers or stones. It is a ritual with religious significance said to be a gesture of paying their respects to God, repelling evil influences & purifying one's soul.

Dermatological effects : blisters & burns.

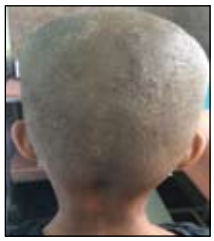
SELF FLAGELLATION : Self flagellation is a ritual involving hitting oneself with a whip or whips of chains with attached blades. It is practised among the Shia section of Muslims to commemorate the matyrdom of prophet Muhammed's grandson Hussain as an act of penance.

Dermatological effects : Contusion, laceration, secondary infection, keloid, hypertrophic scar, koebnerisation.

WAIST THREAD : waist thread (Araijaan/ Udadhara) is a black thread tied around the waist, especially for men is a custom followed by Hinduism. It is said to ward off the effects of evil eye, allows kids to grow faster & in males it promotes proper growth of genitalia.

Dermatological effects : Increases the susceptibility of acquiring fungal infections due to retained moisture in the area.

MUNDAN : Mundan ceremony (donating hair/tonsuring) represents the first time shaving of the baby hair after the child is born. It is believed that hair from birth is associated fron undesirable traits from past lives & shaving the head signifies freedom from past & moving into the future.



Dematological effects : Folliculitis of the scalp, Tinea capitis.

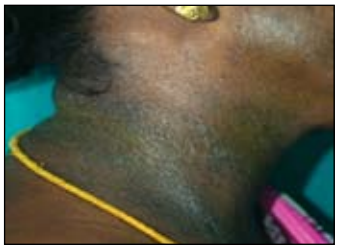
Drawstring dermatitis - dermatophyte infection2

DRAWSTRING DERMATITIS : Drawstring dermatitis is a type of frictional dermatitis that can result from traditional tightly worn garments like 'sari' & 'salwar-kameez'. Chronic friction combined with sweating & humid environment form the culprit.

Dermatological effects : Lichenified grooves, pressure leukoderma, koebnerization of pre-existing dermatoses, dermatophytosis, candidiasis, bacterial infections, squamous cell carcinoma.

TURMERIC : Turmeric is considered sacred, auspicious & a harbinger of prosperity. It is used in traditional occasions from birth to burial. It is considered auspicious to see a woman who has applied turmeric to the face. When a girl reaches puberty, she is bathed in oil & turmeric paste. During haldi ceremony turmeric paste is applied to both bride & groom; before tying the gold thali a thick cotton twine smeared with turmeric is tied to the neck of the bride.

Dermatological effects : Allergic contact dermatitis, Pigmented contact dermatitis, contact urticaria.



Pigmented contact dermatitis over face and neck after application of turmeric on face, neck and thali3

HIJAB : Hijab is a veil worn by Muslim women as a symbol of modesty and privacy. It can cause skin friction, heat, pressure over the skin of forehead

Dermatological effect : Acne mechanica.

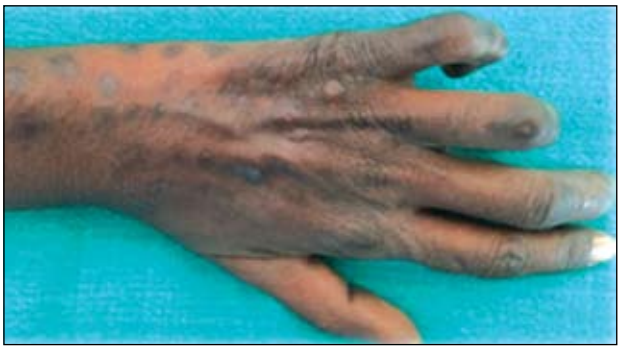
COWDUNG : Application of cowdung over the umbilical stump of newborn baby is practiced as it is believed that it promotes healing & hastens separation of cord.

Dermatological effects : neonatal tetanus, septicemia, septic shock, death.

IMPALING : Impaling involves piercing oneself with sharp dangerous objects like needles, swords, iron rods, spears guns etc. The belief that God enters the body of the participant, protection from the evil spirits & the coming of good-luck in the community drives people into practicing it.

Dermatological effects : local & systemic infections, poor cosmesis, foreign body granuloma, contact dermatitis, keloid, traumatic tearing of earlobe. Swelling & tooth fracture following tongue piercing.

Man with trident pierced through his cheeks



Hyperpigmented lesions over the dorsum of hand following branding in a patient with Hansen's disease

BRANDING : Branding is a process in which third degree burns are inflicted on the skin with a hot iron rod or metallic object. It employs the principle of 'counter irritation' which is used by the faith healers for therapeutic purposes.

Various forms of branding include:

- Strike branding
- Hypothermal branding
- Chemical branding
- Electrocautery branding
- Laser branding

Dermatological effects : hypertrophic scar, keloid, permanent hyperpigmentation, wound infection, septicemia.

PLICA POLONICA : It is a condition in which hair shaft becomes entangled irreversibly, forming a mass which is matted. In South Western India the emergence of matting of hair is considered a deific phenomenon; consequently ,people worship the emerged matted hair and restrict its removal. For unmarried females, the matting of hair can result in dedication to the coercive Devadasi custom whereby women end up marrying a God or Goddess.

Dermatological effects : Bacterial infection, impetigo, baldness.

