

Editorial

A New Avatar – And How To Use It To Your Advantage

I assume you will be reading this editorial using the new Journal website^[1]. Much effort has gone in to setting up the digital home of our Journal over the past 3 years, and I would like to place on record my thanks to the Hospital authorities and my colleagues on the Editorial Board for their unstinting help and support. Please check out all the features of the website; hopefully many of you will use the website information to submit papers for publication. The old home of the previous digital issues, the VIMS website, will now redirect you to the Journal website.

A separate website is one of the prerequisites for indexing of the Journal with the Directory of Open Access Journals (DOAJ)^[2]. This indexing is as per NMC norms^[3], so that publications in the Journal will count towards Faculty promotion. At present the Journal is free at all points – there are no processing or submission charges to the authors, and there are no charges for readers accessing the Journal online. This is a unique situation and I would encourage potential authors to take advantage. Anyone who has recently tried to publish a paper in any standard indexed journal will be aware of how expensive it has become.

The journal is published in June and December each year. At present each submission requires at least 2 rounds of revision before it can be sent for peer review. Most of the revisions are called for simply because the authors do not follow the Journal instructions (eg lack of a structured abstract, no keywords, photographs embedded

into the manuscript). This was admittedly difficult with the print issue, but now the website carries all instructions, and I would encourage any prospective author to please read them thoroughly and prepare your manuscript accordingly. The other point to be kept in mind is that the Journal is a general medical journal, with a cross-specialty readership. What may be standard terminology in one specialty may convey a different meaning in another. Given the large number of post-graduate trainees in our Institute there should be no dearth of thesis derived papers. Thesis publications will also benefit the newly qualified juniors when they apply for Faculty posts at Teaching Institutions.

It is interesting to look at the history of medical publications in India.

Medical journalism on the Indian subcontinent was initially shaped by the military and administrative priorities of the East India Company and the British Raj. The capital of British India, Calcutta, served as the primary cradle for these early literary records.

- **The Earliest Periodic Literature :** In March 1823, colonial surgeons established the Medical and Physical Society of Calcutta to systematically compile clinical observations on native health and indigenous drugs^[4]. This effort led to the publication of the *Transactions of the Medical and Physical Society of Calcutta (TMPSC)* in **1825**, which stands as the first formal English-language medical journal printed in India^[4,5].

- **Imperial Focus :** The *TMPSC* provided an essential platform for documenting severe regional epidemics, surgical case records, and early descriptions of local public health infrastructure, such as municipal lunatic asylums^[5].
- **The Longest-Running Imperial Gazette:** In 1866, the Indian Medical Gazette (IMG) was established^[6]. Operating continuously until 1955, the *IMG* was deeply embedded within the colonial Indian Medical Service (IMS)^[6]. It adapted Western editorial standards to address pressing domestic public health challenges, such as cholera, malaria, and kala-azar.

Independent Ventures : Concurrently, independent medical ventures began to emerge. The Indian Medical Record, launched in 1890, created a competitive marketplace for medical periodicals^[7]. Its subsequent revival in 1930 under the editorship of S. K. Mukherji highlighted a growing desire for independent domestic medical discourse.

The early 20th century brought a shift from individual case reporting toward structured, state-sponsored medical research infrastructure.

- **The Flagship Journal :** In 1911, the Indian Research Fund Association (IRFA) was organized to spearhead structured scientific research against endemic diseases^[5]. To prevent valuable domestic clinical data from being exclusively published in British journals, the IRFA launched the *Indian Journal of Medical Research* (IJMR) in **July 1913**^[8].
- **Editorial Leadership :** Under the inaugural editorship of Sir Pardey Lukis, then Director-General of the IMS, the *IJMR* quickly grew into a highly respected quarterly publication^[8]. This period also saw the introduction of specialized sub-periodicals, such as the Records of the Malaria Survey of India in 1927.
- **National Reclaiming of Medical Literature:** In March 1930, homegrown medical professionals launched *The Indian Medical World*. This publication was renamed the *Journal of the Indian Medical Association* (JIMA) in **September 1931**^[9]. Headquartered in Calcutta, *JIMA* gave Indian clinicians an independent platform to challenge colonial medical narratives.
- **Specialty Proliferation :** This era also marked the birth of specialized clinical journalism, highlighted by the launches of the *Indian Journal of Pediatrics* (1933) and the *Indian Journal of Surgery* (1938). Following independence in 1947, India focused heavily on modernizing and reclaiming its state-run scientific publishing frameworks.
- **The Rise of the ICMR :** In 1949, the IRFA was reorganized into the (ICMR)^[8]. This shift redirected national publishing priorities toward primary healthcare, maternal nutrition, and infectious disease control.
- **Increasing Frequency :** To manage a growing volume of original clinical research, the *IJMR* increased its frequency from a quarterly to a bimonthly schedule in 1958, and eventually to a monthly model in 1964^[8].
- **Emergence of Medical Humanities :** In 1956, Dr. Subba Reddy founded the *Indian Journal of the History of Medicine*,

introducing historical and philosophical perspectives into mainstream Indian clinical literature^[10]. This was expanded in 1970 when the Hamdard Foundation established specialized journals to bridge the gap between modern clinical science and traditional Unani systems.

- **The Access Gap :** Despite these structural gains, the 1980s were marked by severe resource limitations^[11]. High subscription fees for Western medical journals meant that comprehensive clinical literature was largely confined to elite state-run post-graduate institutes. This left community clinicians cut off from global advancements, relying almost entirely on domestic bulletins.

The turn of the 21st century transformed Indian medical publishing through rapid digital adoption and a sharp increase in outsourced corporate writing services.

- **Open-Access Integration :** Partnering with specialized electronic publishers (such as Medknow Publications) allowed traditional Indian print journals to transition smoothly into open-access models^[8]. This shift significantly increased international citation metrics for domestic titles, such as the *Indian Journal of Anaesthesia*.
- **The Commercial Medical Writing Boom:** Around **2005**, India became a premier global hub for outsourced commercial medical writing^[12]. Multinational pharmaceutical

companies began relying heavily on Indian Contract Research Organizations (CROs) to draft clinical study reports, regulatory dossiers, and safety narratives.

- **Professionalization :** This commercial expansion led to the creation of specialized bodies, such as the Indian Medical Writers Association (IMWA), which helped align local practices with global guidelines like the ICMJE and GPP.
- **Regulatory Push :** Recently, governing bodies like the National Medical Commission (NMC) introduced mandatory publication quotas for institutional promotions. While this significantly increased the volume of submissions, it has also highlighted persistent systemic challenges regarding research quality and the rise of predatory publishing channels.

The history of medical publishing in India highlights a remarkable journey of systemic adaptation. From early colonial bulletins like the *Transactions of the Medical and Physical Society of Calcutta* to modern open-access digital networks, the sector has consistently adapted to changing technical and professional needs. The modern challenge requires finding a careful balance : fostering rigorous academic writing within domestic medical colleges while expanding India's footprint in the global pharmaceutical and clinical research industries.

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Original Article

Integrating Spirituality and Medical Science : A Historical, Ethical, and Holistic Perspective

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Abstract :

The relationship between spirituality and medical science has existed since antiquity, shaping the ethical foundations, healing practices, and conceptualization of health across cultures. In the Indian intellectual tradition in particular, medicine has never been isolated from spiritual thought, as evidenced in scriptural references, ethical codes, and holistic understandings of health. From the Vedic origins of Ayurveda to the ethical frameworks embodied in the Hippocratic Oath, the intersection of these two domains reveals a shared objective: alleviation of human suffering. This article explores the historical roots, philosophical parallels, and modern implications of integrating spirituality with contemporary medical science. It highlights how spiritual beliefs have influenced early medical practices, examines their relevance in current healthcare systems, and argues for a holistic approach that combines technological advancement with ethical and spiritual awareness to improve patient outcomes.

Keywords :

Spirituality; Ethics, Medical; Medicine, Ayurvedic; Holistic Health; Integrative Medicine

Introduction :

Since ancient times, the relationship between

spirituality and healing has been deeply embedded in human civilization. In Indian tradition, medicine is often considered sacred, and the physician is regarded as a healer with ethical and spiritual responsibility^[1]. Similarly, in Western medicine, practices like the Hippocratic Oath and symbols such as the Rod of Asclepius reflect the deep-rooted connection between medicine, ethics, and spirituality^[2,3].

In contemporary medical science, although technological advancements have greatly enhanced diagnosis and treatment, they have also led to a more mechanical approach to healthcare, sometimes overlooking the emotional, psychological, and spiritual dimensions of patients^[4]. The World Health Organization's definition of health, which includes physical, mental, and social well-being, further strengthens the argument that health cannot be achieved through medical intervention alone. Instead, it requires a more integrated approach that acknowledges both scientific and spiritual dimensions.

In recent times, the simultaneous existence of science and spirituality has been frequently questioned^[5,6]. This article aims to eliminate this doubt to some extent and explore the common origins, shared goals of spirituality and medical science, particularly in the Indian context, and

complementary roles of these two in general. Revisiting the synergy between spirituality and medical science can provide valuable insights into achieving a more holistic model of healthcare.

Semblance in origin : Ayurveda and Vedic foundations

The Hindu religion is based mainly on four Vedas. These are Rig-Veda, Yajur-Veda, Sama-Veda and Atharva-Veda. These are also called “Shruti” and are considered as the oldest and ultimate authentic guideline for spirituality according to Hindu shastra^[7].

There is another terminology called Upaveda. It means a category of applied knowledge regarded as supplementary to the Vedas^[7].

often isolate disease processes, Ayurveda emphasizes balance among bodily systems and alignment with natural and spiritual laws.

This early integration of spirituality and medicine underscores the notion that healing was never viewed as purely mechanical but rather as a sacred duty intertwined with ethical and metaphysical principles.

