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Journal of the Vivekananda Institute of Medical Sciences

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Dr. Debjani Sinha Ray (Assistant Professor, Dept. of Radiology)

Dr. Suman Das (Visiting Surgeon, Maxillofacial Unit).

Dr. Saikat Sengupta (Senior Consultant, Dept. of Anaesthesiology, Perioperative Medicine & Pain, Apollo Multispecialty Hospitals, Kolkata)

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Editorial

Is There A Doctor on Board?

I write as I fly to Bengaluru for the 75th Annual Conference of the Association of Otolaryngologists of India; the flight is disproportionately full of ENT surgeons, so the thought occurred to me that, if a fellow passenger had a nosebleed, there would be no dearth of help available.

Or would there? How many of my colleagues would actually volunteer if a medical emergency led to the cabin crew requesting help? We are currently regulated by a plethora of watchdogs – the National Medical Commission, the State Medical Council, the State Clinical Care Commission, the Courts and the Consumer courts. Patients are not hesitant to complain and sue us if their expectations are not met. We are legally protected for life saving interventions made in good faith – but to avail of this protection may require several court visits and a media circus. Would we take responsibility for the outcome of our intervention in a medical emergency?

In 2005 I was flying to a conference in San Francisco, when the call went out for a doctor on board. An elderly lady was having chest pain, and had forgotten to take her anti-hypertensives prior to boarding the flight. I measured her BP, which was normal, and arrived at a diagnosis of costochondritis. She felt better with some paracetamol, and on retiring to my seat one of the cabin crew handed me a 4 page form to fill in. On closer inspection this turned out to be a legal disclaimer absolving the airline of any responsibility if the patient sued, transferring all of it to myself. I handed it back unsigned, pointing out that the airline crew themselves had requested a doctor.

It was not always like this. In the gap between passing the final MB and commencing Internship, a friend and I embarked on a 2 week tour of South India. This was 1992, so we travelled by rail in the three tier sleeper class. After an enjoyable fortnight we were returning from Bangalore (as it then was) to Calcutta (sic) by the Madras Mail. This left Madras at night, and one spent a further night on board before arriving at Howrah Station in the morning. Seated on our wooden bunk my friend struck up a conversation with a group of men roughly our own age. I cannot recall what they did but they knew we had just qualified. Dinner was consumed, the bunks set up and we retired for the night around 10pm. Only one of the group was sleeping in our carriage – the rest moved to the adjacent one.

It was around 1am when we were woken by our new acquaintances; something was ado in the adjacent carriage. My friend went to investigate. A few minutes later word was sent that I was needed too. Asking the lady and daughter in the lower bunks to keep an eye on our luggage, I sleepily followed the messenger in to the adjacent carriage, and wondered at the amount of water on the floor. Three-tier sleeper had no curtains, but a white sari had been strung across the gap between berths, with several passengers milling in the passage, amongst whom was a bearded young man with a distinctly worried look. Beyond the barrier I found a young lady supine on a lower berth, my friend crouched next to her, and

two middle aged ladies sat on the opposite berth keeping up a steady flow of soothing noises. She was in labour. The bearded chap outside was a lecturer at Madras University who had thought it a good idea to take his full term wife by train to his ancestral home in rural Bengal.

Both of us had helped deliver several babies in Eden Hospital during our Obstetrics clinical rotation but at that moment I could recall nothing useful. The TT arrived with the medical kit – a large, battered leather suitcase which contained a dozen or so ampoules of various drugs, but nothing of any use – no gloves, no sutures, no IV fluid, no giving sets. We called for hot water (I confess that came to mind from the closing scenes of Doctor in the House) which was brought in a large saucepan from the pantry car, and proceeded to scrub our bare hands - someone handed us an anodised mug, someone else proffered a bar of Lifebuoy soap. One of the ladies produced a reel of cotton thread and a new sewing needle from her handbag, which was sent to the pantry car to be boiled. A brand new packet of razor blades was found.

By now the crown had presented. To our utmost relief the mother, to a chorus of verbal encouragement, delivered a male baby (all I remember is the thick black hair), whom we handed over to one of the ladies. We put half a dozen cotton ligatures on the cord and cut it with a razor blade, then looked at one another – who would deliver the placenta? Enter a short, pot-bellied man with an impressive moustache, in a vest and pyjamas. He was a homeopath from a few carriages down, who had heard the news. He washed his hands and delivered the placenta with no fuss. The new born cried lustily, and was wrapped in a new white cotton sari.

We received almost as many congratulations as the parents, washed our hands, and withdrew. At Howrah a few hours later my friend, who lived near Medical College, organised a taxi for the couple and baby to take them to Eden Hospital.

If something similar happened today what would I do? It has been nearly two decades since I had any first-hand obstetrical experience, and the world has changed. We would probably have said this was outside our fields of specialisation, and suggest they arrange to either pick up an obstetrician at the next station, or offload the passenger to the nearest hospital. I seriously doubt that fellow passengers would be so forthcoming of their belongings. It would be highly unlikely that a couple would travel in such a state nowadays.

Progress? Perhaps.

Ranjan Raychowdhury, Executive Editor; Professor, Department of ENT & Head Neck Surgery, RKMSP, VIMS

Guest Editorial

POCSO Act — A Decade And More

Sohini Chaudhury[1], Sukanta Misra[2]

Abstract :

A child is the most important asset of the society and the future and development of a nation depends on how the children of that country are nurtured. Child sexual abuse (CSA) is one of the major problems in India and children are often marginalized not only in terms of access to basic human needs but also voicing their opinion. The protection of children from sexual offences act (POCSO), 2012 was passed with a view to protect the rights of children more than a decade ago. Though it serves as a panacea in terms of providing instruments to combat the problem it is not devoid of flaws. It is of utmost salience for health professionals to be aware of the provisions of the act and its amendments so as to identify cases of CSA in their everyday practice and provide a multi-dimensional approach for optimum care of the victims and reporting of cases.

Sexual violence knows no boundaries. It occurs in every country, across all parts of society. (UNICEF)

Millions of children around the world face sexual abuse and exploitation every year. The abuse or exploitation can be at home, at school or in their community. The widespread use of digital technologies also puts children at risk. Most often, abuse occurs at the hands of someone a child knows and trusts.[1]

About 1 in 10 girls under the age of 20 have been forced to engage in sex or perform other sexual acts, although the actual figure of sexual abuse is likely to be much higher as boys are equally victimised but remain hugely unreported.[1]

Child sexual abuse (CSA) has been a hidden issue in India. As per a government report, the prevalence of CSA is 53%.[2] It is considered a social taboo and thus reason enough to be ignored by the public as well as the criminal justice system of the country. CSA wasn't regarded as a crime until recently as the only recognized, specific sexual offense against children was rape. A variety of objectionable behaviour, including harassment, child sexual assault that did not amount to rape, and exploitation for pornography, were not punishable due to lack of explicit legislation. There was a need to introduce stricter and harsher penal provisions to instil fear in the minds of the offenders.[3] In recent years, activists, Non-Governmental Organisations (NGOs) and the central governmenthave actively participated in breaking ''the conspiracy of silence",[4] as the ever-increasing number of sexual assault cases against children in India, made it imperative to deliver justice to the victims at the earliest. This significantly increased political and public momentum to address the issue and The Ministry of Women and Child Development led the initiative that resulted in the 2012 Protection of Children from Sexual Offences (POCSO) legislation.[3]

POCSO Act 2012 :

Protection of Children from Sexual Offence (POSCO) Act, 2012 came into effect on 14th

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November, 2012 on the occasion of 'Children's Day'. It was enacted as a consequence of India's ratification of the UN Convention on the Rights of the Child in 1992.

It is an Act which defines a child as any person below the age of 18 years and provides protection to all children irrespective of sex from offences of sexual assault, sexual harassment and pornography and provides for the establishment of Special Courts for the trial of such offences and matters interconnected.

The purpose of this act is to promote and protect the best interest of the child. It ensures that the law operates in a manner that well-being of the child is regarded to be of paramount importance at every stage, in terms of his/her physical, emotional, intellectual and social development.[5]

Salient features of the POCSO Act, 2012 :

- **Definition and grouping of the various sexual offences :**

The Act defines different forms of sexual abuse, which include penetrative as well as non-penetrative assault, sexual harassment and pornography. It has also categorised sexual assault to be "aggravated" under some circumstances when the abused child is mentally ill or when the abuse is committed by a person in a position of trust or authority like a family member, a police officer, doctor or a teacher.

- **Gender-Neutral Law :**

Under this law "any person" under the age of 18 years in considered as a child.

- **'Guilty' until proven innocent :**

Contrary to the general principle of "Innocent until proven guilty", the accused under this act are considered as Guilty until they are proven. The burden to prove themselves as innocent lies on the accused. This makes the act very harsh.

- **First Information Report :**

Any person, including the child, who has reason to believe that an offence is likely to be committed or has already been committed under the Act must immediately notify the Special Juvenile Police Unit or the local police of the affected area.

The Police Unit is required to document the information in writing. After gathering the relevant data, if there is reason to believe that the child needs emergency care and protection, plans must be made right away.

If necessary, the child must be admitted to the closest shelter, home, or medical facility. The Police Unit is also required to notify the closest Special Court and the Child Welfare Committee within twenty-four hours.

- **Procedure for recording statement :**

— Child-friendly

— By a women police officer, not under the rank of sub-inspector, not wearing police uniform while recording the statement of the child.

— The child's parents or anyone whom the child trust should also be present.

— The child should not come in contact with the accused.

— The child's identity and the information received is mandated to be kept confidential.

- **Special POCSO Courts :**

Mandatory to establish kid-friendly courts to deal with the cases and resolve them within 1 year from the date of cognizance of the offence.[5]

POCSO Amendment Act-2019 :

The POCSO Act was amended in 2019 to increase the severity of the penalties for sexual offenses against minors. The penalties are as follows :

Provision	Offence	Punishment
Section 4	Penetrative sexual assault below 16 years	Min- 20 years Max- life imprisonment +fine
Section 4	Penetrative sexual assault between 16-18 years	Min- 10 years Max- life imprisonment +fine
Section 6	Aggravated penetrative sexual assault	Min-20 years Max- Death penalty
Section 8	Storage of Pornographic Material	Min-3years- 5 years ± fine
Section 15	Use of child for pornographic purposes	Min- 5 years

Note : Punishment for using child for pornographic purposes resulting in any form of sexual assault is in addition to minimum five years for use of child for pornographic purposes.

Challenges and Loopholes of the POCSO Act 2012; Current scenario :

According to the data, only 14.03% of POCSO trials result in convictions, compared to 43.44% that do not. There are three acquittals in POCSO cases for every conviction. According to data released by the National Crime Record Bureau in 2021, the accused was a person known to the child victim in 96% of cases filed under the POCSO Act, 2012; in 48.66% of cases, the accused is either a friend or a love partner of the victim.[6]

- Discrepancies regarding the investigation of cases (estimation of age)
- Renders consensual sexual activity illegal- overburdens the courts
- More influenced by biological than mental age
- Woman committing sexual offenses — not subject to prosecution
- Lack of “support persons” lead to high number of acquittals
- Pending cases continue to rise – Special Court has not yet completed any of the cases
- Rising number of fictitious cases due to unrelated disputes

Conclusion :

It has been more than a decade now since the Act was enacted, though time is on the run, results still stagger. The POCSO Act's progress report possesses mixed results. While the legislature's mandate is truly radical in its aim to protect children from sexual abuse and provides for a victim-centered criminal justice system, few challenges remain to be answered. The least

we can do as medical professionals is to keep a watch on sexual abuse, explore and assess the child thoroughly and report all reasonable degree of suspicion in child sexual abuse to the legal authorities. A multi-dimensional, multi-agency team and multi-tier approach including access to psychosocial support is key to holistic comprehensive care for victims of CSA. We must capitalize on this momentum to effect long-term systemic change.

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Guest Editorial

Money And Doctors — Shame or Pride?

Manoj Manikoth A Puthiyaparambil

Born to three generations of government employees, I was so full of ideology when I finished my medical school. I wouldn't practice, I said. I would only serve the poor, I proclaimed; a good teacher would I become, I yearned. And so was it, over the next few years. I wasn't unhappy at all. I had very few needs and no serious financial commitments.

Life was good, and little things kept me happy. But over time, I started feeling uncomfortable. Was I doing enough? I fancied myself a good surgeon-to-be, and as an otolaryngologist, I needed technology to go a step higher. But that needed money. I decided to work for it, but also balefully remembered my classmate in school, a perpetual cynic, who told me once, without mercy - "soon, you will be just the same as everyone else - do things only for money, and rot inside". I so badly wanted to prove him wrong.

Then, as if by sheer chance, I happened to watch a TV interview of the well-known psephologist, Prannoy Roy. He said, and I felt it strike a chord inside me - "the middle class are often bought up thinking that making money is bad - we need to get out of it and understand that to make money well is actually satisfying and benefits a lot of people".

Voila, I thought - I can actually relate to that. Lets now fast forward thirty years. I now am a surgeon with considerable repute, have a really good, well equipped hospital, employ over a hundred people. No, I didn't have any inherited wealth, I didn't marry for money, neither did I have wealthy friends who would pitch in for me. I also didn't, much to my childhood friend's surprise, make money the wrong way. All of us here work to protocol, never prescribe a drug, or order a test unnecessarily, refuse more surgeries than we do and there's a strict no-no to pharma funding of any kind. How was this possible?