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Brain - Teaser : Key

Across

1. Castling phenomena
2. Meirowsky
3. Meyerson
4. Lucios
5. Olflecks
6. Harlequin

Down

1. Koebners
2. Isotopic
3. Brocqs
4. Nikolskys
5. Pathergy
6. Hoignes
7. Raynauds
8. Prozone

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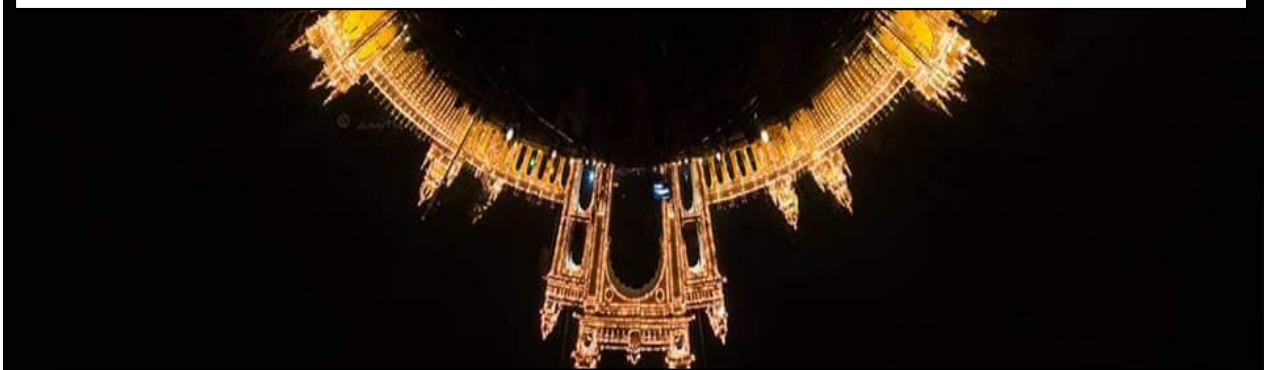

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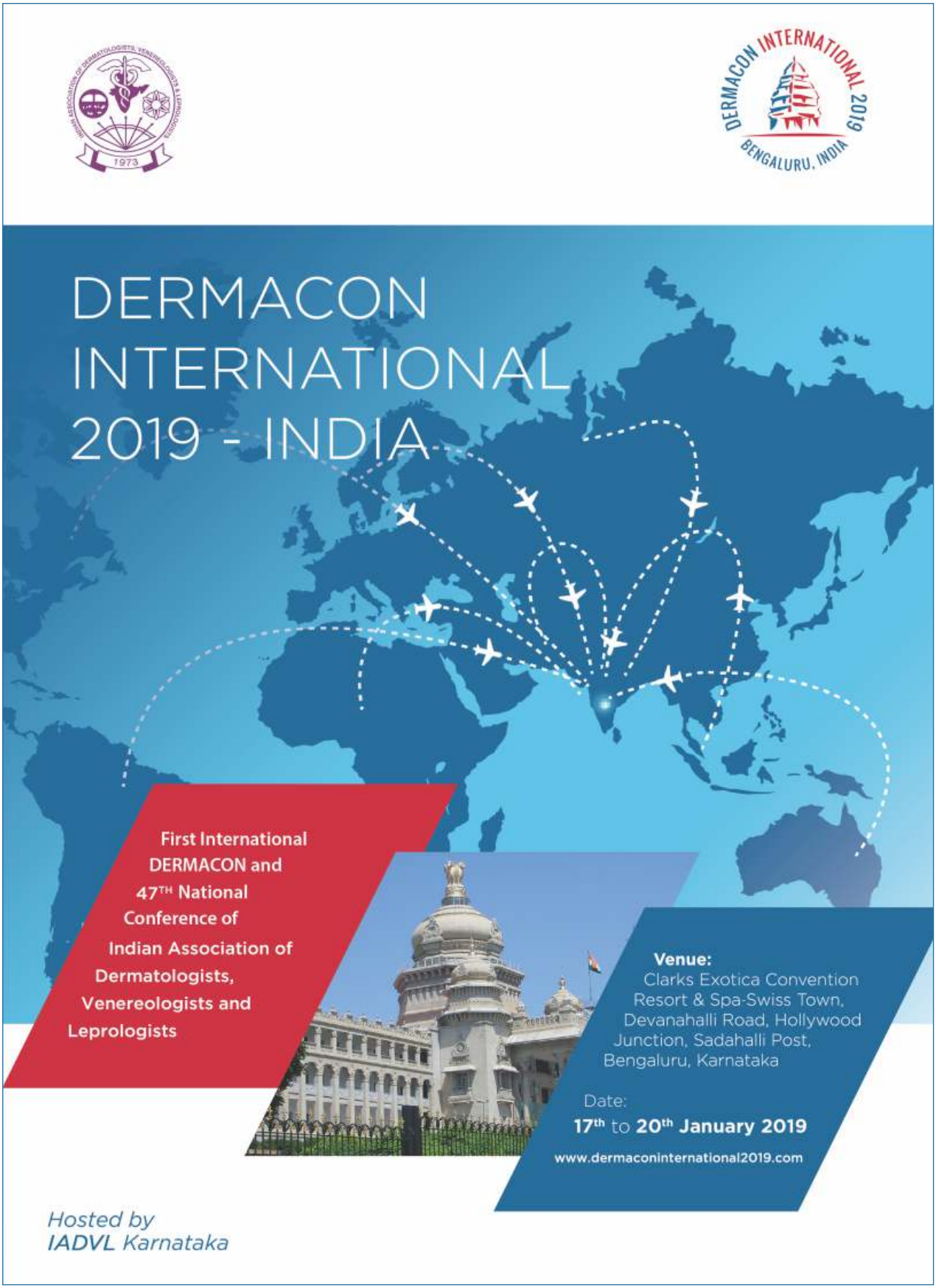
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