Scriptural glorification of medical science:

Ancient Indian literature frequently elevates the role of physicians and medicine to a divine status. A well-known Sanskrit verse states:

**शरीरेजरजरीभूतेव्याधगिरस्तेकलेवरे।
औषधंजाह्नवीतोयंवैद्योनारायणोहरिः॥**

[“Sharire jarjari bhute vyadhi graste kalevare,
Aushadham jahnavi toyam vaidyo narayano harih.”]^[1]

Table I

Some highlighting points of Upavedas

Serial no.	Upaveda	Meaning	Veda
1	Ayurveda	Science of Health	Rig-Veda
2	Dhanurveda	Science of War	Yajur-Veda
3	Gandharvaveda	Science of Music	Sama-Veda
4	Sastrasastra	Science of Weapons	Atharva-Veda

The origins of Indian medical science can be traced to the Vedas. Ayurveda, the Upaveda associated primarily with the Rig-Veda, represents the systematization of medical knowledge. The term “Ayurveda” is derived from the Sanskrit words *ayus* (life) and *veda* (knowledge), signifying “the knowledge of life.” This definition inherently reflects a holistic understanding of health, encompassing not only physical well-being but also mental, social, and spiritual harmony. Unlike modern biomedical models that

This verse metaphorically equates medicine with the sacred waters of the Ganges and the physician with Lord Narayana, emphasizing the sanctity of healing practices. Such analogies highlight the reverence accorded to medical practitioners and reinforce the ethical responsibility associated with the profession^[1].

The symbolic association of medicine with divinity serves multiple purposes. This comparison invariably gives the confidence that

there is a healthy association between these two disciplines since time immemorial. It instils trust and faith in patients, motivates physicians to uphold moral integrity, and reinforces the idea that healing transcends mere technical intervention. Even in contemporary practice, where scientific rationality dominates, the underlying principle of compassion and service remains central to medical ethics.

The Physician's Oath : Ethical Foundations Across Cultures :

The ethical dimension of medical practice is not confined to Indian traditions. The Hippocratic Oath, originating in ancient Greece between the 5th and 3rd centuries BCE, similarly reflects the integration of spirituality and medicine. The original oath invokes deities such as Apollo, Asclepius, and Panacea, indicating that medical practice was conducted under divine witness^[2].

Although modern versions of the oath have been secularized, key principles — such as non-maleficence, beneficence, and humility — remain intact. The statement “Above all, I must not play at God” underscores the limitations of human intervention and the need for ethical restraint^[2].

This cross-cultural parallel suggests that early medical systems universally recognized the importance of moral and spiritual accountability. The physician was not merely a technician but a custodian of life, guided by principles that transcended empirical knowledge.

Symbolism in Medicine: Mythology and Meaning :

The symbolism associated with medicine further reflects its spiritual roots. The Rod of Asclepius, featuring a serpent entwined around a staff, remains a widely recognized emblem of healthcare (Figure 1). In Greek mythology,

Asclepius was the god of healing, and the serpent symbolized rejuvenation and renewal due to its ability to shed its skin^[3].



Figure 1 : The physician's logo

Such symbols serve as reminders of the historical and philosophical foundations of medicine. They reinforce the idea that healing is both a science and an art, requiring not only technical expertise but also wisdom, intuition, and ethical awareness.

Defining Health : Beyond Absence of Disease:

The World Health Organization defines health as “a state of complete physical, mental and social well-being and not merely an absence of disease or infirmity”^[8]. This definition aligns

closely with ancient holistic perspectives, emphasizing that health extends beyond physiological parameters.

Mental well-being, in particular, is deeply influenced by factors such as emotional stability, moral values, and inner peace — elements traditionally associated with spirituality. While pharmacological interventions can address certain aspects of mental health temporarily, long-term well-being often requires practices such as meditation, mindfulness, and ethical living.

Thus, both modern and traditional frameworks converge on the idea that true health is multidimensional, requiring integration of physical, psychological, and spiritual components.

Common Aim : Alleviation of Suffering

Despite differences in methodology, medical science and spirituality share a common goal: to offer a blissful canvas to the human life alleviating all sorts of sufferings. Medical science primarily addresses physical ailments and certain aspects of mental health, while spirituality focuses on existential and emotional distress.

This dual approach can be seen as complementary rather than contradictory. While medical interventions can treat disease, spirituality provides meaning, resilience, and coping mechanisms. Together, they offer a more comprehensive framework for understanding and addressing suffering.

The Narrative of Gautama Buddha : A Shared Struggle

The life of Gautama Buddha provides a compelling illustration of the intersection between spirituality and the human condition. As a prince, Siddhartha encountered sickness, old age, and

death—experiences that profoundly influenced his quest for the cause of sufferings and its solution which ultimately took him to the enlightenment^[4].

Interestingly, these three elements—disease, aging, and death — also constitute the primary challenges addressed by medical science; common challenges of the two streams, attacked from two different directions. While medicine seeks to delay or mitigate these conditions, spirituality seeks to understand and transcend them.

These parallel highlights the shared objectives of both domains and underscores the potential benefits of integrating their approaches.

Religious Beliefs in Early Medical Practice :

Historically, many medical interventions were rooted in religious and ritualistic practices. In Ayurveda, this approach is referred to as *Daiva-Vyapasraya Chikitsa*^[4], which involves spiritual therapies such as मंत्र (mantras), rituals, and offerings.

Although these practices may lack empirical validation by modern standards, they often had significant psychological benefits. They instilled hope, reduced anxiety, and fostered a sense of control among patients. In contemporary medicine, similar effects are observed in placebo responses and psychosomatic healing.

Recognizing the psychological impact of spiritual practices can enhance patient care, particularly in chronic or terminal conditions where emotional support is crucial.

Technological Advancement and The Rise of Holistic Medicine

The past few decades have witnessed remarkable advancements in medical technology. Diagnostic tools have become increasingly precise, and

surgical procedures are often performed with robotic assistance. However, this progress has also led to unintended consequences.

The reliance on machines has, in some cases, diminished the role of clinical intuition and interpersonal interaction. Physicians are becoming more technicians than clinicians. Patients may be perceived as systems or datasets rather than individuals with unique experiences and needs. This mechanistic view risks overlooking the psychological, social, and economic factors that influence health.

Additionally, the rising cost of advanced medical care has made it inaccessible to large segments of the population. These challenges have contributed to the growing interest in holistic medicine, which emphasizes patient-centered care and integration of multiple healing modalities.

Bridging The Gap : Complementary Roles of Spirituality and Medicine

Every illness carries an element of uncertainty, regardless of technological sophistication. Patients, especially who are physically, psychologically and financially challenged, often seek reassurance beyond scientific explanations, turning to spiritual beliefs for comfort and hope. Concepts such as karma, divine will, and life after death can provide psychological resilience in the face of adversity.

While spirituality cannot replace medical treatment or halt pathological processes, it can play a supportive role in patient care. Many a time it so happens that which seems to be a simple illness snatches the life of a patient, on the other hand a clinically hopeless patient returns home from death bed. That is, everything of a disease is not in a doctor's hand, and there is

something which is working behind, maybe we are unable to grasp that. Thus, it can also help physicians

cope with the emotional burden of their profession, particularly in cases where outcomes are unfavourable despite best efforts.

The integration of spirituality into healthcare does not imply abandoning scientific rigor. Rather, it involves acknowledging the limitations of medicine and embracing a more comprehensive approach that addresses the human experience in its entirety.

Toward an Integrated Model of Healthcare :

The convergence of spirituality and medical science offers a pathway toward holistic healthcare. Such an approach would involve:

- 1. Patient-Centered Care :** Recognizing patients as individuals with physical, emotional, and spiritual needs.
- 2. Ethical Practice :** Upholding values such as compassion, humility, and integrity.
- 3. Interdisciplinary Collaboration :** Incorporating insights from psychology, sociology, and spiritual traditions.
- 4. Preventive Health :** Emphasizing lifestyle, mindfulness, and ethical living as components of well-being.
- 5. Accessibility :** Ensuring that healthcare remains inclusive and affordable.

By integrating these elements, healthcare systems can move beyond disease management to promote overall well-being.

Conclusion :

The historical and philosophical relationship between spirituality and medical science reveals a shared commitment to alleviating human

suffering. From the Vedic origins of Ayurveda to the ethical principles of the Hippocratic Oath, both domains have evolved with a common purpose.

In the modern era, technological advancements have transformed medicine but have also highlighted the need for a more holistic approach. Integrating spirituality into healthcare can address gaps in patient care, enhance psychological well-

being, and restore the humanistic aspects of medical practice.

Rather than viewing spirituality and science as opposing forces, they should be recognized as complementary dimensions of a unified endeavour. By bridging the gap between these disciplines, we can create a healthcare system that not only treats disease but also nurtures the human spirit.

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Original Article

Video-assisted Thoracoscopic Surgery in Multiloculated Pleural Effusion — The Earlier, The Better

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Abstract :

Background :

Video-assisted thoracoscopic surgery (VATS) is a minimally invasive surgery performed for the treatment as well as the diagnosis of different chest problems, including pleural effusion. Early diagnosis and management using VATS in stage II and early stage III pleural effusions improves the outcome, with delay being the most common factor for conversion to open.

Materials and Methods :

This is a descriptive case series in which 34 patients underwent video-assisted thoracoscopy for multiloculated pleural effusion, not responding to conservative management, strictly adhering to the inclusion and exclusion criteria at a tertiary care hospital in Kolkata, West Bengal, India.

Results :

64.7% patients had Stage II pleural effusion while 35.3% patients had Stage III pleural effusion. Patients in Stage II had a shorter surgery time, shorter hospital stay, a shorter ICU stay and ICD duration as compared to those who were operated in Stage III.

Conclusion :

Performing VATS in the early stages of pleural

effusion is beneficial and can be done satisfactorily in inoculated effusions with good results.