There's no magic here, no providential hand. Just a formula that can just as easily be adapted by anyone else with reasonable skill and a little bit of guts. Let me try and enumerate what made me do well.

We must remember that for most of us, our only earning comes from the patient. This money is never given thankfully - illness is a burden and the expense related to it's alleviation is given grudgingly. Understanding this basic equation must make us strive to make each rupee of that money count for the patient. So, the first recommendation from my side to an aspiring entrepreneur is to make sure that you give value. We have long been caught in a vortex of trying to undercut our charges to gain practice. It is a losing game. We have to add value, albeit slowly, for everything we do. A better waiting room, more efficient patient management, transparency and education, everything counts for the patient, and they would actually like paying for it. It is simple economics. If you intend to spend an x amount of money to increase the facility in your clinic/hospital, you need to spread it over the

Director and Head of Cochlear Implant Unit, MESIARC ENT Hospital

patients that you see now, and look at the increase in patient flow due to the better system to make your profits. You just can't work the other way, it is foolish to invest heavily and think they would come pouring it just because the waiting room rivals a luxury suite.

The increase in your professional worth is what should give you profits. Let us take an imaginary scenario. There are often patients who present with a symptom that could be because of two different conditions. Doctor A, is cautious, ill trained and afraid of failure. He would investigate heavily, and when that too doesn't give him enough clues, gives the patient medications for both conditions. The patient gets better, yes, but the doctor would never know which medicine has made him so. The spiral begins, and patients get investigated more and more, medicated more and more, side effects of treatment spirals and skill acquisition is minimal. Let us look now a doctor B. He is shrewd, well trained and is not afraid to experiment. He starts with the same uncertainty. He, by using an analytical, but yet unskilled brain, thinks in favor of one. He doesn't investigate much because he trusts his instincts. If the patient gets better, he is elated-he is proven right. If he doesn't, there's always option 2. To prevent the discomfiture of an irate patient irked by the delay in treatment, he uses kind words and counseling to reassure the patient that he is only trying to avoid unnecessary medications and investigations. Over time, doctor B gets more and more skilled. He now has acquired that sixth sense which tells him what the patient might be having instead of over investigating. If the doctor B has entrepreneurial skills, he will now increase his charges. What the lab gets and what the pharmacy gets is now his. Money, now flows into the coffers, and a beaming patient praises the doctor. Doctor A is, unfortunately, still despondent.

The same goes for investing in surgical equipment. If you think that a particular instrument would greatly add to your results, buy it, but do not look at charging for it every time you use it to repay your loans. It creates stress and stress reduces your results. You would buy a Laser, simply because the salesman would pitch in with a formula "Sir, you might have ten laser cases a month, so x times ten times twelve, your loans are over in so many years" It is a gambit we fall for. I would buy a Laser only if it significantly improves my results. I would never even advertise or boast about it. I would use that in my counseling for a surgery if I think its absolutely necessary. But I would increase charges over my entire operation list for the month to make sure I am not pressurized to use it when I don't really need it. Thereby I have only marginally increased charges; I have no stress if I don't have any laser cases for a month, and if I do get one, I do a pretty damn good job. And this creates more patients, while shouting from the rooftop that I have an expensive laser would only have created suspicion, and sometimes, jealousy.

We have to prioritize our investments -- I would rather buy a good equipment than say, a fancy car or a palatial house that I can very well do without. If my choice of the purchase was founded on good grounds, it is often that the house and the car would follow, even if you can't really count on it! Similarly, we must understand that a well run professional medical establishment offers far greater returns that those fancy stock market juggle. I was once told about this by some one who I consider my mentor and hold that close to my heart. My only real investment

is my hospital - and if I retire, that should give me returns in decent terms for as long as I live.

Another important lesson I received early on in life is from a senior neurosurgeon colleague. He once told me that it was a dangerous ploy to keep referral patients over 10%. It surprised me then, but the logic was irrefutable. Referrals are fickle. A doctor who refers to you can stop referring to you, even if he is not unhappy with you. But your patients, those who come to you for solace and comfort, are your real saviors. They bring more convinced patients who in turn, become your well wishers again. Many doctors spend a lot of efforts on placating the referees, little knowing that it is really not worth the effort. If you spend a quarter of that time with your own patients, the results are astounding. Nearly thirty years in practice, my referrals are still less that that magical figure. And I am in no way unhappy.

A very good financial trick is to stick to the things you do best, or add someone to the team who would do something better than you. I have often seen people holding on to patients too long, and not referring out of fear of losing them. Referrals should be made early and to the appropriate person, not someone who calls you home for a weekend treat! Over time, you might lose friends, but keep only the good ones who value your intention. As I have surmised before, earning trust is worth its weight in gold, and nothing improves your stature more than the feeling you create that if you can't do it, you will send them to someone who can.

You also need to plan a retirement. For many doctors, this is unthinkable. To prevent burn outs, and to improve your family and social life, this is of paramount importance. A simple formula is to calculate how much you need now, once your loans are paid off and then plan to have that over the next twenty years, giving 10% to inflation. So, after you have reached the fifties and if you've been successful, you need to delegate your practice to deserving youngsters who respect your principles of practice and think about a system which gives you a share of the practice you have so painfully built up. You should, at that time, put yourself at a premium. Reducing your consulting hours and increasing your charges will allow you to work less for the same amount of money. And, for your social responsibility to be satisfied, you can also use your free time, involving your family too, to do your mite to the society, what appeals to your heart.

Finally, you need to invest in your health. Eating properly, exercising regularly and reducing stress will help you to enjoy what you've reaped. And for those unfortunate times when ill health can strike without warning, it is important to be properly insured. An ideal health insurance should cover even the costliest procedure done, and should cover your family too.

I am currently insured for 95 lakhs, and feel safe under its umbrella, even if I don't even have a health issue at present. It might look an overkill, but considering the peace of mind it offers- priceless. Even more adequate should be your life insurance. This should give your family the same income even with you not being around. And do junk those policies that offer you a lot of investment benefit. The health and life insurance policies are useless for me if I am in good health and if I am alive - but I would rather be happy that I am healthy and alive!

What made me want to pen this all down? Being a person who cannot resist being on social media for doctors, I see a lot of frustration and angst.

I see many who feel that they are being hunted, victimized for no fault of theirs. I see people who feel that they do not receive their due. At the other end, I see the public who are critical, and out to malign the medical community for the wrong doing of a few. And there seems to be no way to make these radically different view points meet. It appears that the level of frustration is related to the failure of the medical profession to make it pay, and for the customers to realize what they are paying for.

Let us not kid ourselves anymore - medical profession is just another profession, and it is no more noble than that of a lowly servant nor any worthier than that of a soldier. We have only one small difference - we aren't in control of many things that we deal with. We deal with uncertainties and changing patterns of ever increasing knowledge that rival most other professions. But we cannot, under the cloak of that nebulousness, neither wallow in self pity, nor puff out in artificial pride. We have to deal with this as a profession, and aim to give our very best, and by making sure we are doing so, to get in return what is due. Once we realize this, most our our helplessness should disappear. I do not consider myself a special person, and I do not ever want to think I am indispensable to many. I am here to do a job as best as I can, and with that, take my due. No one, I think, should ever suspect that I am taking more than I could, or attempting to do more than I should. This is all that I ever need.

Original Article

Selective Microdochectomy in Management of Single Duct Pathological Nipple Discharge : A Case Series

Kalyan Ashis Mukherjee[1], Debayan Chowdhury[2]

Abstract :

Background : Isolated single-duct nipple discharge is worrying and poses a surgical dilemma. Factors predicting malignancy are controversial. This study evaluates microdochectomy as a mean for diagnosis and treatment of patients with pathological nipple discharge.

Materials and Methods :

Study design : This study is a case series, aprospective, longitudinal, interventionist study**, Study area :** Ramakrishna Mission Seva Pratishthan Hospital, Kolkata**, Study period :** June 2019 to June 2022 (3 years)**, Sample size:** 12 cases, **Inclusion criteria :** Female patients presenting with pathological nipple discharge due to breast pathology coming from a single lactiferous duct**, Exclusion criteria :** Pregnant or breast- feeding patients with physiological nipple discharge or not giving consent or unfit for surgery. **Methodology :** Microdochectomy and excision of the single duct system was done in all cases.

Results :

The mean Age (Years) (mean ± s.d.) of patients was 37.00 ± 8.24621. Of the 8 patients in our study, 3(37.5%) patients had a Serous discharge, 2(25%) had Sero-purulent discharge and 3(37.5%) had a Sanguinolent discharge. Histopathological analysis of the micro-dochectomy specimens showed that 6(75%) patients had Duct Ectasia, 1(12.5%) patient had fibrocystic breast disease, 1(12.5%) had Duct Papilloma. All findings were Benign.

Conclusion :

Microdochectomy is a safe and effective in managing women with persistent, spontaneous, single duct pathological nipple discharge, providing symptomatic relief and a cosmetically better option.

Key Words :

Pathological nipple discharge, microdochectomy, duct ectasia, intraductal papilloma

Introduction :

Pathological nipple discharge is defined as unilateral, spontaneous discharge from a single duct during non-lactational period.[1] Nipple discharge is a complaint of approximately 5% of women[2] and the third most common breast complaint after breast pain and breast mass.[3] Most nipple discharge is benign in origin (97%).[3] Causes of pathological nipple discharge include – Fibrocystic breast disease, Duct ectasia, Intraductal papilloma, infection (periductal mastitis), breast abscess, Neoplastic process of the breast (e.g., Intraductal Carcinoma, Paget

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disease of the breast), thoracic or breast trauma, pituitary tumor or Prolactinoma, Systemic disease or endocrinopathies that elevate prolactin level (hypothyroidism, disorders of pituitary gland or hypothalamus, chronic kidney or liver disorders), a side-effect of medications that inhibit dopamine secretion (e.g., opioids, oral contraceptives, antihypertensives (methyldopa, reserpine, verapamil), antidepressants, and antipsychotics).[4,5,6,7] Bloody nipple discharge is considered as highly suspicious for malignancy or ductal carcinoma *in situ* of the breast.[8] The imaging techniques mammography and galactography[9] as well as ultrasonography (USG) and magnetic resonance imaging (MRI) cannot replace histological examination in patients with pathological nipple discharge. Controversy exists in the diagnostic value of nipple discharge cytology.[2,5] In 10 to 15% of the cases, pathological discharge is the only symptom of breast cancer.[2] Approximately, 55% of patients presenting with nipple discharge have an associated mass, 19% of which are malignant.[10] Management of a spontaneous single duct nippledischarge with no associated mass and normal mammography remains controversial. Techniques like major duct excision and microdochectomy are used for histological clarification.[1,8,11] This study explores the safety in performing microdochectomy in all patients presenting with spontaneous single duct nipple discharge in a tertiary care centre in Kolkata.

Case Presentations :

Patients presented with pathological nipple discharge due to some breast pathology coming from a single lactiferous duct. The discharge was mainly serous, while some presented with sero-purulent or sanguinolent discharge. None had an associated breast lump or any history of pain.

Materials and Methods :

Study design : This study is a case series, aprospective, longitudinal, interventionist study.

Study area : Ramakrishna Mission Seva Pratishthan Hospital, Kolkata.

Study period : June 2019 to June 2022 (3 years).

Sample size : 8 cases

Inclusion criteria :

Female patients presenting with pathological nipple discharge.

Exclusion criteria : Patients with -

1) Nipple discharge during pregnancy or breastfeeding period (physiological nipple discharge)
2) Patients not giving consent for micro-dochectomy surgery.
3) Patientsunfitfor General Anaesthesia.

Investigations :

Mammography – of bilateral breasts was done in patients above 40 years age.

Ultrasound – of bilateral breasts and axillae was done in patients < 40 years age.

Procedure Methodology :

Microdochectomy Procedure : Under General Anaesthesia, the discharging point on the nipple was identified by manipulation and expressing the discharge. A polypropylene suture was inserted via the discharging point into the pathological duct to dilate the tract and to know its extent. Methylene blue dye was injected into the tract via the discharging point in the nipple. An elliptical incision was made – one end just beyond the discharging point on the nipple and the other end upto the end of the pathological

duct which was identified by palpating the polypropylene suture. Incision deepened and the whole pathological duct system was identified by the bluish methylene blue stain and was extracted out enbloc and sent for histopathological examination. Incision was closed with subcuticular suturing with 3-0 polyglactin. Compression dressing applied.

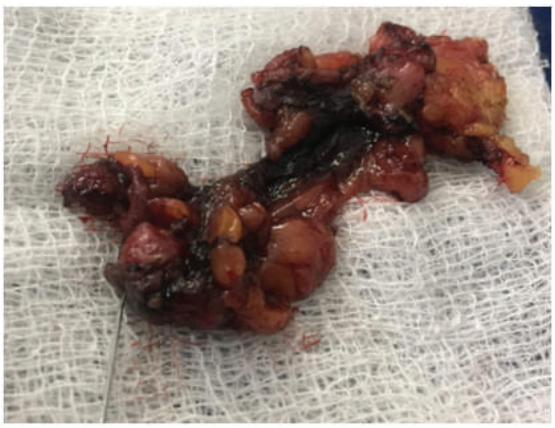

Fig 1 : Microdochectomy specimen of the excised pathological duct

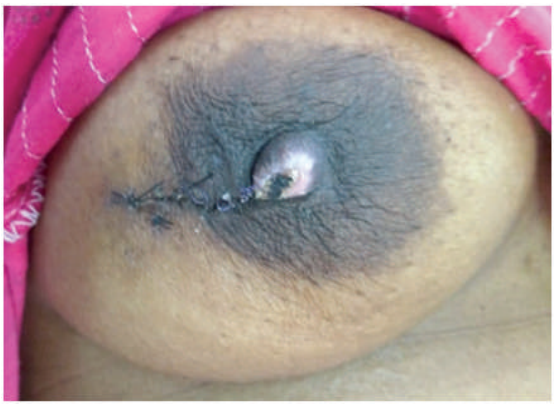

Fig 2 : Post microdochectomy appearance (skin sutured with subcuticular sutures)

Discharge: Dressing removed after 48hrs. Wound inspected and redressing done, then discharged.

Follow-up : All patients were followed up after 1 week, 2 weeks, 1 month and 6 months.

Results and Analysis :

In our study, females presented with pathological nipple discharge, the age ranging from 23 to 48 years. The mean Age (Years) (mean ± s.d.) of patients was 37.00± 8.24621.

Of the 8 patients in our study, 3(37.5%) patients had a Serous discharge, 2(25%) had Sero-purulent discharge and 3(37.5%) had a Sanguinolent discharge.

Mammography was done in 4 patients who were >40 years of age. In all of them, mammography was normal.

USG of bilateral breasts and axillae was done in all patients, which showed 1(12.5%) patient had fibrocystic breast disease, 1(12.5%) had Duct Papilloma, and 6(75%) had Duct Ectasia.

Histopathological analysis of the micro-dochectomy specimens showed that 6(75%) patients had Duct Ectasia, 1(12.5%) patient had fibrocystic breast disease, 1(12.5%) had Duct Papilloma, thus corroborating the USG findings. Thus, all the histopathological findings yielded Benign results.

There were no post-operative complications in any patients.

There was no recurrence in any patient in the 6 months follow-up period.

Discussion :

In a study by Wong L et al[12] on micro-dochectomy for single-duct nipple discharge, the median age of the patients was 43 years (range 26 – 72 years). In our study, the mean age was 37 years, ranging from 23 – 48 years.

In a study by Burton S et al[13] comprising of 52

patients, nipple discharge was coloured in 12, clear in 21 and blood-stained in 19. In Wong L et al[12] study, 67(73%) patients had blood-stained discharge. In our study, 3(37.5%) patients had a Serous discharge, 2(25%) had Sero-purulent discharge and 3(37.5%) had a Sanguinolent discharge.

In Burton S et al[13] study, out of 52 patients, 42 had undergone mammography out of which only 1 was suspicious with an ill-defined centrally placed mass but histology proved it to be a papilloma and fibrocystic change only. In our study, out of 8 patients, 4 had undergone mammography, of which findings of all were normal.

In a study by Lanitis S et al[1], histolopathological examination of the microdochectomy specimen showed that most of the patients had intraductal papillomas (n=37, 48.7%), duct ectasia (n=12, 15.8%), or a combination of both (n=10, 13.2%). Other benign caused occurred in 9(11.8%) patients and 8(10.5%) patients had cancer. In Wong L study[12], commonest causes were ductal papilloma (52%), and fibrocystic breast disease (21%) whereas, 5% had carcinoma of breast.In our study, histopathological analysis showed that 6(75%) patients had Duct Ectasia, 1(12.5%) patient had fibrocystic breast disease, 1(12.5%) had Duct Papilloma. No cases of malignancy was detected in our study.

Conclusion :

Microdochectomy is a safe method, effective in managing women with persistent, spontaneous, single duct pathological nipple discharge, providing symptomatic relief. It is cosmetically good and can be used as a conservative technique in patients who have not completed their family.

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Original Article

Unsafe CSOM with Post-auricular Abscess in Patients with Microtia : Our Experience

Saurav Naskar

Abstract :

Microtia is a developmental anomaly of the external ear. It is often associated with congenital aural atresia and anomalies of the middle and inner ear. In such patients, owing to the structural deformity, the middle ear is poorly ventilated resulting in retraction pocket formation and eventually may give rise to squamosal chronic otitis media.

Case Outline :

Case 1 was a 7 year old boy with right sided microtia and complete aural atresia presenting with post-auricular abscess. Case 2 was a 17 year old female with bilateral microtia, left ear discharge with post-auricular abscess.

Conclusion :

Patients with developmental anomaly of external ear should be screened properly for early diagnosis of any underlying disease to prevent further complication.

Introduction :

Microtia is defined as the abnormal development of pinna resulting in a malformed auricle. The deformities caused could range from mild distortion of pinna to complete absence of auricle (anotia). However, other components of the external (acoustic meatus and tympanic membrane), middle, and inner ear are also frequently impacted, as are other craniofacial and extra cranial anomalies. Microtia is usually unilateral (77% to 93%) and right-sided (60%). The condition also occurs more frequently in males (2.5:1). Microtia's prevalence per 10,000 births in the United States ranges from 1.8 to 3.5 and worldwide from 0.4 to 8.3. The condition is more common among asians, pacific islanders, and hispanic individuals in the United States.[1]

Although differences in opinion regarding "normative values" for auricular position and protrusion exists, Tolleth provided some general guidelines on which surgical correction can be based.[2] With the head oriented vertically, the desired position of the auricle is approximately one-ear length posterior to the lateral orbital rim. The level of the brow defines the preferred position of the top of the ear, whereas the base of the columella marks the appropriate inferior extent of the lobule. The axis of the auricle should not lie in the vertical plane; rather, it should be rotated 15 to 20 degree in the posterior direction. A distance of 15 to 20mm between the scalp & the outer edge of the helix provides an esthetically pleasing degree of auricular protrusion.

Several grading systems for microtia exist, but the Marx classification is widely used. This grading system classifies the condition as follows:

- **Grade I :** the auricle is slightly smaller, by at least 2 standard deviations below the normal, but all subunits are present.
- **Grade II :** the auricle is smaller than usual, and subunits are severely underdeveloped or absent. The auricle's superior half is often less developed than the inferior half.
- **Grade III :** only a small piece of cartilage is present in the ear's superior remnant. The lobule is rotated anterosuperiorly. This

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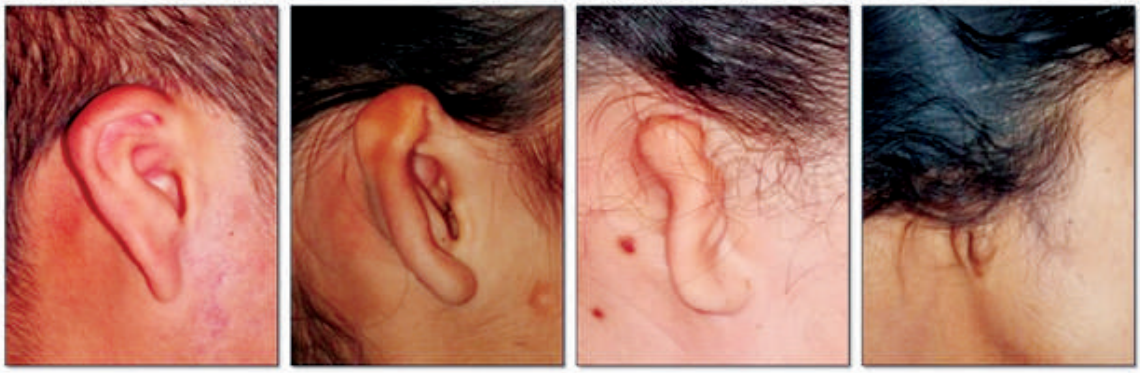
configuration is the most common, often colloquially called "peanut ear.

- **Grade IV :** the auricle and lobule are completely absent (anotia).

Marx Classification of Microtia



Grade I : Auricle small but all subunits present

Grade II : Auricle small and subunits under developed or absent

Grade III : Small cartilage remnant with anterosuperiorly rotated lobule

Grade IV : Anotia

Case 1 :

A 7 year old male child was brought to the outpatient department with complaints of right sided post auricular swelling and pain for 2 days. There was no history of nausea, vomiting, dizziness or vertigo. Hearing was markedly reduced in right ear.

On ***physical examination***, the child hadright sided microtia with atresia of external auditory canal (probe could be passed for almost 3mm). External ear consisted of lobule, tragus and a small bulge of rudimentary cartilagenous tissue behind an atretic canal. However, lobule and tragus of the diseased ear were present almost at the same level compared to the other side. His left ear was completely normal. The patient presented with a globular post-auricular swelling on the right mastoid region, of size 2x2cm^2, fluctuant in nature, tender to touch with tense, inflamed and thinned out overlying skin which was on the verge of rupturing.

Past history of post-auricular abscess of right ear present, which ruptured and healed spontaneously without any treatment.

Blood investigations revealed raised leucocyte count (18.2x10^3/ml), predominantly polymorphs, with other parameters within normal limits.

Microscopic examination of the pus from post-auricular abscess showed gram positive cocci in cluster with no growth of pathogenic organism on culture.

Audiometry & tuning fork tests gave inconsistent results.

BERA : bc-abr suggestive of cochlear pathology in right ear. Ac-abr could not be done due to external ear pathology. Ac-abr of left ear suggestive of minimal hearing loss.

HRCT temporal bone showed right sided mastoiditis with retroauricular abscess. Otitis media and externa present. Tympanic membrane not visualized. Mild erosion of middle ear ossicles. Scutum eroded. Inner ear : cochlea, vestibule, semicircular canal, cochlear aqueduct, vestibular aqueduct, facial nerve canal, jugular fossa, carotid canal- normal.

Operative findings : In order to locate the antrum of the diseased ear the mastoid tip of that side was palpated and its position compared with that of the opposite side. Bilaterally the mastoid tip and the tragus were lying at the same level. The lobule was almost 2cm above and anterior to the mastoid tip. The external canal was probed and found to be blind measuring 3mm. A curvilinear incision was made passing over the post-auricular abscess 1cm above the mastoid tip running behind the lobule. After initial dissection the spine of Henle was identified which was rudimentary. Macewan's triangle was not well defined. Mastoid antrum & attic were hypoplastic. Cholesteatoma was seen in antrum, sinodural angle and attic goingfurther anteriorly into the eustachian tube opening. Eustachian tube orifice provided an important landmark to identify the otherwise malformed middle ear. Cholesteatoma sac was found lying on the bony canal overlying the vertical segment of the facial nerve. Dura was low lying. Incus and malleus were malformed & fused together. Stapes could not be identified. Canaloplasty and meatoplasty were done by pulling and suturing the tragus more anteriorly & lobule further inferiorly. A stent was kept to maintain the patency of the external canal.

Case 2 :

A 17 year old female presented witha left post auricular swelling with pain and left ear discharge for 5 days. She also complained of left sided facial asymmetry and decreased hearing from the same side since childhood. There was no complaint of nausea, vomiting, vertigo or tinnitus.

On ***physical examination***, the patient had bilateral microtia with a diffuse swelling over the left post-auricular area extending to the angle of mandible and lateral aspect of upper third of neck. The swelling was fluctuant and tender to touch. On left side, there were two cartilaginous spicules in place of the lobule lying inferiorly to the meatus and an isolated tag of soft tissue almost 2cm posterior to the external canal. The tragus was rudimentary. Left external auditory canal was stenosed and filled with foul smelling whitish discharge. The canal ran downward and posteriorly. Tympanic membrane could not be seen. Bilateral external auditory meatus were placed more posteriorly and at a lower level, almost 3cm below the level of the horizontal line drawn from the lateral canthus of eye on the temporal bone.

Past history of left sided post auricular abscess twice, 4 years and 8 years ago, for which the patient underwent incision and drainage.

Microscopic examination of pus from the abscess showed gram positive cocci but without growth of any organism.

Audiological evaluation :

Tuning fork test :

Pre-operative: Rinne's test was positive on right side with tuning forks of 256/512/1024hz but not perceived on the left. The Weber lateralized towards the left, whereas absolute bone conduction test was equivocal on right but could not be perceived on the left.

Post -operative : After surgery Rinne's test was found to be positive in both ears with Weber lateralizing to the left; absolute bone conduction was equivocal on each side.

Left ear - pure tone average was 55 dbhl - moderate conductive hearing loss. Bone conduction could not be done as the patient was having post-auricular pain.

Right ear - bone conduction threshold withinnormal limit.

Tympanometry, Brainstem Evoked Response Audiometryand Otoacoustic emission could not be tested due to active discharge.

HRCT temporal bone : homogenous mildly enhancing soft tissue density seen infiltrating

the left external and middle ear cavities with erosion of posterior & inferior bony wall of external canal, scutum & long process of incus and stapes. It was seen completely filling epi, meso and hypo tympanum. It is also extended to Prussack's space, aditus and mastoid air cells with erosion and opacification. It was seen eroding the lateral semicircular canal with dehiscence of facial canal. Evidence of heterogenous enhancing thickwalled collection was noted in left posteroinferior auricular region. It extended inferiorly upto mid thyroid level and superiorly communicated with the left external ear cavity.