Keywords :

VATS = Video-assisted thoracoscopic surgery, ICD = Inter-costal chest drain, USG = Ultrasonography, CBNAAT = Cartridge based nucleic acid amplification test,

Introduction :

Video-assisted thoracoscopic surgery (VATS) is a minimally invasive surgery performed for the treatment as well as the diagnosis of different chest problems, including pleural effusion. Pleural effusion is a common problem and is divided into either transudate or exudative types, depending on the laboratory characteristics of the fluid. The underlying pathology for exudative effusion is a local process that causes increased capillary permeability, which results in the exudation of fluid, protein, cells, and other serum constituents. There are numerous causes, the most common being tuberculosis (in India), cancer, and viral infection, which cause increased morbidity and prolonged hospitalization^[1,2,3]. Pleural effusion can be divided into three phases: stage I is the exudative phase, stage II is the fibrino-purulent phase, and stage III is the organizing stage^[4].

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Stage I (Exudative Stage) : thin serous fluid with minimal debris, pH>7.2, LDH1000IU/L, glucose> 60 mg/dl, negative culture, and no loculations^[4,5].

Stage II (Fibrino-purulent Stage) : thick fluid and thick fibrin strands; pH7.2; LDH>1000IU/L; glucose 60 mg/dl; positive culture or presence of suppuration; and increased loculations^[4,5].

Stage III (Organising Stage) : thick fibrous peel and scarformation^[4,5].

Multiloculated pleural effusion in both stages II and III needs antibiotic treatment along with drainage of fluid by ICD placement^[1]. This ICD placement is not effective in later stages because fibrin deposition and loculi of fluid restrict lung expansion^[1,4,6]. Surgery is needed after the failure of primary treatment. Early diagnosis and treatment are necessary for the patient^[7,8]. Previously, all those patients who required surgery were subjected to an open thoracotomy. Gradually, with the advancements in minimal access surgeries, video-assisted thoracoscopic surgery (VATS) facilitates the management, with less post operative discomfort and reduced hospitalization, as compared to those who undergo open thoracotomy as a primary surgical procedure^[1,3,4,5,6]. Although VATS is useful in both stage II and stage III effusions, it is technically difficult in stage III, especially if there are thick or calcified septa and dense adhesions.

In this retrospective study, we shall discuss our experience with VATS for effective management of stage II and early stage III pleural effusions.

Case Presentations :

Patients presented with pleuritic chest pain, chest discomfort, dyspnoea, persistent fever, and pleural effusion.

Materials & Methods :

Study Design : This is a descriptive individual case series – a prospective, longitudinal, interventional study.

Study Population : Patients admitted in Ramakrishna Mission Seva Pratishthan Hospital with multiloculated pleural effusion.

Study period : August 2019 to July 2024 (5 years).

Sample Size : 34 cases.

Investigations : To determine the general condition of the patient and to confirm the underlying cause of such condition. USG-guided pleural fluid aspiration was done for bacterial culture or CBNAAT. All patients had preoperative CT scans of the chest for diagnosis, and USG, if necessary, to determine the thickness of the septa.

Inclusion Criteria :

Patients admitted with loculated pleural effusion (etiology being bacterial or tubercular), were planned for surgical intervention (VATS) only when all the alternative treatments were exhausted.

Exclusion Criteria :

- 1) Patients with decompensated cardiac disease
- 2) Patients not fit for VATS
- 3) Patients not willing to participate in the study

Procedure Methodology :

A thorough history taking, clinical examination was done. Informed consent for VATS was taken.

Video-assisted Thoracoscopic Surgery Procedure :

The patients were operated on under general anaesthesia, using a double-lumen endotracheal

tube for selective ventilation. A standard laparoscopic setup is used for the surgery. The position of the patient and surgeon depends upon the site of collections on radiological images. The patient is mostly placed laterally with the affected site upwards. The surgeon and assistant holding the telescope stand facing the patient's

anterior chest while the monitor setup is kept behind the patient. The first port (10 mm) is made at the site of collection. If the whole of the pleural space is involved, then the 5th intercostals space near the nipple is used. The nipple in VATS is considered as the landmark of entry point like the umbilicus is in laparoscopy.

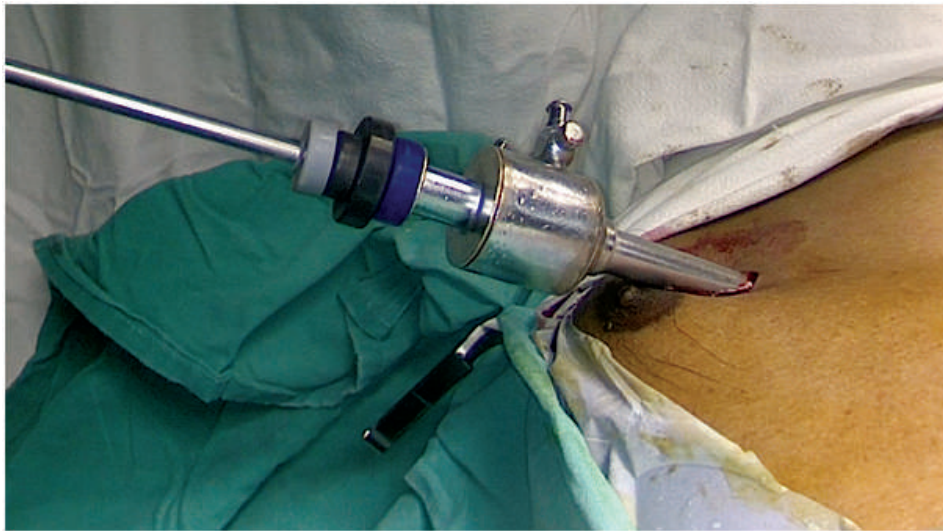


Fig 1: First 10 mm port done just lateral to the nipple in the 5th intercostal space



Fig 2: Aspiration of pleural fluid – sent for diagnostic confirmation.

A second port is done under vision depending upon the location of the effusion. Additional ports are created as needed. We use both 10 mm

and 5mm suckers, soft graspers to remove tissues, and ultrasonic devices or electro-cautery whenever needed, especially in stage III.

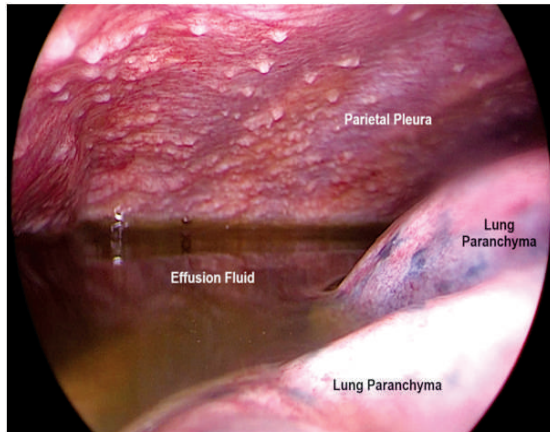


Fig 3 : View of Pleural cavity

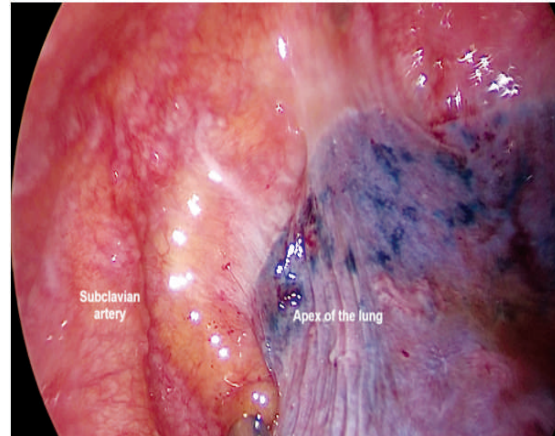


Fig 4: View of upper pleura

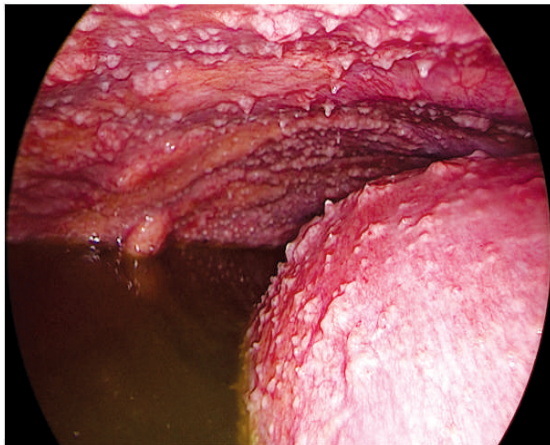


Fig 5 : Small whitish tubercles in parietal pleura as well as pericardium in Tubercular effusion

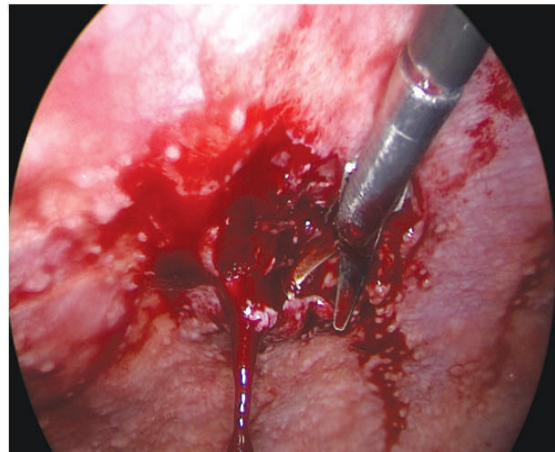


Fig 6 : Procedure of taking Pleural biopsy for diagnosis

Drainage of the pus with breakage of the adhesions means there is no need for visceral or parietal decortication, which allows full lung

expansion and obliteration of the empyema cavity.