Operative findings : probing revealed a stenosed external canal running downward and posteriorly. An initial small incision of 2cm was given just below and almost 1.5cm posterior to the cartilaginous remnant away from the mastoid tip to drain the abscess. The incision was extended upward and anteriorly running between the soft tissue tag and the external canal, to 1.5cm above the meatus. Spine of Henle was rudimentary. Drilling revealed sclerosed mastoid antrum. Granulation tissue was present in aditus, attic and middle ear. Malleus and incus were malformed and fused; stapes head and stapedius tendon were visualised. Round window was found placed anteriorly. Lateral semicircular canal was eroded. Bony canal of the vertical part of the facial nerve was partly dehiscent. Abscess found to extend from canal inferiorly. Canaloplasty was done. The soft tissue tag was pulled and sutured superior to the meatus. Meatoplasty was maintained by keeping a stent.

Discussion :

The external auricle or pinna develops from a series of small cartilaginous tubercles or hillocks. Hillock 1-3 comes from 1st or mandibular arch & 4-6 comes from 2nd or hyoid arch. According to Park[3], hillock 1 produces the anterior portion of the ear lobule, hillock 2 tragus and hillock 3 the ascending helix. Of the 2nd arch hillocks, 4 and 5 produces antihelix and helix, with 6 contributing to the posterior lobule. By the end of fifth week, five branchial arches are discernable. In a 38 day old embryo, six hillocks have developed in the mesenchymal tissue of the first (mandibular) and second (hyoid) arch and a process of fusion produces a primitive ear in the 50 day old embryo. Both **case 1 & 2** presented with microtia, case 1 unilateral whereas case 2 bilateral. Malformation, such as anotia and microtia, are likely to be caused by the disturbance of development at seven or eight weeks gestational age. In both the cases tragus & lobule (1st arch structures) though present, 2nd arch anomaly was more pronounced. The ear initially forms in the neck region and moves upward onto the head by week 10. In **case 2** this migration was affected & bilateral ears were low set.

Case1 had atresia of right external auditory canal whereas **case 2** presented with stenosis of bilateral canal. At 28 weeks, a core of ectoderm canalizes from medial to lateral and eventually breaks through to communicate with the conchal depression. Failure of canalisation or more likely lack of ectodermal migration can lead to atresia of external auditory meatus and partial canalisation leads to meatal stenosis (diameter of the canal less than 4mm).

In both the cases malleus and incus were malformed and fused. The head of the malleus and body and short process of the incus develops from Meckel's cartilage (first arch derivative), whereas, the manubrium of the malleus, long process of the incus and stapes suprastructure arise from Reichert's cartilage (second arch derivative). The process begins at 4 weeks and adult shape, size and ossification is present by 25 weeks.

The full-sized outline of membranous labyrinth is formed by 25 weeks of gestation. The Superior

Semicircular canal starts to develop at 35 days. Cochlea is also formed by 25 weeks. The Organ of Corti starts developing as a single block of heaped up ectodermal cells at about 11 weeks. Within this mass develop inner & outer hair cells and then specialized supporting cells.[4] Recent studies using high resolution computed tomography suggest a higher rate of inner ear congenital anomalies affecting between 10 and 47 percent of patient with atresia. BERA of **case 1** is suggestive of cochlear pathology in right ear. Audiological evaluation in **case 2** revealed moderate conductive hearing loss.

Pathology :

Developmental anomaly of external ear is usually associated with malformed middle ear which compromises the ventilation of middle ear cavity via eustachian tube. This causes retraction of tympanic membrane that marks the beginning of any disease process. Because of the stenosed or atretic canal there is inadequate drainage and patients usually present late with complications like subperiosteal abscess.

Microtia is the developmental anomaly of ear due to failure of fusion of hillocks developing from 1st & 2nd pharyngeal arches. The normal size of the auricle at birth is 66% of the length & 76% of the width of an adult ear. By the age of six, the auricle has attained 90% of adult proportion.[5] A study by Becker & Tos[6] showed the incidence of atresia of external auditory canal to be 0.5 per 1,00,000 population, incidence of membranous atresia being twenty times less than the solid form. Congenital aural stenosis as compared to aural atresia, carries a much greater risk of cholesteatoma. Jahrsdoerfer & Cole[7] reviewed 600 cases of major congenital ear malformation. Fifty patients (54 ears) were found to have aural stenosis. The most significant finding was that in children of 12 years or older with a meatus narrower than 2mm, 91% develop cholesteatoma.

Conclusion :

Microtia may occur in isolation or be associated with other congenital anomalies. Family history & proper antenatal screening helps us in anticipating such occurrences.

Hearing should be assessed early in an infant with microtia or aural atresia. Auditory brainstem response testing should be performed, especially in young children. A moderate to severe 50 to 65 db conductive hearing loss can result from unilateral aural atresia, although 10% to 15% may have simultaneous sensorineural hearing loss. Testing of the non-atretic ear is necessary, as clinicians should not assume hearing is normal on that side.[8] Patients having squamosal chronic otitis media with microtia presents late and usually with complications. A computed tomography scan of the temporal bone is necessary to see the extent of the disease, grade aural atresia and assess candidacy for repair.

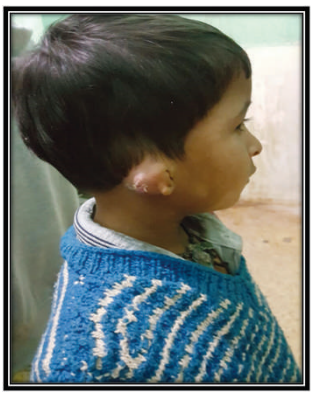
Management of microtia withsquamosal chronic otitis media requires a multi-disciplinary approach. Otologists take care of removing the unsafe disease and restore hearing as far as possible, plastic surgeons perform surgical reconstruction to improve ear appearance and function. Audiologists assess hearing function, provide rehabilitative services, and monitor auditory progress. Speech pathologists evaluate and treat speech and language disorders. Anaplastologists fabricate custom prostheses, collaborating closely with patients and the surgical team to create lifelike alternatives when surgical reconstruction is not suitable or preferred. Psychosocial support and counseling to address any emotional or social challenges associated with the condition.

Lastly, patients with microtia and their families must be educated regarding the treatment options available. Long-term follow-up with various specialists can help minimize the condition's physical and psychosocial tolls on the patient.

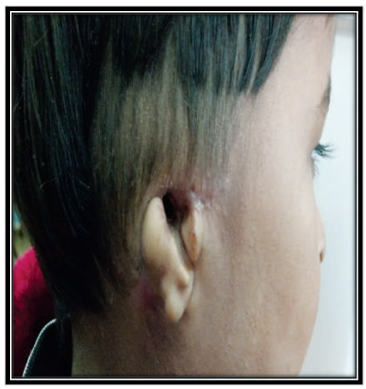
Discussion regarding the timing of interventions is crucial. Surgical intervention for comorbid conditions, such as aural atresia, must be considered.

CASE: 1

PRE-OPERATION

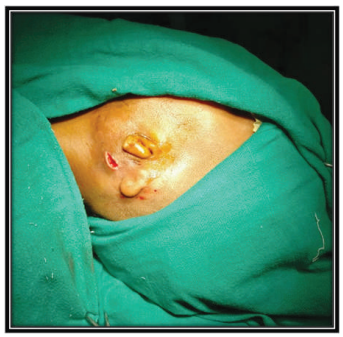


POST-OPERATION

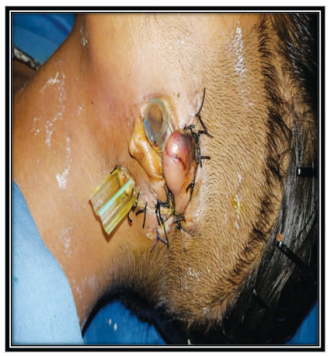


CASE: 2

PRE-OPERATION



POST-OPERATION



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Case Report

A Rare Cause of Altered MRI Signal Intensity in Bilatral Thalamus And Brainstem

Shrabanti Roychoudhury

Abstract :

Leigh syndrome, an inherited neurodegenerative condition is a relatively less frequent cause of thalamus and brainstem hyperintensity in MRI of infants. Herein, we report a case of Leigh syndrome in a 5-month-old male child who presented with abnormal posturing and dystonic spasms. The diagnosis confirmed with high level of clinical suspicion and gene analysis of blood sample. A brief description of Leigh syndrome is elaborated in this article.

Key words :

Leigh syndrome, Primary mitochondrial disorder, thalamus hyperintensity, brainstem hyperintensity

Case History :

A 5-month-old male baby presented with abnormal posturing and dystonic spasms. MRI brain was advised.

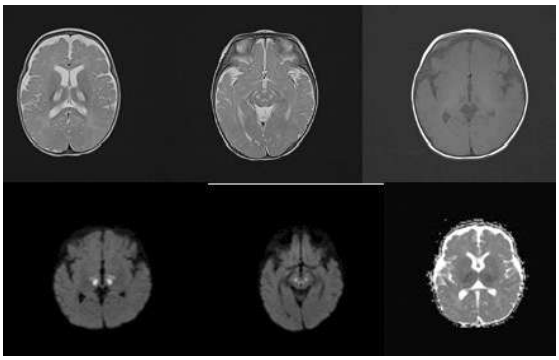

Fig 1 : MRI shows bilateral symmetric T2 hyperintense, T1 hypointense lesions in thalami, substantia nigra, oculomotor nuclei and red nuclei (upper panel). These altered signal areas had diffusion restriction (lower panel)

Imaging Findings :

Non-contrast MRI of brain showed bilateral symmetric hyperintense T2 and hypointense T1 lesions in the thalami, substantia nigra, oculomotor nuclei and red nuclei. These altered signal areas had diffusion restriction. Based on the MRI findings (Fig 1), the differential diagnoses of hypoxic/metabolic encephalopathy or Artery of Percheron infarct was suggested.

Diagnosis :

On clinical suspicion; the treating physician sent blood sample for gene analysis, which revealed homozygous likely pathogenic variant intron 2 of NDUFS3 gene. This finding is associated with mitochondrial complex-I deficiency.

Discussion :

Primary mitochondrial disorder (PMD) constitutes the most common cause of inborn error of metabolism of childhood. Central nervous system (CNS) is frequently affected. Neuroimaging findings vary from unremarkable and non-specific to highly suggestive. In the appropriate clinical setting, combination of signal intensity changes in basal ganglia, thalamus, brainstem, cortex, white matter, cerebellum or spinal cord may indicate possibility of PMD.[1] Mitochondrial encephalopathies can affect both grey and white matter. Grey matter lesions are multifocalvasculo-necrotic with neuronal loss. White matter lesions are characterised by demyelination and spongy degeneration.[2] Leigh syndrome (LS) or subacute necrotising

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encephalopathy represents the most common phenotype of paediatric MSD. LS has a variable mode of inheritance : autosomal recessive (most common), mitochondrial DNA inheritance pattern (maternal) or X-linked recessive pattern (less common). Alternatively, it may besporadic. The most common biochemical defect of DNA associated LS is complex-I deficiency affecting NDUFS4 (Nicotinamide adenine Dinucleotide plus hydrogen-dehydrogenase) gene subunit.[3]

The most common symptoms of LS include hypotonia, regression of milestones and developmental delay. Strabismus, nystagmus, swallowing difficulties, chorea, ataxia, pyramidal signs and respiratory insufficiency.[4] Clinical symptoms commonly manifest by the age of 2 year.[5] The overall survival rate is poor and often limited up to age of six years.

MRI is the imaging modality of choice. Common imaging findings are bilateral lesions in the basal ganglia, diencephalon and brainstem (substantia nigra, oculomotor nuclei, periaqueductal grey matter and inferior olivary nuclei). Less common findings may occur in white mater, cortex, cerebellum and spinal cord.[6] Lesions are usually hyperintense on T2 weighted and FLAIR MR images, and hypointense on T1 weighted images with or without restricted diffusion. Areas of enhancement, foci of calcification and necrosis may be seen. Abnormally elevated lactate peak is commonly seen on MR spectroscopy.[1]

The differential diagnosis of LS is extensive and includes viral encephalitis, demyelinating disease, acute necrotising encephalitis of childhood, hypoxic injury, glutaric aciduria, hydroxy-glutaric aciduria,Wernicke encephalopathy, haemolytic uremic syndrome, maple syrup urine disease, Wilson disease, Huntington disease, carbon-mono-oxide poisoning and kernicterus.

Conclusion :

LS is an uncommon cause of bilateral symmetrical signal alteration in neuroimaging. The imaging and clinical presentation may overlap with other differentials like viral encephalitis, demyelinating diseases, hypoxic injury besides many other metabolic encephalopathies. A high level of clinical suspicion is required to diagnose LS. Gene analysis of blood sample is confirmatory.

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Abstracts

Abstracts for Paper Presentation at the 35th Annual Scientific Conference of the Ramakrishna Mission Seva Pratishthan Vivekananda Institute of Medical Sciences, November, 2023

Impaired Autophagy and Enhanced Inflammasome-Mediated Inflammation in Peripheral Blood Mononuclear Cells is Associated with Non-Alcoholic Fatty Liver Disease Severity : A Cross-Sectional Study

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Background :

Dysfunctional metabolism involving inflammation, oxidative stress and mitochondrial dysfunction lies at the heart of non-alcoholic fatty liver disease (nafld). Circulating Peripheral Blood Mononuclear Cells (PBMC) are critical surrogate monitors of tissues difficult to biopsy. Alterations in the immuno-metabolic state in nafld subjects may be reflected in the expression of different pbmc-specific molecular markers. Immunometabolic disturbances and mitochondrial anomalies in pbmc could be deciphered to investigate mechanistic changes in fatty liver disease.

Methodology :

An observational cross-sectional study was undertaken in a Government hospital in Kolkata, India, where subjects were recruited for study based on fibroscan and USG scores. Cellular and serum samples from a cohort of nafld patients (n=50) were analyzed for oxidative stress, inflammation, inflammasome activation, and autophagic flux pbmcs by western blot, flow cytometry, scanning electron microscopy, and immunocytochemistry. Statistical analysis of data was computed in spss 28.0.

Results :

Baseline anthropometric, clinical and dietary parameters were found altered and associated with nafld severity. Systemic inflammation was indicated by higher proin flammatory markers like inos, cox-2, il-6, tnf-α, il-1β, hscrp in serum of nafld subjects ($p<0.05$). Intracellular and mitochondrial ros were elevated in disease groups. Collapse of mitochondrial membrane potential and release of cytochrome-c in pbmc were aggravated along with disease severity. Nlrp3 inflammasome marker proteins were upregulated ($p<0.05$) in pbmc along with nafld severity. Expression of autophagic markers such

as lc3b, beclin-1 and its regulator pampkα were found diminished (p<0.05) with a concomitant rise of p62. The degree of colocalization of nlrp3 and lc3b proteins in pbmc was found to be decreased along nafld severity.

Conclusion :

The present work provides evidence of enhanced ros-induced nlrp3 inflammasome activation and compromised autophagosomal flux in pbmc driving nafld severity. Intracellular events such as oxidative stress and mitochondrial dysfunction were found to be important triggers for inflammasome-mediated inflammation.

Cytokine Release Syndrome in Children with Viral Lower Respiratory Tract Infections at A Tertiary Care Center in Eastern India : Restrospective Observational Study

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Purpose :

Infection as a cause of hypercytokinemia is now increasingly seen. In the recent upsurge of viral lower respiratory tract infections (lrti), especially adenovirus, many patients were noted to suffer from crs. Not all satisfied the hlh 2004 criteria but required anti-inflammatory therapies. With no available guidelines we intend to describe our experience in such patients.

Methods :

Retrospective observational study on children withcrs due to viral lrti, admitted from January 2023 to March 2023, at Institute of Child Health, Kolkata. Crs was diagnosed on basis of continuous fever, multisystem involvement, falling platelets, transaminitis and elevated ferritin with negative cultures.

Results :

20 patients were included. 14 had adeno virus, 1 for human metapneumovirus and 1 corona 229e. 13 were males, 7 were females. All had continuous fever, 17 had tachypnoea, 17had cns involvement (irritability, lethargy or seizures), 15 had oedema, 19 had hepatomegaly and 9 had splenomegaly. The median age was 36 months, median day of fever at admission was 4 days,median day of fever at diagnosis was 13 days. Median investigations at diagnosis was hb 9.15 mg/dl, total leukocyte count 4490/cmm, absolute neutrophil count 2088, platelet 1.15 lakhs/cmm, crp 27.6 mg/l, sgot 116.5 u/l, albumin 3.05g/l, ferritin 2954 ng/ml, triglyceride 162mg/dl. Crp was noted to be normal at diagnosis in 7 patients. 18 patients received intravenous dexamethasone, 1 hydrocortisone and 1 required no intervention. Fever was the first to respond to therapy. Encephalopathy and oedema subsided 4 to 5 days after initiation of therapy.

Conclusion :

High degree of suspicion is required to diagnose crs. Criteria of hlh-2004 maybe not fulfilled.multisystem involvement, trends in cytopenia with rising ferritin,transaminitis and fall in albumin helps in early identification. Crp may not always be raised. Early identification and initiation of immunosuppression is the key to a successful outcome.

Aims and objectives :

To note the demographic profile, clinical features, laboratory investigations, therapy and outcome of crs due to viral lrti.

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Development of Strip-based Diagnostics For The Detection of Deadly Free-living Amoebae

Basic Science Category

Shreyasee Hazra, Suman Kalyan Dinda, Sk Rajjack Hossain, And Dipak Manna#

Free-living amoebae (flas) are single-celled protozoa found in various environments, including water and soil and have the unique ability to adapt to extreme environments, making them resilient to various environmental factors. Although, most flas do not cause harm to humans, four families, including *acanthamoeba sp., balamuthia mandrillaris, naegleria fowleri,* and *sappinia sp.,* can cause severe infections such as primary amoebic meningoencephalitis (pam), granulomatous amoebic encephalitis (gae), and balamuthia amoebic encephalitis (bae). Acanthamoeba can cause corneal infection and is prevalent among contact lens wearers, especially those with weakened immune systems. These infections have a high mortality rate and are challenging to diagnose due to their similarity to common illnesses.

Development of a point-of-care detection system that is rapid, accurate, and cost-effective is crucial to identify the presence of these deadly flas in patients and water bodies. The proposed technology works in two steps, first a multiplex-recombinase polymerase amplification (rpa), followed by a strip-based lateral flow detection. The kit can detect flas in patient samples and water bodies and will be used to survey water bodies in districts in north-eastern india to prevent infections and raise awareness among the public.

Prevention is the best way to avoid infections caused by flas, as there is currently no drug available to treat these pathogens. The strip-based lateral flow detection system can help ensure the safety of swimming pools and recreational water bodies. Public awareness and regular checking and certification of water bodies will help prevent infections caused by these deadly parasites.

Our objectives are :

Objective 1 : development and standardization of multiplex-pcr, multiplex-rpa (recombinase polymerase amplification) and making rerm-bp/cnp conjugate.

Objective 2 : preparation of lateral flow strip, detection, checking sensitivity and specificity of the device, and

Objective 3 : survey and water testing from different aquatic bodies in different parts of india for these deadly parasites.

A Case of Multiple Myeloma Presenting With Generalized Lymphadenopathy And Biclonal Gammopathy — An Extremely Unusual Presentation

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Abstract :

Introduction :

Multiple myeloma is a b cell neoplasm of the Bone Marrow with various manifestations like anaemia, bone lesions, hypercalcemia, renal dysfunction. Less frequent presentations being Lymphadenopathy (~4%) and biclonal gammopathy (~1%). The Involvement of the lymph nodes is a rare condition and hence a Diagnostic challenge.

Case Description :

Here we report a case of a 81 year old non Diabetic, hypertensive male, with history of right sided adrenal myelolipoma, ckd-v not on hemodialysis, admitted at our hospital with disorientation from one week. Further evaluation revealed severe anemia, thrombocytopenia, hypoalbuminemia, pth independent hypercalcemia, severe hyperuricemia, ascites, uremic encephalopathy; left supraclavicular lymphadenopathy with conglomerated, firm lymph nodes without fixity to any structures. Chest radiograph showing widened mediastinum followed by hrct thorax showing enlarged mediastinal lymph nodes; ncct whole abdomen showing enlarged retroperitoneal lymph nodes. Fnac from the left supraclavicular node showed suspicion of plasmacytoma. Bone marrow biopsy was done which showed 30 to 40% plasma cells with impression reported as plasma cell dyscrasia. Radiographs of skull and pelvis not showing any obvious bony Lesions. Serum protein electrophoresis revealed two "m" bands, in beta2 and in gamma globulin region. Serum beta2 microglobulin levels were very high (> 20500 ng/ml). Serum free light chain assay showing high lambda–free light chains level (>6500 mg/l); thus clinching the diagnosis of multiple myeloma in the above clinical settings. Patient was treated conservatively with steroid-bortezomib-thalidomide but we could not save the patient.

Conclusion :

Multiple myeloma can present in various ways. High Index of suspicion clinically is very important.

Pain to Pleasure by Rutin : Anti-nociceptive And Anti-inflammatory Action of Rutin in Formalin Induced Acute Murine Pain Model

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Background :

Effective and safe analgesic against acute pain is still an enigma. Rich in distinctive phytocompounds, plants may be a superior substitute. Rutin, a common flavonoid composed of rutinose and quercetin, might be useful.

Aims :

To study the anti-inflammatory and anti-nociceptive properties of rutin in a formalin induced acute pain model.

Methods :

Anti-hyperalgesic behaviours by tail flick, hot plate and nociceptive behavior by paw licking events were measured. Open field and elevated plus maze tests were used to measure spontaneous movement and anxiety, respectively. Substance p, cgrp, nk1r, p65, and pakt were used to measure the neurogenic inflammation caused by formalin in paw tissue. Changes in gaba, bdnf, and glutamate in the spinal cord were assessed. Animal tests were carried out with iaec consent.

Results and discussion :

In both prophylactic and therapeutic strategy with rutin demonstrated significant analgesic effect. Rutin treatment increased the paw withdrawal and tail flick latency by **3x** and **2.8x** respectively. It also restricted the paw licking event by **0.3x**. Rutin therapy significantly **($p<0.01$)** restored the restricted movement and high anxiety that formalin caused. It also significantly reduced neurogenic inflammation on local basis as observed by substance p, cgrp, nk1r, p65 **($p<0.01$)**. Cell survival marker pakt expression in paw was significantly upregulated in rutin treatment **($p<0.01$)**. Rutin downregulated excitatory neurotransmitter glutamate by **0.6x** at the spinal level as follow-up to its overexpression. The novel treatment restored the level of decreased gaba by **1.5x**. Spinal depleted bdnf level in pain condition was significantly elevated in therapeutic rutin treatment.

Conclusion :

In conclusion, rutin proves to be a potent therapeutic and preventive agent against acute pain caused by formalin in a mouse model. It will be a great substitute for the current analgesics, which have a lot of side effects that are either neurotoxic or systemic.

Exploration of Immune-enhancing Potential of Polysaccharides Extracted From Wild Edible Mushrooms of West Bengal, India

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Abstract :

The innate immune system serves as our first line of defense against pathogens, with macrophages playing a pivotal role. However, there are instances where this system's performance falls short. Innovative

immunomodulatory drugs offer a solution to these limitations. Recent research has illuminated the potential of macrofungal polysaccharides, particularly β-glucans, in boosting macrophage functionality. While the body of research in this domain is still growing, west bengal, an exclusive state in india, is endowed with a wealth of basidiomycetes, some of which have traditional applications in promoting health and food security. To explore this resource, we embarked on field expeditions across the state, uncovering several distinct mushroom species. Following rigorous characterization, we identified two of these species as novel taxa, while one contributed as a new addition to macrofungal diversity of the state. To assess their practical applications, we employed a multi-step extraction process to isolate polysaccharides, with the primary carbohydrate component being β-glucan. These macromolecules were subsequently tested on murine macrophage raw264.7 cells to assess their immunomodulatory effects. The results indicated that the treatment led to increased cellular proliferation, enhanced phagocytosis, pseudopod formation, elevated nitric oxide and reactive oxygen species production, and an augmentation in the synthesis of pro-inflammatory mediators such as cyclooxygenase (cox)-2, interferon (ifn)-γ, inducible nitric oxide synthase (inos), and tumor necrosis factor (tnf)-α. This provided concrete evidence of the immune-enhancing properties of the investigated polymers. Furthermore, a noteworthy up-regulation of toll-like receptors (tlrs) and nf-kb expression was observed, shedding light on the mechanism of action via the tlr/nf-kb pathway. In summary, the examined macrofungi hold promising potential for applications in the pharmaceutical and healthcare sectors, which could bolster the economic value of these largely untapped mushrooms.

Keywords :

β-glucan, chemical characterization, pro-inflammatory mediators, murine macrophages, signalling cascade

From Land to Pharmaceutics : Unravelling The Therapeutic Relevance of A Tribal Mushroom of Folklore Delicacy

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Cancer ranks as a leading cause of death and an important barrier to increasing life expectancy in every country of the world. Among various cancer treatments, chemotherapy, the most potent modalities and various patients provided with chemotherapy possesses severe side effects. With the complications from traditional therapies, the scientific community is looking for answers from nature derived drugs. A broad array of enthralling and rare mushrooms was observed to be grown solely in the wilderness of india. One such wild edible mushroom, *astraeus hygrometricus*, has lately been discovered in districts of west bengal, india, and turned out to be a traditionally popular

myco-food of the tribal community that displayed significant bioactivity. This study aimed to find out whether, astrakurkurol, a novel terpenoid isolated from *a. Hygrometricus*, possessed any anticancer activities breast cancer cells. Astrakurkurol demonstrated noteworthy cytotoxic effects selectively against and breast cancer cells in significantly low concentrations while imparting no such toxicity towards peripheral blood mononuclear cells *in vitro*. Further experimental facts revealed that this effect was unveiled to be apoptosis, documented by dna fragmentation, chromatin condensation, nuclear shrinkage, membrane blebbing, and imbalance of cell cycle distribution. The in detail mechanistic analysis disclosed the involvement of mitochondria-mediated intrinsic signalling pathway. Astrakurkurol was further observed to regress the size of tumor remarkably in both *ex ovo* chick and *in vivo* balb/c mice model and induced apoptosis in the tumor cells. The study also predicted that astrakurkurol bears the qualities of a clinical drug as this fact was confirmed by the biosafety regression of solid tumors by astrakurkurol in mice. These findings put forth astrakurkurol as a convincing natural anti-cancer compound, which selectively targets breast cancer cells and induces cellular apoptosis via intrinsic pathway. In effect, astrakurkurol could be considered for scrutinizing the breast cancer therapies and as a robust contender for future analysis.