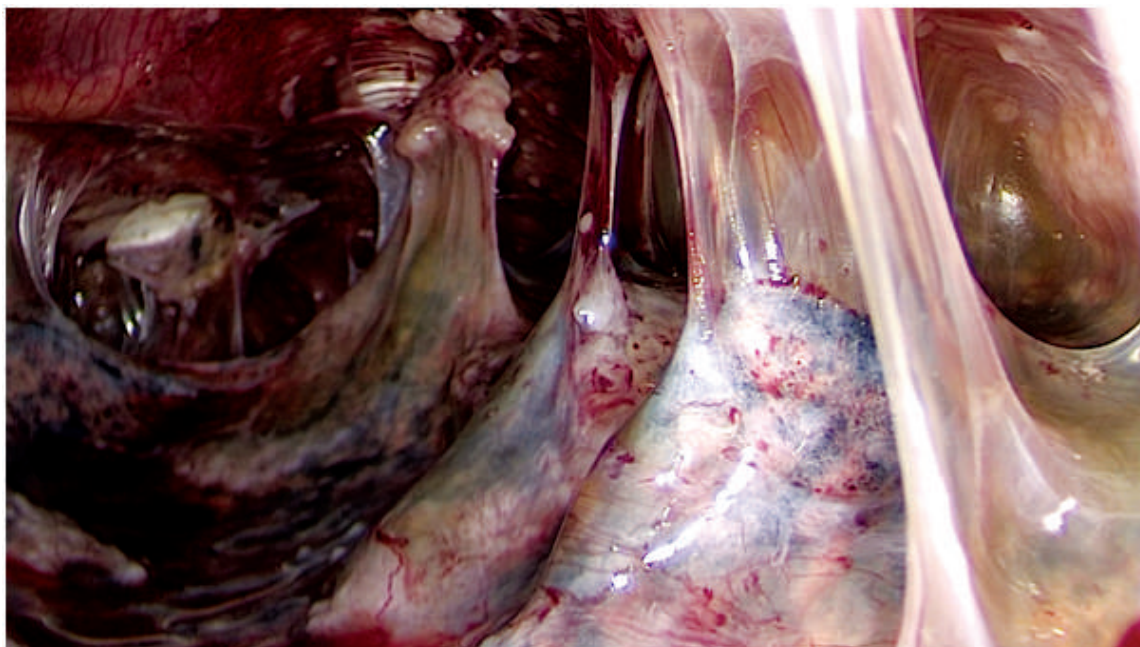


Fig 7 : Stage II loculated pleural effusion – loculations can be seen

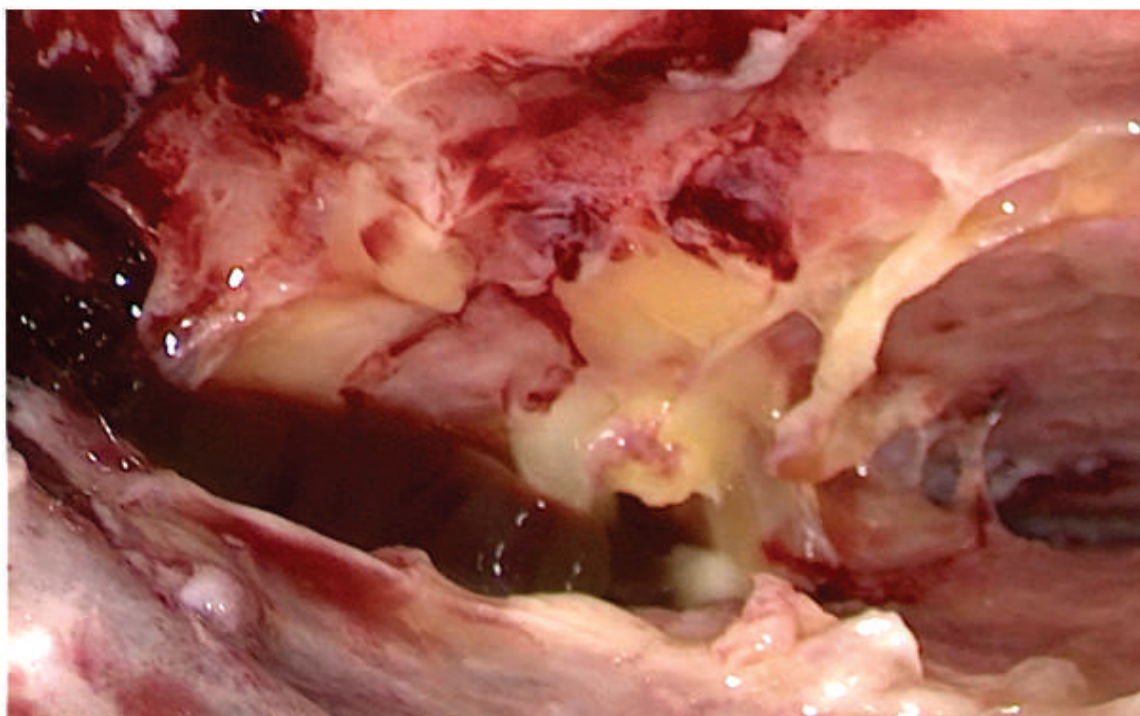


Fig 8 : Stage III loculated pleural effusion – inspissated pus loculations

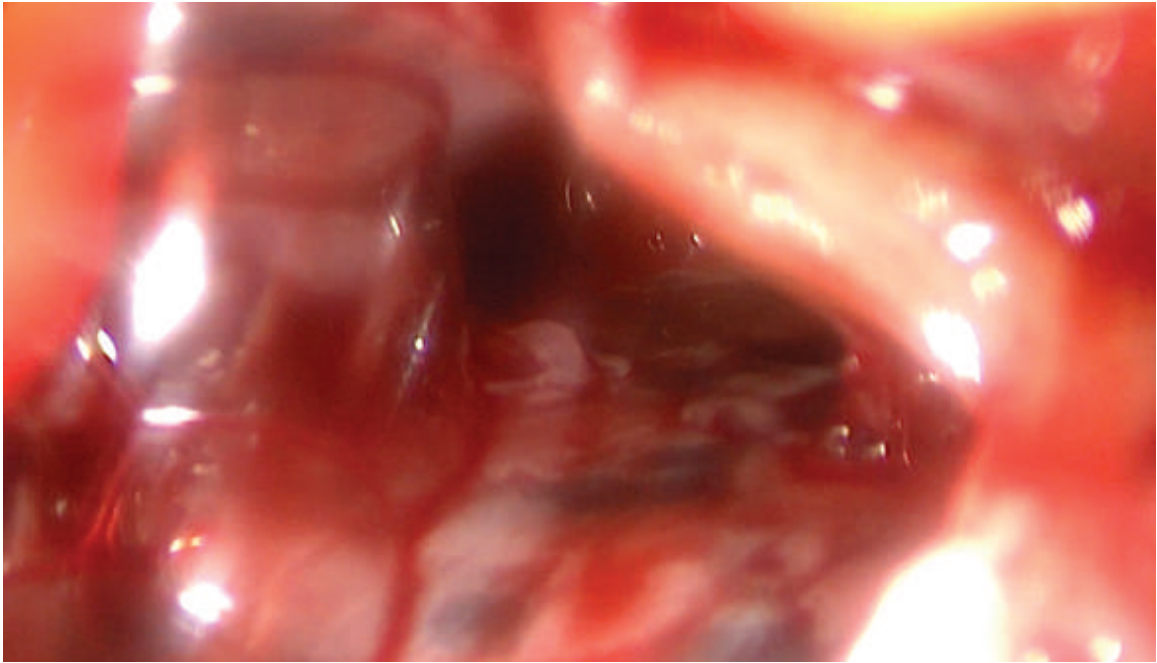


Fig 9 : Stage III loculated pleural effusion – dirty fibrotic loculations

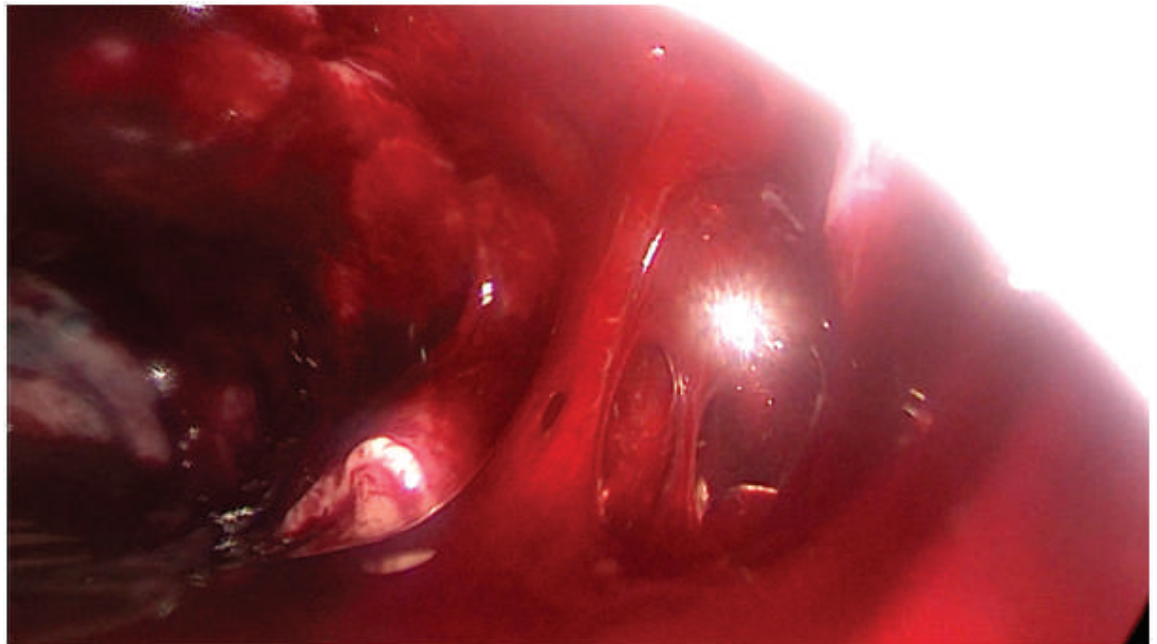


Fig 10 : Stage III loculated pleural effusion – fibrin clotted loculations

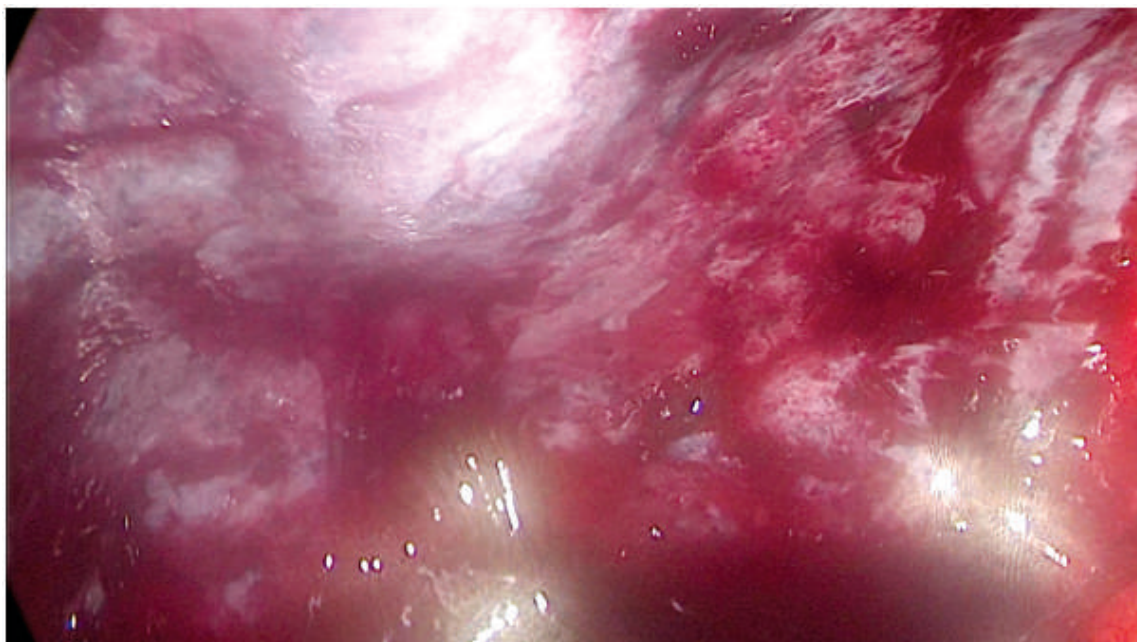


Fig 11 : View after breaking of loculi – parietal pleura cleared of loculations

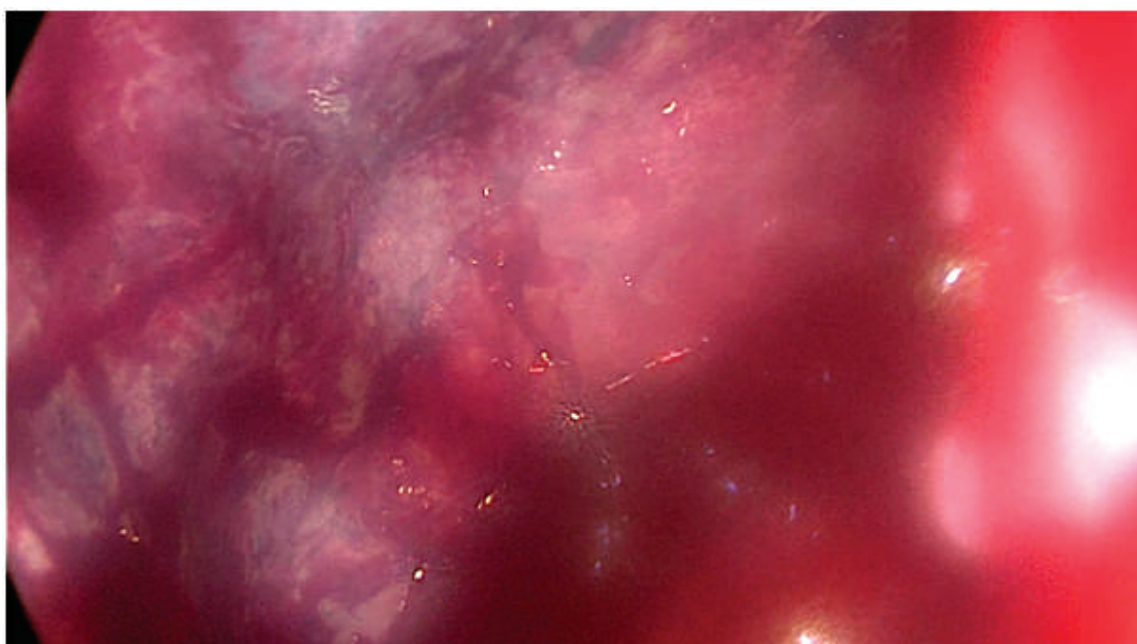


Fig 12 : Condition of pleura after breaking of loculi – oozy

ICDs one or two, depending on the extent of dissection, were always placed under vision.



Fig 13 : Chest-drain placement near the lung apex

Post operative management protocol :

Broad spectrum antibiotics followed by culture sensitivity and analgesics for pain control. ICU monitoring is not mandatory; it depends on the anaesthesia team. Physiotherapy and early mobilization are aggressively practiced. Routine ICD care is advised, as is careful monitoring of collection and water column movement. Sanguinous collection in ICD is common which was managed with Injection Tranexamic acid. ICD was removed when the collection was serous and <30 ml for 3 days with no air column movement.

Follow-up :

Patients were followed up at 1 week, 2 weeks, 1 month and 6 months after discharge. Chest radiograph was done in all patients to look for

resolution or recurrence.

Statistical analysis :

Analysis was done using SPSS software version 25.0. Pearson's Chi-square Test was used to test the significance between the variables of the two groups.

Results :

Out of 34 patients undergoing VATS, the Mean Age (Years) (Mean $\pm$ S.D.) was 49.09 ± 4.358 with a range of 40-56 years.

Predominantly, Males suffered from loculated pleural effusions. There were 67.6% (n=23) Males and 32.4% (n=11) Females.

64.7% (n=22) patients had Stage II pleural effusion while 35.3% (n=12) patients had Stage III pleural effusion.

The Mean Duration of Symptoms (Days) (Mean $\pm$ S.D.) before the patient was put for VATS was 18.53 ± 8.251 . The Mean Duration of Symptoms (Days) (Mean $\pm$ S.D.) in Stage II patients was 12.77 ± 1.660 while in Stage III patients was 29.08 ± 3.343 .

The Mean Duration of Surgery (Mins) (Mean $\pm$ S.D.) was 111.21 ± 27.365 . The Mean Duration of Surgery (Mins) (Mean $\pm$ S.D.) in Stage II patients was 92.14 ± 8.615 while in Stage III patients was 146.17 ± 6.645 .

The Mean Duration of Post-operative ICU Stay (Days) (Mean $\pm$ S.D.) was 2.44 ± 0.746 . The Mean Duration of Post-operative ICU Stay (Days) (Mean $\pm$ S.D.) in Stage II patients was 2.09 ± 0.610 while in Stage III patients was 3.08 ± 0.515 .

The Mean Duration of ICD Placement (Days) (Mean $\pm$ S.D.) was 8.56 ± 0.960 . The Mean Duration of ICD Placement (Days) (Mean $\pm$ S.D.) in Stage II patients was 8.05 ± 0.653 while in Stage III patients was 9.50 ± 0.674 .

The Mean Hospital Stay (Days) (Mean $\pm$ S.D.) was 10.65 ± 1.070 . The Mean Hospital Stay (Days) (Mean $\pm$ S.D.) in Stage II patients was 10.05 ± 0.653 while in Stage III patients was 11.75 ± 0.754 .