Understanding Immunogenetics of Auto-immune Graves' Disease (GD) in Patients of West Bengal, A Cross-sectional Study

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Background And Objective :

Thyroid diseases are one of the most common forms of endocrine disorders globally. Graves' disease (gd), an autoimmune form of thyroid disease, is a major kind. Our initial data showed an exaggerated inflammation in the myeloid cells and a decline in endogenous Vitamin D levels and the vitamin d receptor expression. The aim of the study is to find out the association of Vitamin D receptor (vdr) gene polymorphisms with susceptibility to gd, and elucidate cellular stress pathways in the myeloid cells underlying the pathogenesis of gd.

Methodology :

56 gd patients and 40 control subjects were participated in the present study so far from rkm seva pratishthan, kolkata. Following necessary protocols, various haematological, biochemical

and genetic parameters were studied from blood.

Results :

At the onset, an extensive female preponderance found in the gd patients (male=15, female=41 among 56 subjects, 1:2.7 ratio). Tsh-r, anti-tpo and anti-tg antibodies were upregulated by 4.7, 27.29 and 6.07 folds respectively. Low levels of serum vitamin d (16.719±1.248 ng/ml) and down regulation of mrna expression of vdr (1.3 fold) found in gd patients. Pcr-rflp studies revealed that 68.51% of gd patients have apa1 (rs7975232) vdr polymorphism while 67.40% have bsm1 (rs1544410) polymorphism and 53.8% have fok1 (rs2228570) polymorphism. 83.3% of gd patients are found to be hla-dqb2 positive. Consequently, major th1 cytokines: tnf-á and il-2 levels in serum were markedly enhanced by 29.60 and 1.314 folds respectively over controls (246.016±57.522 pg/ml; 45.343±3.352 pg/ml respectively). Subsequently, the mrna expression of pro-inflammatory genes il2r (4.44 fold up), ifn-γ (1.55 fold), tnf-α (3.1 fold), il1β (20.04 fold) were all increased. Markers for immune suppression, foxp3 and ctla4 were down by 3.1 fold and 1.5 fold respectively, complementing the previous set of the data. Interestingly, mrna expressions of er stress markers ire1-α, perk and atf6 were upregulated like 2.6, 1.5 and 2.0 folds compared to controls ($p<0.05$).

Conclusion :

At this point of study, our data strongly suggest a link between a dysregulated immune system with vitamin d deficiency in gd patients. Hla-dqb2 expression was found to be strongly associated with gd. Also, the activation of er stress pathways was observed in the gd patients.

Mucocutaneous Manifestations of Primary Systemic Light Chain Amyloidosis : A Descriptive Case Series of 14 Patients from A Tertiary Care Hospital

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Conflict of interest: nil

Abstract :

Introduction :

Primary Systemic Amyloidosis (PSA), also called AL Amyloidosis, is characterized by the deposition of insoluble monoclonal immunoglobulin light chains or l-chain fragments in various tissues and organs of our body. There is a dearth of literature regarding the mucocutaneous manifestations of PSA in the indian population which prompted us to undertake the present study. We sought to find out different clinical characteristics of mucocutaneous manifestations in a group of patients of PSA in a tertiary care center in kolkata.

Methodology:

Consecutive patients of PSA who presented to our facility with cutaneous features were included in this cross-sectional observational study done over 3 years in a tertiary care hospital in kolkata. A detailed history was taken, and a thorough clinical examination and appropriate laboratory evaluation were done. Data were recorded in a pre-designed, pre-tested schedule, and appropriate statistical analysis was done.

Results :

A total of 14 patients (mean age at presentation; 62.78 years, age range: 55–72 years; female-to-male ratio of 2:5; mean disease duration : 7 months) of PSA with mucocutaneous features were evaluated. Multiple myeloma was associated in 35.7% of patients. Among cutaneous manifestations, all patients had pinch purpura, macroglossia, and lateral ridging on the tongue. Periorbital purpura (92.8%), facial purpura (85.7%), ecchymoses and waxy nodules (each 78.5 %); pruritus (57.1%), xerosis (50%), and diffuse alopecia (35.7%); bullous lesions, subcutaneous nodules, atrophie blanche, macular amyloidosis, lichen amyloidosis, and cutis laxa (7.1 % each) were other features. Thickened skin and nail dystrophy were noted in 14.3 % of patients. Head and neck were the most (100%) commonly affected sites. 28.5 % of patients had significant findings in echocardiography.

Conclusions :

Primary systemic amyloidosis has a wide gamut of cutaneous features and recognizing these skin lesions in the setting of PSA may be a significant clinical indicator of the underlying systemic illness.

Role of Point of Care Gastric Ultrasonography in Predicting Feed Intolerance in Critically Ill Children Admitted in Pediatric ICU in A Tertiary Care Hospital of Kolkata

Biswadeep Das, Rupa Biswas, N. C. Mahapatra

Background :

With increasing use of pocus by pediatric intensivists, pocus may be used to measure gastric residual volume (grv) in predicting feed intolerance in picu patients on enteral nutrition.

Objectives :

Our study aimed to compare UGRV in critically ill children with tolerance or intolerance of enteral feed & to assess the same as a tool in predicting intolerance early.

Materials & Methods :

It was a prospective observational study. The patients admitted in PICU, already on enteral nutrition are included in our study.

Study conducted over the period of last 3 months (from 1st February 2023 to 30th April 2023). Total no of patients under study- 78.

Children between age of 1 yr. to 12 years who were already on enteral nutrition & were planned for initiating enteral feed were included in our study. However patients with hemodynamic instability or GI surgical conditions were excluded from our study.

Before starting en, the og/ng tube aspirated & GRV-0 was recorded by USG machine. Similarly GRV-1, GRV-2, GRV-3 & GRV-4 were measured at 1, 2, 3 & 4 hrs. of feed respectively. During the USG, each time ap & cc diameters of stomach noted, from there csa of antrum

derived. Using the spencer formula GRV calculated. This procedure repeated once daily for a minimum of 2 days.

Total data collected for 168 occasions.

Collected data analysed using MS Excel sheet & stata 14 software.

Results :

Feed intolerance encountered only on 18 episodes out of 168 episodes. GRV4 was the best predictor of feed intolerance with 0.997 auroc, SN - 100% SP - 73.9%, (95% ci) f/b GRV3 with auroc 0.928, SN-91.7% SP-58% (p value <0.05).

Conclusion :

Serial USG measurements by pocus can be used in picu in critically ill patients receiving enteral tube feed for prediction of gastric feed intolerance.

Spontaneous CSF Rhinorrohea — Endoscopic Endonasal Repair

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Aim :

Endoscopic endonasal repair is considered to be the treatment of choice for spontaneous csf rhinorrhoea. Aim is to analyse various repair techniques, the outcome of treatment and the causes of failures.

Methods :

Prospective longitudinal study on 65 patients operated for spontaneous csf rhinorrhoea for a period of 10 years. Site of leak classified location wise e.g medial & lateral lamellar leaks, sphenoid sinus & lateral recess leaks, frontal sinus leaks. Ct cisternography was done before endonasal endoscopic repair. Intra operative leaks were classified as grade 1 to 4 based on nature of leak. The size of leak was classified into <5mm,5mm-1cm and >1cm. Statistical software used spss(22).

Results :

The success rate was 93.8 %. Seven patients had leak of<5mm,45 had 5mm-1cm,13 had>1cm leak. 50 patients underwent bath plug technique supported by fascia, 4 patients underwent cartilage with fat and fascia and 11 patients underwent hadad flap. Out of 4 cases of recurrence,75% of the leaks were grade 4 and of size 1cm.

Conclusion :

Endoscopic endonasal repair of spontaneous csf rhinorrhoea has high success rate but there is no significant association of site leak with recurrence.

Infantile Kawasaki Disease : A Distinct Entity ?

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Background :

Kawasaki disease (KD) is predominantly seen in children less than five years and diagnosis is clinical. Infants have incomplete presentations

often leading to delay in diagnosis and higher incidence of coronary aneurysms.

Methods :

This is a retrospective, analytical study in infants with KD defined as per the AHA guidelines, at institute of child health kolkata from january 2018 to september 2022.

Result :

136 patients were diagnosed as KD, 29(21%) being infants. Median age of the infants was 180 days (iqr 160), 15 were less 6 months and 14 more than 6 months. 15 were males and 14 were females. 76% (n=22) of infants presented as incomplete KD. Fever of more than 5 days in 86%, mucositis in 62%, conjunctivitis in 62%, rashes in 55%, unilateral lymphadenopathy in 45%, and dorsal oedema of extremities in 45%. Mean hemoglobin was 8.8 6gm/dl, TLC 21522/cmm, ANC 9920, platelets 653000/cmm, CRP 137.83 mg/l.

IVIG was given to all. 10% (n=3) were resistant to IVIG and were given infliximab (IFX).

12 (41.4%) babies had coronary artery aneurysms (CAA) at diagnosis. One 2 months old baby with late diagnosis after 3 weeks had multiple giant aneurysms with large thrombus in lad, was ivig resistant and needed thrombolysis. 4/5 of patients with moderate caa at diagnosis received additional IFX and 1 received steroids.

Conclusion :

Compared to our overall data on KD, those presenting in infancy had more incomplete presentations (76% vs 20%), with consequent late diagnosis (day 11 vs day 7) and higher incidence of caas (41.4% vs. 22%).

A Case Series of Pancytopenia in Adults in A Tertiary Care Hospital in Kolkata — Etiological And Clinical Spectrum

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Introduction :

Pancytopenia refers to a hematological condition where there is decrease in count in cells of all 3 lineages in the peripheral blood.

Case details :

Case 1 :

Patient admitted with complaint of fever for 5 days associated with chills and rigor. Initial workup revealed pancytopenia and vivax antigen positive. There was no organomegaly. Thus a case of complicated vivax which resolved with chloroquine and primaquine

Case 2 :

19 year old boy admitted with complaint of fever, generalized body weakness. On examination the boy was cachectic, no organomegaly or lymphadenopathy. Bone marrow aspiration fungal culture revealed aspergillus niger growth

Case 3 :

Patient admitted with complaint of bleeding from ulcers in mouth. On examination she had severe pallor and hand deformity suggestive of ra. She mistook methotrexate daily for 10 days. So diagnosis of folitrax overdose was made.

Case 4 :

Patient admitted with complaint of generalized body weakness and diarrhea. Malabsorption worp up was within normal limit. CBC showed pancytopenia with macrocytic changes. Her Vit 12 level was very low. Bone marrow revealed megaloblastic changes. Thus a case of hypovitaminosis 12 induced pancytopenia.

Case 5 :

Patient admitted with severe pallor and generalized weakness. Lab revealed pancytopenia. Bone marrow biopsy was suggestive of hypoplastic anemia.

Case 6 :

Patient admitted with complaint of generalized body weakness and recurrent fever with cough.

CBC revealed pancytopenia with megaloblastic changes. Bone marrow aspiration was suggestive of myelodysplastic syndrome.

Conclusion :

Pancytopenia can be due to various causes. It can be infiltrative e.g. Lymphoma,tuberculosis. It can be due bone marrow malfunction e.g. Aplastic anemia, myelodysplastic syndrome. It can be due increased desteuction e.g hypersplenism due to any cause. But initial presentation of each case and its clinical courses warrants further discussion.

Unusual Presentation of Severe Leptospirosis Presenting with Septic Shock : A Case Report

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Introduction :

Leptospirosis is a globally important zoonotic disease whose apparent re-emergence is illustrated by recent outbreaks on virtually all continents. The disease is caused by pathogenic leptospira species.

Prevalence of leptospira in india varices from 3-25%, though 90% cases are mild but 10% cases are severe and in severe cases morality is as high as 52%.

Presentation (clinical features +lab findings): 56 years old female admitted with complaints of sudden onset palpitation and dizziness; inability to move both lower limbs for 2 days. Blood Pressure-80/40mmhg, PR - 140/min irregularly irregular, ECG – afib with hvr. Patient having history of an episode of fever only 7-10 days back, with no fever in between. She also having yellowish discoloration of sclera and generalized body for 2 days .

Hemoglobin-5.4 gm% , Plt-44,000/cumm, LFT – bil (t) -24.6 (conjugated – 21.6, unconjugated – 3), CPK - > 16, 000, EMG – myositis process. Urea – 141, Creatinine - 4.5, Vit. B12 - 68. Leptospira IGM - reactive.

Management : Patient was empirically started with I.V meropenem, vasopressor support, with decreasing urine output and AKI she was put on sled for 3 times, gradually vasopressor support removed, patient became dialysis dependent. After leptospira report came started with inj. Doxycycline .

Conclusion : Leptospira presenting as cardiac arrhythmia, jaundice, myositis, septic shock is rare. Severe leptospirosis (weil's disease) presenting in conglomeration of acute hepatitis, AKI, myocarditis, thrombocytopenia and septic shock.

The Clinical Profile And Etiological Classification of Children with Precocious Puberty at A Tertiary Care Children's Hospital

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Abstract :

Background :

Precocious puberty is onset of secondary sexual characters at an age which is less than 2-2.5 sd below the mean age. It may point to an underlying serious etiology and thus needs prompt evaluation and management.

Objectives :

To assess the clinical profile and etiology of children with precocious puberty.