Conversion to thoracotomy was not needed in any of the patients undergoing VATS.

There was no case of recurrence in the 6 months follow-up period.

Discussion :

Pleural effusion is a common problem that thoracic surgeons face and deal with. The mainstay of treatment is source control and preventing recurrent infection, which, if not done, leads to restriction of lung expansion

secondary to fibrosis at a later stage. Pleural effusion is managed best through early drainage by chest drain placement. Previously, open decortications and thoracotomy were the main stays of treatment. Still, the management option for the fibrino-purulent stage of pleural effusion is controversial. After a thorough and detailed literature search, it was found that VATS is a superior primary treatment in a few studies^[9]. Delay in the management of effusion leads to functional impairment and increases morbidity and mortality. The basic principle of both open and VATS is the same, i.e., taking off the visceral peel and leaving behind the parietal one^[10]. Various trials were done, and they too had a similar outcome, i.e., reduced morbidity when VATS was done. The results were comparable to our study. So, still debatable, but the use of VATS must be considered early in the treatment of pleural effusion, even in stage III. Duration is not directly proportionate to diseases severity, but longer duration leads to chronic disease; among chronic cases, duration has limited impact. As for comorbidities, they have no significant impact on our patients. The presence of thick septa in the CT thorax is a poor prognostic marker for VATS, and the chance of conversion is higher, although thick septa (more than 5mm) are not a contraindication to VATS. Etiology has an impact on the outcome; drug-resistant TB and malignancy definitely would not do well as disease processes could not be stopped, and for our cases, they were referred by physicians after all alternative means of treatments were exhausted.

Conclusion :

Video-assisted thoracoscopy facilitates the management of fibrino-purulent, multi-loculated pleural effusions, as well as organized effusions.

Early VATS is better, considering the difficulty and postoperative morbidity, i.e., less postoperative discomfort, reduced hospitalization, and fewer postoperative complications.

Limitation of our study :

Our study was limited by the small number of cases. Further studies, preferably randomised comparative trials with larger study populations, are required to confirm best management practice.

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Case Report

Orbital Atherectomy : A Valuable Addition to The Armamentarium for Coronary Calcification Modification

Manojit Lodha¹, Santanu De²

Abstract :

Background :

Severe coronary artery calcification remains a major challenge in percutaneous coronary intervention (PCI), often resulting in suboptimal stent expansion and adverse outcomes.

Case Summary :

A 63-year-old male with Class III angina and heavily calcified left anterior descending (LAD) artery disease underwent orbital atherectomy-assisted PCI. Adequate plaque modification enabled successful deployment of two stents. Optical coherence tomography (OCT) confirmed optimal stent expansion and apposition with no significant residual stenosis.

Conclusion :

Orbital atherectomy is a safe and effective modality for calcium modification in complex coronary lesions, particularly in high-risk patients unsuitable for surgical revascularization.

Keywords :

Orbital atherectomy; coronary calcification; PCI; LAD; OCT

Introduction :

Coronary artery calcification poses a significant challenge in contemporary interventional cardiology, particularly in elderly patients and

those with multiple comorbidities. Severe calcification adversely affects lesion preparation, stent delivery, and optimal expansion, thereby increasing the risk of restenosis and major adverse cardiac events (MACE).^[1]

Severely calcified coronary lesions are associated with higher procedural complexity and poorer clinical outcomes. Emerging plaque modification technologies such as orbital atherectomy offer potential advantages over conventional techniques and warrant further clinical evaluation.^[2]

Case Presentation :

A 63-year-old male presented with exertional angina (Canadian Cardiovascular Society Class III) persisting for six months despite optimal medical therapy. Coronary angiography revealed single-vessel disease with severe, long-segment stenosis involving the proximal to mid LAD. The lesion demonstrated extensive “tram-track” calcification (Fig. 1).

The patient declined coronary artery bypass grafting (CABG). Additionally, he was considered high-risk for surgical intervention due to underlying chronic obstructive pulmonary disease (COPD) and overall frailty.

Given the severity of calcification, a decision was made to proceed with orbital atherectomy-assisted PCI after obtaining informed consent.

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Procedure :

Orbital atherectomy was performed using a standard technique, achieving effective modification of the calcified plaque. This facilitated smooth delivery and deployment of two coronary stents in the LAD.

Post-procedural OCT imaging confirmed excellent stent expansion and apposition, with no significant residual stenosis (Fig. 2). Final angiography demonstrated satisfactory restoration of vessel lumen and TIMI III flow.

The patient had an uneventful recovery and was discharged in stable condition after two days.

Discussion :

Severe coronary calcification remains one of the most important determinants of PCI complexity and outcomes. Inadequate lesion preparation in such cases can lead to stent under-expansion, increased risk of restenosis, and adverse cardiac events.^[3]

Orbital atherectomy utilizes an eccentrically mounted, diamond-coated crown that rotates in an orbital fashion, allowing differential sanding of calcified plaque while preserving compliant vessel tissue. This mechanism enables circumferential calcium modification and improves vessel compliance.

Compared to rotational atherectomy, orbital atherectomy provides continuous blood flow during ablation, which may contribute to a reduced incidence of slow-flow or no-reflow phenomena. Additionally, its ability to modify calcium in a circumferential manner facilitates improved stent expansion.^[4]

The system offers several procedural advantages, including the use of a single crown for varying vessel diameters and a relatively simplified device

platform. These features contribute to ease of use and a favorable learning curve.

However, certain limitations should be considered. Orbital atherectomy may be less suitable in highly tortuous vessels, balloon-uncrossable lesions, or in the presence of visible thrombus. Cost considerations may also limit its widespread adoption in resource-constrained settings.

While rotational atherectomy remains the traditional standard for heavily calcified lesions, orbital atherectomy offers procedural advantages that may translate into improved clinical outcomes in selected patients. However, large-scale randomized comparative studies remain limited. Patient was discharged after 2 days.

Advantages of Orbital Atherectomy :

- 1. Superior Plaque Modification :** The orbital motion allows for bidirectional ablation (back-and-forth movement) and modifies calcium over the entire circumference, often resulting in deeper tissue modifications than other methods.
- 2. Versatility & Ease of Use :** A single crown size can treat vessels of varying diameters (2.5 mm to 4.0 mm).
- 3.** The system frequently uses the "Viper Wire," which is easy to navigate, often eliminating the need for a microcatheter.
- 4. Reduced Complications :** Compared to traditional methods, it has a lower incidence of slow-flow and lower risk of the device entrapment.
- 5. Smaller Access Site :** It is well-suited for trans radial access, which is often preferred for patient comfort and reduced bleeding.

6. Ease of use : Simpler learning curve.

Disadvantages of Orbital Atherectomy :

- 1. Vascular Complications :** While rare, risks include coronary perforation, vessel dissection, or spasms, particularly in highly tortuous or long vessels.
- 2.** It is costlier as compared to traditional rotaablation.
- 3. Less Acute Lumen Gain :** Some studies suggest that orbital atherectomy may result in less immediate, maximum luminal enlargement compared to traditional rotational atherectomy.
- 4.** It is not suitable for very tortuous vessel, balloon uncrossable lesions and lesions with visible thrombus

The MACE results in ORBIT II (with orbital atherectomy) were lower at three years compared to two years in the ROTAXUS study, in which patients underwent rotational atherectomy.

Conclusion :

Orbital atherectomy is a safe and effective modality for the management of heavily calcified coronary lesions. It provides favorable procedural characteristics, including improved plaque modification and reduced complication rates.

It is particularly valuable in high-risk patients who are unsuitable for surgical revascularization. Further studies are warranted to establish its comparative efficacy and long-term outcomes relative to existing atherectomy techniques.

Figures :

Figure 1 : Pre-procedure coronary angiogram showing severe calcified LAD lesion with characteristic tram-track appearance.



Figure 2: Post-procedure angiogram demonstrating well-expanded stents with restoration of luminal patency



Declarations**Funding : None****Conflict of Interest :** None declared**Ethical Approval :** Not required for single case report**Informed Consent :** Obtained from patient**References :**

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Case Report

A Rare Presentation of Probable Catastrophic Antiphospholipid Syndrome with Bilateral Adrenal Haemorrhage Secondary to Systemic Lupus Erythematosus

Jyotirmay Maji¹, Ajitesh Roy²

Abstract :

Background :

Catastrophic antiphospholipid syndrome (CAPS), a rare thrombotic manifestation of antiphospholipid syndrome (APS), carries high mortality. Bilateral adrenal haemorrhage (BAH), an unusual complication of APS, is seldom reported. This case highlights a rare presentation of bilateral adrenal haemorrhage due to probable CAPS secondary to systemic lupus erythematosus (SLE).

Case Presentation :

A 57-year-old diabetic female from India, presented with hypovolemic shock, abdominal pain, and vomiting. Clinical evaluation, imaging (CECT abdomen), and laboratory investigations (anti- β 2GP1 IgG, lupus anticoagulant, anticardiolipin antibodies) were conducted. Secondary causes like sepsis, trauma, and coagulopathies were excluded. SLE workup included ANA and anti-dsDNA testing. CECT revealed bilateral adrenal haemorrhage. Persistent positivity for antiphospholipid antibodies confirmed APS. Elevated ANA (1:100) and anti-dsDNA suggested underlying SLE, despite absent typical symptoms. Serum cortisol

(9.2 μ g/ dL) and ACTH (180 pg/mL) indicated evolving adrenal insufficiency. The patient received methylprednisolone pulses, IVIG, anticoagulants, and immunosuppressants (MMF), achieving rapid stabilisation without mineralocorticoid replacement.

Conclusion :

This case underscores Bilateral Adrenal haemorrhage as a rare and atypical manifestation of CAPS and any case of APS should always be evaluated for background SLE. Early diagnosis via antibody testing and imaging, combined with aggressive immunosuppression and anticoagulation, improves outcomes.

This report enriches the limited literature on CAPS-related BAH and reinforces multidisciplinary management in thrombotic-autoimmune syndromes.

Keywords :

Anti Phospholipid Syndrome (APS); Bilateral Adrenal Haemorrhage (BAH); Systemic Lupus Erythematosus (SLE)

1. Introduction :

APS (antiphospholipid syndrome) is an autoantibody mediated acquired thrombophilia

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characterised by recurrent arterial or venous thrombosis and/or pregnancy morbidity. It could be Primary or Secondary to other autoimmune disease.

Currently the incidence of APS is 5 cases out of 1,00,000 population.^[1] 1% of APS patients present with Catastrophic APS.^[2] Mortality accounted for 37% cases of CAPS with CAPS associated with SLE accounting to higher mortality (48%).^[3] Here we will discuss a rare presentation of probable CAPS in a back- ground of SLE.

2. Case Summary & Discussion :

A 57 years old diabetic, non-hypertensive, Indian female presented with severe prostration and pain abdomen associated with vomiting for 1 week. The pain was acute and generalised, there was no aggravating or relieving factor, no history of radiation, dysuria, or fever. On examination features of hypovolaemic shock were present and she was resuscitated in ICU. But there was persistently low blood pressure. Routine Investigations are as in Table 1. Any infectious or surgical aetiology was ruled out through extensive evaluation.

Table 1. Laboratory Investigations

Parameter	Value	Parameter	Value
Total Leucocyte Count	18,000/mm ³ (88% neutrophils)	Serum Albumin	4.2 mg/dL
Platelet Count	85,000/mm ³	Serum Globulin	3.2 mg/dL
ESR	100 mm/hr	SGOT	57.8 U/L
CRP	101.2 mg/L	SGPT	39.8 U/L
Procalcitonin	0.03 ng/mL	Amylase	41 U/L
Sodium	126 mEq/L	Lipase	63 U/L
Potassium	3.3 mEq/L	Urine R/E & M/E	OBT positive, RBC 60-80/HPF, Albumin ++, Pus cells 2-3/HPF
Urea	19.7 mg/dL	Blood Cul- ture & Urine Culture	No growth
Creatinine	0.9 mg/dL	Arterial Blood Gas (ABG)	No acidosis; Lactate 1.4 mmol/L

USG Whole Abdomen showed suspected Suprarenal lesion. So, **CECT Abdomen** was done, which showed hyper dense, non-enhancing

lesion in B/L adrenal with perilesional fat stranding – likely Bilateral **Adrenal Haemorrhage**.