Material and methods :

It is a retrospective review of the children who presented with precocious puberty from november 2022 to october 2023 at the institute of child health, Kolkata. Boys and girls of age less than eight and nine years respectively were included. Detailed history and examination including anthropometry and tanner staging were done along with bone age, lh, fsh, dheas, thyroid function test, 17-OH progesterone levels in all the participants and testosterone in boys and estradiol in girls.

Results :

Total 24 cases with 16 females were reported. Central precocious puberty (CPP) Constituted 70.83% (17/24) and was found to be more prevalent in females (13/17). The most common etiology of CPP was idiopathic (47.06%) followed by hypothalamic hamartoma (29.41%), craniophyaryngioma (17.64%) and medulloblastoma (5.88%). Peripheral precocious puberty (PPP) was found in 29.16% (7/24) patients with male predominance (4/7) and congenital adrenal hyperplasia and mccune albright syndrome (28.57%) being the most common etiologies, followed by hypothyroidism, adrenocortical tumor and testosterone secreting tumor (14.28%).

Conclusion :

The results of our study are consistent to those of other studies done in this subject. This domain is a neglected area and our study can be extrapolated to the whole population to serve as a guide for practicing paediatricians.

Keywords :

Precocious puberty, central precocious puberty, peripheral precocious puberty.

A Comparative Study of The Effect of Aromatase Inhibitor And GNRH Analogue on The Immuno-inflammatory Status in Eutopic Endometrium of Adenomyosis

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Background: Adenomyosis, an estrogen-dependent inflammatory condition, is characterized by the abnormal presence of endometriotic glands and stroma within the myometrium, leading to hyperplasia and hypertrophy. Current non-surgical therapeutic management involves goserelin, a gnrh-agonist, but it is associated with unwanted side effects and high costs. This pharmacological intervention study aimed to assess the efficacy of letrozole, a non-conventional aromatase inhibitor, as a safe and cost-effective alternative to goserelin for treating adenomyosis without compromising fertility.

Objectives : To evaluate the interventional effectiveness of letrozole and compare it with goserelin in eutopic endometrial tissue, focusing on immune-inflammatory markers.

Methods : Adenomyotic subjects received a 3-month treatment with either goserelin at 3.6 mg/month (n=5) or letrozole at 2.5 mg thrice weekly (n=5), followed by comprehensive haematological, biochemical, and molecular analyses.

Results : Both goserelin and letrozole treatments led to changes in oxidative stress markers in eutopic endometrial tissue homogenate, with alterations in superoxide dismutase (25% increase in goserelin, 32% increase in letrozole), catalase (41% increase in goserelin, 44% increase in letrozole), and reduced glutathione (50% increase in goserelin, 15% increase in letrozole). Immunoblot studies indicated reduced expressions of Cox-2 and VEGF (30% increase in goserelin, 33%, decrease in letrozole), while MMP-2 remained relatively unchanged in the letrozole group. Goserelin treatment resulted in decreased il-1β (16% decrease) and VEGF (6% decrease) expressions, while cox-2 expression remained unchanged. Data were presented as mean±sem values.

Conclusion : This study presents promising results regarding the use of letrozole for effective adenomyosis management in reproductive-age women, offering a cost-effective alternative to GNRH-agonists with comparable efficacy in alleviating pain and inflammation markers. Further research involving a larger sample size and additional biomarkers is warranted to gain a more comprehensive understanding of potential shifts in the treatment paradigm.

A Profile of 51 Patients of Seizure Disorder with Mucocutaneous Manifestations : A Cross-Sectional Observational Study from A Tertiary Care Hospital of Eastern India

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Conflict of interest: nil

Keywords :

Seizure disorders; cutaneous manifestations, tuberous sclerosis complex

Abstract :

Introduction :

Skin is the window of our body and an experienced clinician can evaluate the internal organs through this window. Mucocutaneous signs often help diagnose more severe internal diseases like seizure disorders. We present here a profile of 51 patients with seizure disorders from eastern india where cutaneous signs played an important role in clinching the final diagnosis.

Methods :

A cross-sectional observational study on 51 consecutive patients of seizure disorders with mucocutaneous manifestations was done over five years in a tertiary care hospital in kolkata.

Results :

We evaluated 51 patients (age range: 1 month to 72 years; female-to-male ratio of 19:32). Family history of seizure was present in 6 %of patients. Tuberous sclerosis complex (29.4%) was the most common underlying etiology of seizure followed by both neurofibromatosis-type1 (7.84%) and systemic lupus erythematosus (9.8%). Among others were sturge weber syndrome (6%), mucormycosis (6%), phakomatosis pigmentovascularis(6%), xeroderma pigmentosus and meningococcal meningitis (each 4%); neurocysticercosis, sneddon's syndrome, behcet's disease, primary apla (each 2%); bacterial endocarditis, ataxia telangiectasia, phenylketonuria, gricelli syndrome, dyschromatosis symmetrica herediteria, and brain metastasis (each 2%). The commonest site affected was head and neck. Regarding cutaneous signs, adenoma sebaceum was the commonest (n=15, 29.4%) followed by hypomelanotic macules (n=14, 27.4%), connective tissue nevi (n=9, 17.64%), malar rash (9.8%), café au lait macules, neurofibroma, freckling, koenen's tumor, and morbilliform rash (each 7.84%). The limitation of the study was the relatively small size of the study population.

Conclusion :

Proper skin examination can provide important clues for the early diagnosis of the etiology of seizure disorders.

Thrombosis With Multiple Coronary Aneurysms in Infantile Kawasaki Disease : A Case Series

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Background :

Kawasaki disease is an acute vasculitis of childhood that leads to coronary artery aneurysms in 25% of untreated cases. This is a case series of 4 infants diagnosed with kawasaki disease with multiple coronary aneursyms & thrombus.

Case 1 :

3 months old with fever for 26 days, with features of complete KD. echocardiography - lad aneurysm with thrombus, LMCA aneurysm & RCA dilatation,

Treatment - Infliximab , IVIG, steroids, ecospirin,

LMWH. Thrombus peristed on day 7 echo-cardiography, hence cyclosporine, clopidogrel were started. 4 weeks echo showed resolution of previous thrombus.

Case 2 :

2 months old boy with fever for 15 days, thrombocytosis, aneurysms involving all major coronaries, thrombus in lad diagnosed as incomplete KD. IVIG, aspirin, LMWH, infliximab, warfarin were given. Echocardiography showed dissolution of the clot. at 5 years, giant aneurysm of lad persisted.

Case 3 :

10 months old girl with day 16 of fever, echo showed aneurysm in LMCA, RCA, LAD with clot, diagnosed with complete KD, treated with IVIG, steroids, heparin, alteplase. During alteplase infusion baby died from myocardial infarction.

Case 4 :

6 weeks old baby with fever for 2 days, presented with KD shock. Echocardiography showed lad aneurysm, LMCA, RCA ectasia. Treated by IVIG, infliximab. Echo later on showed regression in size of caas, with thrombus in lad, obstructing the lumen, lmwh was initiated. Echo after 7 days showed dissolution of clot. Child had regression of aneurysms by 2 years of age.

Results : 4 babies had coronary thrombus during diagnosis. Thrombolysis was successful in 3, one patient died, two of them continued to have persistent aneurysms.

Use of Lung USG in Peep Titration in Comparison to Arterial Oxygenation Level Estimation in Children with ARDS Admitted in PICU of A Tertiary Care Hospital in Kolkata

Soumyadeep Bhanja, Nepal Ch. Mahapatra, Sumita Pal, Rupa Biswas

Background :

Mechanical ventilation with low tv & high peep is conventional strategy for improving oxygenation in patients with ARDS & patients may require recruitment maneuvers with high pressures to achieve satisfactory opening of collapsed alveoli. The arterial oxygenation method, validated to detect efficacy of recruitment is invasive & often associated with complications. Lung USG easily available in PICU can be used in ARDS patients for assessing the same.

Objective :

Our study aimed at assessing role of lung USG to evaluate lung recruitment in patients with ARDS.

Materials & Method : Observational prospective study. The patients admitted in PICU with ards included in the study.

Study conducted over a period of 4 months. (1st June – 30th Sept. 2023)

Total no. of patients – 7

Patients with ARDS (berlin criteria i.e. Pao2/fio2 <=300 with peep >=5 cm H_2O) were included in our study. However patients with hemodynamic instability were excluded.

All the patients were intubated & on MV were initially on VC mode followed by PC mode. Baseline lung mechanics noted & ABG sampling done. Simultaneously USG performed in a particular position & LUS aeration pattern noted as defined by bouhemad et al. (cb1 b2 & n

patterns) by dividing the lung field into 12 zones. Then recruitment maneuver performed in PC mode by gradually increasing pip & peep based on ABG findings & then decruitment maneuver performed following same. On each occasion lus pattern noted.

Results :

In all the cases, LUS patterns correlated well with arterial blood gas findings during recruitment & decruitment phenomenon.

Conclusion :

With advantage of being non invasive, safe with no radiation exposure & easily repeatable bedside USG can be used alone for assessing lung recruitment & to select appropriate level of peep to prevent decruitment during expiration.

Scrub Typhus Meningoencephalitis in Children : An Experience from Eastern India

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Background :

Scrub typhus, a zoonotic disease caused by orientia tsutsugamushi is an emerging cause of acute encephalitis syndrome (AES) along with acute undifferentiated febrile illness (AUFI) with significant morbidity and mortality in different regions of india.

Objectives :

The goal of this study was to look at the clinical characteristics, laboratory results and outcome of stme in children.

Methods :

This record based retrospective research, was undertaken over 18months, among 75 children, aged 1month to 12years. Baseline investigations such as CBC, serum electrolytes, liver and renal function tests were done. Tests were done to rule out other diseases like malaria, typhoid, dengue, and japanese encephalitis.

Results :

16 children were diagonosed with stme out of 75 AES. Upon treatment, all the children recovered completely and without any sequele, with the exception of 2 children. One of them suffered from a right – sided motor impairment and the other child was subsequently found to have been suffering from adem. Overall study depicts the male to female ratio was 3:1. Fever, convulsion, altered sensorium, nuchal stiffness, vomiting, pallor and hepatomegaly, were among the most prevelant clinical features. Laboratory results included percentage of lymphocytic pleocytosis (96.31 ± 4.7) and somewhat increased protein levels (mean 50.92 ±16.78 mg/dl) were detected in the cerebrospinal fluid (CSF). Other abnormal findings were anemia, leucocytosis, thromobocytopenia, hyponatremia, hypokalemia, hypoalbuminemia and increased liver enzymes.

Conclusion :

STME is an uncommon but fatal complication of scrub typhus that requires early identification and treatment.a high index of suspicion needs to be maintained for stme as a possible AES entity, as prompt anti-scrub measures taken can go a long way in mitigating the related morbidity and mortality especially in resource constrained settings.

Analysis of Outcomes of Paediatric Cochlear Implantation Surgery

Parichay Panda

Background :

Paediatric deafness affects hearing speech and social development of an individual which leads to social isolation and which in turn further aggravates language and auditory difficulties.

Cochlear implantation has emerged out to be the gold standard treatment of those children who do not benefit from hearing aid.

Purpose :

Purpose of the study is to assess the audiological and speech outcomes post cochlear implant surgeries In paediatric age group.

Methods :

Retrospective study was done for 23 Pre lingually deaf children who underwent cochlear implantation in tertiary care centre. Audiological and speech outcomes were measured by the assessment of modified categories of auditory (CAP) performance score and speech intelligibility rating (SIR). Statistical analysis was done using SPSS 20.

Results :

23 patients had average CAP score of. 17 before cochlear implant and average SIR category 1 before cochlear implant.

The mean CAP score post operatively at 2 years for 23 patients was 5.4. The mean SIR rating post operatively at 2 years for 23 patients was 3.43.

The mean improvement of CAP score at the end of 2 years was 5.3.

The mean improvement of SIR rating at the end of 2 years was 2.43.

Conclusion :

Cochlear implantation in paediatric age group is a safe and Effective procedure providing substantial auditory and speech benefits. However it is a long journey which requires multiple mapping sessions and persistent and regular speech therapy sessions for a fruitful outcome even after a successful cochlear implant surgery.

Dengue Fever : A Common Infection with An Uncommon Complication

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Background :

Dengue fever is an arboviral infection classically presenting with fever, arthralgia, headache and rashes. It is hyperendemic in the state of west bengal and a major impact on health. Neurological complications are rare in dengue fever but are reported in literature.

Case Presentation :

A 24 years old male presented with bilateral lower limb weakness and inability to close his eyes. Patient had a past history of dengue fever 1 week ago. On examination, patient had bilateral lower motor neurone type weakness (power 2/5) of bilateral lowerlimbs and bilateral upper limbs

(power 4/5) with are flexia, patient also had bilateral IMN type facial nerve weakness. A suspicion of guillian barrè syndrome was made and nerve conduction studies, CSF study and dengue IGM was ordered. NCV showed demyelimating disease, CSF showed. Albuminocytological dissociation and dengue IGM came out to be Positive.

By the end of day 2, patient developed hoarseness of voice and inability to swallow and cranial NV 9, 10, 11 weakness was ellicited on examination. Patient was shifted to CCU and intubated and put on IMV and IVIG was started @ 2gm/kg body weight over 5 days.

Patient showed significant improvement after day 7 of admission and was extubated, bulbar palsy improved, power of all 4 limbs gradually increased. Patient was shifted to ward and started on physiotherapy, patient weakness further improved and was discharged with minimal residual weakness.