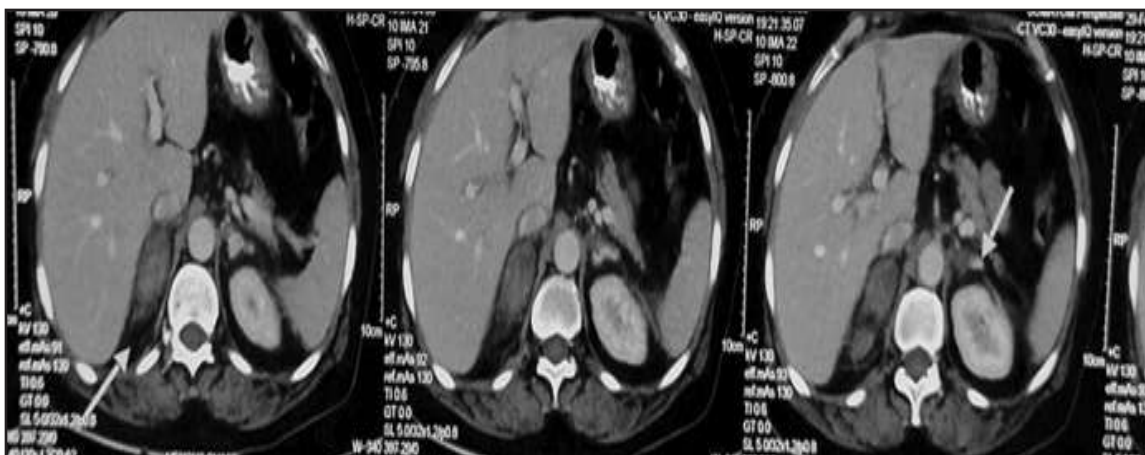


Figure A1. CECT Abdomen showing Adrenal Haemorrhage (marked by yellow arrows)

Then we revisited the case. There was no history of anti-coagulation, gram-negative septicaemia, trauma, no previous history of foetal demise, no previous history of recurrent stroke. There was no precipitating history suggestive of Disseminated Intravascular Coagulation, Thrombotic Microangiopathy. Peripheral Blood Smear was rechecked to rule out Microangiopathic changes like schistocytes. Also, platelet count was low, Prothrombin time (PT) normal, Activated Partial Thromboplastin Time was mildly raised which goes against Disseminated Intravascular Coagulation. There was also no history suggestive of Small Vessel Vasculitis. So, though rare, but to rule out APS (which could be a potential cause of B/L Adrenal Haemorrhage), we did the following investigations: **Anti-B2GP1 IgG (14.00 U/ml), Lupus Anticoagulant, Anti Cardiolipin Antibody IgG was positive (55 GPL)**. These antibodies were repeated after 12

weeks and came to be positive. APS was diagnosed. There are very few reported cases of B/L Adrenal haemorrhage in APS, as by Hana Aldajaani *et al*^[4] and Dr. Rashika Bansal *et al* recently.^[5]

To rule out any secondary cause, Blood for ANA (IIFT) – Hep 20-10 Cell Line was done, which showed Positive result in 1:100 dilution with **Dense Fine Speckled Nuclear** pattern. **Anti-ds DNA was positive in high titre.**

But in this case, we didn't get any history of skin rash, recurrent oral ulcers, any vasculitic rash, low back pain or any inflammatory polyarthritis.

So, a **Probable Catastrophic APS** secondary to SLE was diagnosed. Simultaneously Serum 8 am Cortisol was 9.2µg/dl with Serum ACTH value 180 pg/ml which showed an evolving stage of Primary Adrenal Insufficiency.

Table A1: Criteria for the Classification of Catastrophic Antiphospholipid Syndrome (CAPS)

Criteria	Description
1. Multi-organ involvement	Evidence of involvement of three or more organs, systems and/or tissues†
2. Rapid development	Development of manifestations simultaneously or in less than a week
3. Histopathological confirmation	Confirmation by histopathology of small vessel occlusion in at least one organ or tissue‡
4. Laboratory confirmation	Laboratory confirmation of the presence of antiphospholipid antibodies (lupus anticoagulant and/or anticardiolipin anti- bodies)§

Classification Categories :

Category	Criteria Required
Definite Catastrophic APS	All four criteria
Probable Catastrophic APS	All four criteria, except for only two organs, systems and/or tissues involvement
	All four criteria, except for the absence of laboratory confirmation at least six weeks apart due to the early death of a patient never tested for aPL before the catastrophic APS
	Criteria 1, 2 and 4
	Criteria 1, 3 and 4 and the development of a third event in more than a week but less than a month, despite anticoagulation

Notes :

- Usually, clinical evidence of vessel occlusions, confirmed by imaging techniques when appropriate. Renal involvement is defined by a 50% rise in serum creatinine, severe systemic hypertension (>180/100 mmHg) and/or proteinuria (>500 mg/24 hours).
- For histopathological confirmation, significant evidence of thrombosis must be present, although

vasculitis may coexist occasionally.

- If the patient had not been previously diagnosed as having an APS, the laboratory confirmation requires that presence of antiphospholipid antibodies must be detected on two or more occasions at least six weeks apart (not necessarily at the time of the event), according to the proposed preliminary criteria for the classification of definite APS.

Source: Adapted from Asherson RA, Cervera R, de Groot PG, et al. Catastrophic antiphospholipid syndrome: international consensus statement on classification criteria and treatment guidelines. *Lupus*. 2003;12(7):530-534.

Patient was started on Methyl prednisolone pulse therapy followed by IVIG. Subsequently the treatment was followed by maintenance steroid, immunosuppressants like MMF, Anticoagulant. Surprisingly patient's Plasma Renin Activity was normal, so, mineralocorticoid replacement therapy was not needed. Patient responded dramatically and followed up. Now patient is in absolutely stable condition with oral steroid replacement.

Though rare, but Bilateral Adrenal haemorrhage could be a presentation of APS.

4. Discussion :

The temporal relationship between adrenal haemorrhage and evolving adrenal insufficiency in this case aligns with the "two-hit hypothesis" proposed for CAPS, where an initial triggering event (possibly subclinical SLE activity) leads to widespread endothelial damage and subsequent thrombotic microangiopathy.^[6] Antiphospholipid antibodies, particularly anti- β 2-glycoprotein I and anti-cardiolipin antibodies, play a crucial role in initiating the thrombotic cascade, by disrupting the annexin A5 shield on endothelial surfaces, exposing phosphatidylserine and creating a prothrombotic environment.^[7] In SLE-associated APS, these effects are potentially amplified by complement activation and immune complex deposition, creating a hypercoagulable state that predisposes to microvascular thrombosis.^[8]

The adrenal glands are particularly vulnerable

to thrombosis and subsequent haemorrhage due to their unique vascular architecture. They receive rich arterial supply but drain through a single vein, creating a vascular watershed area susceptible to congestion and thrombosis.^[9] When antiphospholipid antibodies trigger thrombosis in the adrenal veins, venous congestion ensues, leading to haemorrhagic infarction.^[10] This pathophysiological mechanism explains the bilateral adrenal involvement observed in our patient.

The absence of typical SLE manifestations in our patient represents what some researchers have termed "serositis-dominant lupus," where visceral or serological manifestations predominate over cutaneous or articular features.^[11] This phenotypic heterogeneity underscores the importance of comprehensive immunological evaluation in unusual thrombotic presentations, particularly involving the adrenal glands.^[12]

5. Conclusion :

Although rare, bilateral adrenal haemorrhage should prompt consideration of APS in the differential diagnosis, particularly when associated with thrombocytopenia and positive antiphospholipid antibodies. This case highlights the importance of recognising CAPS as a potentially life-threatening condition requiring aggressive immunomodulatory and anticoagulant therapy. Early diagnosis and appropriate management can significantly improve outcomes in this high-mortality condition.

6. Declaration :

Author Contributions : Jyotirmay Maji and Ajitesh Roy both contributed to the conception and design of the case report as well as in the

acquisition of the patient's data and imaging readings interpretation of data and the writing of the manuscript; both authors have read and agreed to the published version of the manuscript.

Funding : This research received no external funding.

Institutional Review Board Statement : Ethical review and approval were waived for this study, as it is not required for this case report.

Informed Consent Statement : Informed consent was obtained from the patient.

Data Availability Statement : Data are contained within the article.

Conflicts of Interest : The authors declare no conflicts of interest.

Acknowledgements : We express our gratitude to our patient, institution for their support.

7. Abbreviations :

The following abbreviations are used in this manuscript:

CAPS	Catastrophic Antiphospholipid Syndrome
BAH	Bilateral Adrenal Haemorrhage
SLE	Systemic Lupus Erythematosus
CECT	Contrast Enhanced Computed Tomography
β2G-	Beta 2 Glycoprotein P1
ANA	Anti Nuclear Antibody
dsD-	Double Stranded DNA NA
ACT	Adreno Corticotrophic Hormone H
IVIG	Intra-veinous Immunoglobulin
MMF	Mycophenolate Mofetil

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Case Report**Pharyngeal Angiolipoma Presenting as Neonatal Respiratory Distress**Sugato Banerjee¹, Surajit Santra², Amna Goswami³, Ranjan Raychowdhury⁴**Abstract :**

Neonatal respiratory distress is an acute emergency. We report a rare case of pharyngeal angiolipoma producing glottic obstruction in a neonate, which was successfully managed avoiding tracheostomy. The baby was found to have Tetralogy of Fallot, Brachycephaly, a sacral sinus and Syringomyelia. Angiolipomata of the head and neck are extremely rare, with only 36 cases previously reported. No previous association of angiolipoma with Fallot's tetralogy, Brachycephaly or Syringomyelia were found after a search of the literature.

Keywords :

Angiolipoma, Tetralogy of Fallot, Brachycephaly, Syringomyelia

Case Report :

A female neonate presented 3 hours after birth with respiratory distress and cyanosis. Born full term as a normal delivery, the first child of her parents, she did not cry at birth, and then developed stridor, so was referred from a rural hospital. On examination a smooth, mucosa covered mass was seen in the pharynx, obstructing the glottic inlet. A 2.5mm ID endotracheal tube was negotiated beyond the mass, which was firm and did not bleed to touch, to secure the airway.