Conclusion: guillian barrè syndrome is a rare but possible neurological sequelae of dengue fever. In areas where dengue is endemic, screening for dengue fever may be important in patients presenting with acute flaccid paralysis

Seronegative Neuromyelitis Optica Spectrum Disorder : A Challenging Diagnosis And Treatment

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Background :

Neuromyelitis optica (NMO) is an autoimmune, demyelinating inflammatory disorder affecting central nerovous system mostly targeting optic nerves and the spinal cord. The revised diagnostic criteria for Neuromyelitis Optica Spectrum Disorder (2015) has been proposed on the basis of anti-aq4 status. Results of a negative antibody will group the patient in a seronegative group.

Case Presentation :

30 years old female with no known co-morbidities presented With bilateral lower limb weakness, low back pain for 15 days and abdominal distention with acute urinary retention 15 days ago relieved by catheterisation. On clinical Examination, bilateral plantar non responsive, hypotonia in bilateral lower limb, MRC Power grading of lower limb in both proximal and distal 0/5, DTR absent in lower limbs.

Standard blood work (kidney and liver function, fasting glucose, blood count, inflammatory markers, serum electrolytes, serum proteins, iron, vitamin B12, folate, and urinalysis were carried out with normal results.

MRI of DL spine with whole spine screening was suggestive of longitudinal extensive Transverse myelitis.

MRI of brain and orbit was suggestive of demyelinating changes in bilateral posterior optic nerves near optic chiasma and pons. Vep showed p100 waves of bilateral higher latency suggestive of conduction block and demyelination in bilateral optic nerves.

CSF study showed lymphocytic pleocytosis, elevated protein and negative for oligoclonal Band and Anti-AQP4 and Anti-MOG antibodies.

CNS infections ruled out, other autoimmune diseases (eg, acute disseminated encephalo-myelitis, systemic lupus erythematosus, sjögren syndrome, neuro-behçet disease, sarcoidosis, primary angiitis of the cns, paraneoplastic and autoimmune Encephalitis) were excluded because of the absence of typical clinical, humoral, and Radiological findings.

Patient was treated with high dose methyl-prednisolone for 5 days followed by 7 cycles alternate day plasma exchange followed by tapering dose of oral prednisolone and Mycophenolate mofetil.

Conclusion :

The prognosis of relapsing course is poor. Early diagnosis and immunomodulator are required to decrease chances of recurrence. Further development of diagnosis and modalities in seronegative neuromyelitis optica spectrum disorder is Required.

Bolt from The Blue

Sweta Samanta
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Introduction :

Young onset stroke warrants detailed workup. Sometimes, there can be mixed pathology.

Body :

A 26yrs old female presented with high grade fever followed by sudden onset left sided hemiparesis for 2 days. A pansystolic murmur of mitral regurgitation was clinically found. Patient was put on empirical antibiotic treatment of infective endocarditis. But later echocardiography revealed it to be chordae tendineae rupture of MV. On further probing she gave a history of death of a live birth baby on d2 of life with some cardiac issues as described by doctors and one spontaneous abortion at 20 weeks of gestation. No history of arthritis, serositis, rash, ulcer, lymphadenopathy or parotid enlargement was noted and no cytopenia in PBS. ANA and ANA profile along with APLA profile were sent and it came to be positive for – ANA (hep20-10): 3 = coarse speckled, anti SS - a (anti ro 52) to be positive in high titre but negative for Anti SM and Anti DS-DNA. At the other hand, lupus anticoagulant was positive whereas rest two were negative. Meanwhile most of the infectious etiologies were ruled out and mri brain showed “eccentric wall thickening involving the cavernous segment in ICA”, MR angiography of brain showed “absent intraluminal flow signal in right middle cerebral artery” with “reduced intraluminal flow signal intensity in right ICA”. Furthermore, schirmer-test and oral salivary pool was normal patient was started on t. Prednisolone 20mg OD and inj. LMWH f/b warfarin. Patient improved well and was discharged.

Conclusion :

It was a case of undifferentiated mixed connective tissue disorder which can be SLE or Sjogren Syndrome with secondary APLA Syndrome presenting with neurovascular and cardiac involvement.

Here lies the tough decision of continuing which treatment and how long or have to wait for proper manifestation of the disease. But patient is doing well and is on followup.

Who Did It? IXO Did — A Taste for Rarities

Jayatree Majumdar

Rabindranath Tagore International Institute of Cardiac Sciences

Abstract :

A 54 years old lady, with no known comorbidities, got admitted with a history of fever for 4 days and diarrhea with altered sensorium for 1 day. She was initially managed at a local hospital and was transferred here in an intubated state for further management. Examination revealed purpuric rash and signs of meningism without any focal neurological deficit.

Labs showed raised inflammatory markers, marked thrombocytopenia, normocytic normochromic anemia and negative tropical markers. CSF study revealed pleocytosis, raised protein, low sugar with negative ADA, gram, Zn & Indian ink stain. CSF autoimmune panel was negative. MRI of the brain was suggestive of meningitis. Empirically antibiotics were started addressing meningitis.

Owing to poor initial response and with new onset of seizure, further evaluation was done. Blood for ANA, ANCA profile and thrombotic thrombocytopenic purpura came to be negative. Serology for Japanese Encephalitis PCR, borrelia antibodies were sent. Her LDH, triglycerides and ferritin were marginally raised. Bone marrow biopsy showed hemophagocytic lympho-histiocytosis. Pulse dose of injection methylprednisolone was started considering the possibility of macrophage activation syndrome, following which she responded well and was successfully extubated.

However, after 3 days she developed hoarseness of voice, excessive salivation and ascending flaccid paralysis which evolved into areflexic quadriparesis in 4 days. Nerve conduction study showed motor axonal neuropathy, repeat mri of brain was non-contributory. She was planned for intravenous immunoglobulin therapy for the possibility of guillain barre syndrome but the patient was discharged under leave against medical advice.

Meanwhile, the borrelia igm came to be positive with negative IGG. She was retrospectively diagnosed as a case of neuroborreliosis. Her further course of disease and treatment response could not be followed.

Minimally Invasive Surgical Correction of Displaced Intraarticular Fractures of Calcaneum Shows Better Clinical Outcome Over Conventional Plating

Atanu Chatterjee

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Introduction :

The gold standard treatment for intra-articular fractures is open reduction internal fixation using an extended lateral approach. However, many calcaneus fractures are associated with severe soft tissue injuries, which increase the risks of skin necrosis and infections, particularly in patients who smoke or have diabetes. Surgeons have opted for less invasive techniques to reduce risks associated with performing the lateral

extensile approach. For recent years, minimally invasive percutaneous fixation has become increasingly popular because the minimally invasive method was associated with lower complication rates, shorter hospital stays, and more rapid healing.

Method :

Here we have operated 42 patients by same surgeon and followed up for minimum 1 year. Here we attempted to compare via x-ray radiographs and AOFAS, VAS, complications of the short-term outcome and function of closed reduction percutaneous fixation versus the results of conventional plating as per standard literature.

Results :

There was no significant difference in the bohler's angle and gissane's angle between the plate group and screw group during the preoperation and the last follow-up. There was no significant difference in the final aofas score and vas score between the two groups ($p > 0.05$). The total incidence of complications was 6.7% in the plate group and 3.1% in the screw group ($p > 0.05$). The rates of implant removal and total cost during the hospitalization in the plate group were significantly higher compared with screws group ($p < 0.05$).

Conclusion :

The less invasive plate fixation versus screw fixation via minimally invasive approach contributed comparable quality of reduction and post-operative functional outcomes. Skin complications and post operative stays are significantly less in mis group.

Clino Etiological Profile And Structural Anomaly of UTI in Age Group 0-5 Years

Binay Mahali

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Objective :

To study clinical profile of urinary tract infection (UTI) and to document the common micro-organisms causing uti in admitted patients and to test their sensitivity pattern and structured anomaly of uti in 0-5 years.

Background and justification :

UTI is more common infection in children and at times difficult to diagnosis. Recurrent uti could lead to CKD for which dmsa, mcu needs to be done to rule out structural anomaly of UTI. According to IAP guidelines all children was subjective to DMSA and MCU. Hence my study is being done to find out what is the number of structural anomalies found in the children.

Materials and Method :

We did a hospital based descriptive study in the dept. Of paediatric medicine from 1st Oct., 2022. The data of total 20 patients, 0-5 years of age with sign and symptoms suggestive of UTI was collected on a structured pro forma. The clinical presentation, the common causative organisms and their sensitivity pattern was documented. Then they follow up in OPD and results of usg/mcu/dmsa were documented. The results were compared with others national and internationals studies.

Results :

In this study all cases were culture positive and total number of cases 20 (m-14, f-6), (0-1 yrs.

=9, 1- 5 yrs. =11). The most common **symptom** found in all age groups was fever, while the commonest sign was abdominal tenderness and the commonest pathogens found were e. Coli (70%), followed by klebsiella. The organism shows maximum sensitivity to amikacin, ofloxacin, ciprofloxacin and ceftriaxone and 25% patient shows structural anomaly.

Conclusion :

UTI should be considered in any patient with fever without focus beyond 3-4 days. E. Coli is the commonest organism and amikacin is the Doc. 25% of patient shows structural anomaly, so it justifies the investigation for children.

An Unusual Swelling on The Back of A Young Woman : A Diagnostic Challenge

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Introduction :

Parkes weber syndrome (PWS) is an exceedingly rare vascular malformation which comprises of pathological capillary and arteriovenous malformation and ipsilateral limb hypertrophy. We report herein an interesting case of a young woman with pws at unusual location with a typical features.

Case details :

A 20-year-old-woman presented to us with gradually progressive reddish, painful swelling over the right upper back for the preceding 10 years. Cutaneous examination revealed an ill-defined, tender, solitary, erythematous soft tissue swelling of 12cm×10cm over right posterior and lateral chest wall with an overlying port wine stain and bluish hue over some areas. On palpation, the swelling was compressible with raised local temperature. Auscultation revealed bruit. USG color doppler revealed low resistance high velocity arterial flow with high diastolic flux and arteriovenous shunting with tortuous vessels. Computed tomograph angiography revealed extensive arteriovenous malformation with lateral thoracic and subscapular branches of right axillary artery being two dominant feeders. There were also smaller feeders from posterior intercostal arteries and right subclavian artery.

Conclusions :

Whenever we come across a case of vascular swelling, the treating physician should suspect underlying arteriovenous malformation and proceed accordingly.the early recognition of parkes-weber syndrome is required to establish the most appropriate treatment and prevent morbidity.

Keywords :

Parkes weber syndrome; arteriovenous malformation; vascular malformation

Unusual Presentation of Severe Leptospirosis Presenting with Septic Shock : A Case Report

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Introduction : Leptospirosis is a globally important zoonotic disease whose apparent re-emergence is illustrated by recent outbreaks on virtually all continents. The disease is caused by pathogenic leptospira species.

Prevalence of leptospira in india varices from 3-25%, though 90% cases are mild but 10% cases are severe and in severe cases morality is as high as 52%.

Presentation (clinical features+lab findings): 56 years old female admitted with complaints of sudden onset palpitation and dizziness; inability to move both lower limbs for 2 days. blood pressure-80/40 mmhg, PR - 140/min irregularly irregular, ECG – AFIB with HVR. patient having history of an episode of fever only 7-10 days back, with no fever in between. She also having yellowish discoloration of sclera and generalized body for 2 days. Hemoglobin -5.4 gm%, plt-44,000/cumm, LFT – bil (T) -24.6 (Conjugated – 21.6, Unconjugated – 3), CPK - > 16, 000, EMG – myositis process. Urea – 141, Creatinine- 4.5 , Vit B12 - 68. Leptospira IGM - reactive.

Management :

Patient was empirically started with i.v meropenem, vasopressor support, with decreasing urine output and AKI she was put on sled for 3 times, gradually vasopressor support removed, patient became dialysis dependent. After leptospira report came started with inj. Doxycycline .

Conclusion :

Leptospira presenting as cardiac arrhythmia, jaundice, myositis, septic shock is rare. Severe leptospirosis (weil's disease) presenting in conglomeration of acute hepatitis, AKI, myocarditis , thrombocytopenia and septic shock.

Posterior Ischeamic Optic Neuropathy in A Pateint with Uncontrolled Diabetes : A Case Report

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Abstract :

Purpose :

To present a case of bilateral posterior ischemic optic neuropathy (PION) in a patient with uncontrolled diabetes.

Background :

Ischemia of the optic nerve that does not involve the optic nerve head is termed posterior ischemic optic neuropathy (PION). It is a rare disorder with a grave prognosis and exact incidence is not known. So far, according to literature very few cases of bilateral pion have been reported.

Case Report :

A 54-year-old female with uncontrolled diabetes mellitus presented with simultaneous bilateral

profound decrease in vision. Ophthalmological examination with neuroimaging consisting of mri of brain and orbits as well as MRA lead to a diagnosis of bilateral pion.

Discussion :

Pion is a devastating vision threatening condition which can be classified into three types: arteritic pion, non-arteritic pion, and perioperative pion. Considering the fact that there is no definite treatment for pion, preventive measures including control of systemic comorbidities and regular ophthalmic check-up are vital because of the severity of the condition and the possibility of irreversible visual loss.

Keywords :

Pion, uncontrolled diabetes mellitus, bilateral vision loss, normal optic disc.