The initial plan was to perform a tracheostomy

and then proceed for definitive surgery. It was decided, however, to try and avoid tracheostomy if possible. A CT scan of the neck was obtained, which revealed the mass to be pedunculated, arising from the postero-lateral wall of the pharynx (Fig 1). The presence of a sacral sinus was noted, but lumbo-sacral skiagrams excluded spina bifida. The shape of the skull did not appear normal. Surgery was performed on the third day post-delivery.

On table the endotracheal tube was carefully

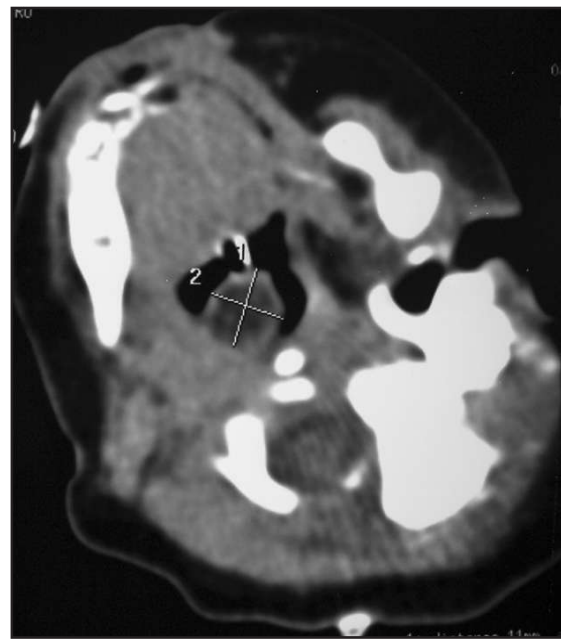


Fig 1 : Axial CT scan showing pedunculated, postero-lateral pharyngeal mass

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replaced by a 3.5mm armoured tube and a right Lateral Pharyngotomy performed. Haemostasis was maintained throughout by judicious use of bipolar diathermy. A smooth, mucosa covered, firm, pyramidal, pedunculated mass was delivered via the pharyngeal incision (Fig 2); the pedicle was transfixed with 4-0 silk, and the mass excised. The pharynx was closed with interrupted 5-0 vicryl. A braided nylon drain was introduced, and the incision closed in layers. The armoured tube was carefully replaced with a 3.5mm portex endotracheal tube, and a nasogastric tube was introduced.



Fig 2: Excised mass

Apart from one convulsive episode the post-operative period was otherwise uneventful. She was weaned off the ventilator and extubated without problem on the third post-operative day. The histopathology report was angiolipoma. After extubation some respiratory distress was still apparent when the baby cried. Further

investigations revealed the presence of Tetralogy of Fallot. Brachycephaly was apparent within a few months, and a lumbo-sacral MRI scan found the sacral sinus to end at the vertebral column, with a D11 – S1 syrinx. Appropriate management was organised for all of these conditions. The patient is well on five years of follow up.

Discussion :

Neonatal respiratory distress is an acute emergency. In the premature baby the commonest cause is hyaline membrane disease. In term deliveries the commonest cause of congenital stridor is laryngomalacia, followed by congenital laryngeal web, vocal cord palsy, subglottic stenosis, subglottic haemangioma, laryngeal or laryngotracheo-oesophageal cleft, tracheomalacia and tracheal stenosis^[1]. Endotracheal intubation and ventilation of premature infants was responsible for a marked increase in the number of cases of acquired subglottic stenosis, but the development of high volume, low pressure cuffs and improved ventilatory techniques has seen the incidence drop.

Angiolipomata are benign, encapsulated variants of lipomata; histologically they resemble lipomata in the presence of mature lipocytes with areas of angiomatous elements^[2]. They have been described in the gastro-intestinal tract^[3], the spine^[4], the bones^[5], as well as subcutaneously^[6] and tend to be multiple^[7]. To date there have been 36 documented cases of head and neck angiolipoma in the literature^[8], with presentation in the supraglottic larynx^[9], the parotid gland^[10], the temporalis muscle^[11] and the maxillary sinus^[12]. Treatment is by surgical excision.

Numerous lesions are known to be associated with Tetralogy of Fallot, but angiolipoma has not been previously described as one. A Pubmed

search of the English language medical literature using the terms Angiolipoma AND Brachycephaly, Angiolipoma AND Syringomyelia yielded no results.

A rare case of neonatal pharyngeal angiolipoma is presented which was successfully managed without a tracheostomy. The lesion was associated with Tetralogy of Fallot, Brachycephaly and Syringomyelia.

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Conference Papers

Abstracts from The 37th Annual Scientific Conference of The Ramakrishna Mission Seva Pratishthan Vivekananda Institute of Medical Sciences, November, 2025

Early Intramedullary Nailing for a Distal Tibial Metadiaphyseal Fracture with Poor Soft Tissue Condition : A 6-Month Follow-Up Case Report

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Introduction :

Distal tibial metadiaphyseal fractures pose challenges, especially with compromised soft tissue. Minimally invasive fixation is preferred to minimize further soft tissue damage. Intramedullary nailing (IMN) offers good stability, although fixation in very distal fractures requires careful technique.

Aims and Objective :

To describe the technique and clinical outcome of early IM nailing in a distal tibial metadiaphyseal fracture with poor soft tissue condition.

Materials and Methodology :

A 62-year-old male presented with a distal tibial metadiaphyseal fracture and Grade II soft tissue injury after a road traffic accident. Early IM nailing was performed with the guide wire placed close to the physeal scar and centered in AP and

lateral views. Polar screws assisted reduction and progressive rimming enabled proper distal nail engagement. The patient remained non-weight bearing until early signs of consolidation.

Results :

Wound healing was satisfactory at 2 weeks. By 6 weeks, early callus formation and improving ankle mobility were observed. At 3 months, radiographic union allowed partial weight-bearing. At 6 months, the patient achieved full weight-bearing with good ankle motion and functional recovery.

Conclusion :

Early IM nailing is effective for distal tibial fractures with poor soft tissue condition. Accurate guide-wire placement near the physeal scar is key to achieving stable fixation. With appropriate postoperative protection, excellent radiological and functional outcomes can be obtained.

Active Surveillance in an Unusual Presentation of Papillary Microcarcinoma of Thyroid

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Background :

Papillary Thyroid Microcarcinoma (PTMC) is defined as a lesion measuring <1 cm in maximum dimension. It is most often diagnosed incidentally on histopathological examination of thyroid specimens removed for benign disease. Recent studies have highlighted the role of active surveillance as a safe and effective management strategy for selected PTMC cases, reducing overtreatment without compromising outcomes.

Aims and Objectives :

We report an unusual case of cystic papillary thyroid microcarcinoma detected incidentally following hemithyroidectomy for a benign colloid nodule and to discuss the rationale for adopting an active surveillance approach.

Methods :

A 50-year-old female presented with a 7-year history of right anterior neck swelling. The radionuclide thyroid scan (^{99m}Tc) revealed a moderate-sized “cold nodule” in the right lobe. Fine-needle aspiration cytology (FNAC) was suggestive of a cystic colloid nodule (Bethesda II). The patient underwent right hemithyroidectomy, and histopathology confirmed cystic colloid goitre in the right lobe. Surprisingly an incidental cystic micropapillary carcinoma was found in the isthmus. Post operative High-

Resolution Ultrasonography (HRUSG) revealed a subcentimetric solid lesion in the left lobe. After discussion in Joint Clinic the patient was advised active surveillance with regular clinical and radiological follow-up.

Results :

At 6 months follow-up, the patient remained clinically stable with no evidence of recurrence or increase in size of the subcentimetric lesion. The patient remains euthyroid and continues on periodic surveillance every six months.

Conclusion :

This case highlights the challenge in detecting PTMC which could not be detected in the pre operative thyroid scan and CT and emphasises the importance of performing a hemithyroidectomy rather than just a lobectomy. It also underscores the potential role of active surveillance in selected cases of incidentally detected papillary thyroid microcarcinoma, especially when the lesion is subcentimetric, asymptomatic, and confined to the thyroid. Avoiding unnecessary total thyroidectomy can minimize surgical morbidity while ensuring disease control through vigilant monitoring. Individualized patient selection and multidisciplinary evaluation remain key to optimizing outcomes.

H Score vs HLH-2004 Criteria in Pediatric Infection-Associated HLH: Balancing Early Diagnosis with Judicious Use of Immunosuppressive Therapy

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Background :

Hemophagocytic lymphohistiocytosis (HLH) is a life-threatening hyperinflammatory syndrome caused by uncontrolled immune activation^[1]. Distinguishing secondary HLH due to sepsis from severe infections remains challenging^[2]. The HLH-2004 criteria and the H Score are widely used diagnostic frameworks, yet their comparative clinical utility in infection-triggered HLH is debated.

Objectives :

To compare the diagnostic performance of the H Score versus HLH-2004 criteria in infection-associated HLH, and evaluate treatment decisions guided by these tools.

Methods :

A prospective observational study was conducted over 18 months (Feb 2024 – Jul 2025) at a tertiary center. Thirty-eight children (1 month – 12 years) with secondary HLH were analyzed. Clinical and laboratory data at diagnosis were used to compute both scores. Treatment details and

outcomes were documented through hospitalization.

Results :

Among 38 patients, 32 had viral and 6 bacterial triggers. All (100%) were H Score-positive; 28 (73%) met both criteria and received immunosuppression. Ten were HLH-2004 – negative but H Score – positive; among them five were treated with immunosuppression based on H Score and clinical judgement, while five (1 dengue, 2 scrub typhus, 2 enteric fever) improved without it. In total, 33 (87%) received immunosuppression, 5 did not. Thirty-six improved clinically; 2 (1 enteric, 1 adenoviral) died from MODS.

Conclusion :

The H Score enables earlier identification of HLH, particularly in cases not meeting HLH-2004 criteria, serving as a practical screening tool. HLH-2004 remains more specific but limited by incomplete parameter assessment. Therapeutic decisions should integrate clinical context, disease progression, and physician judgment rather than rely solely on scoring systems.

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Disarming Persister Survival in The Superbug *Pseudomonas Aeruginosa* Through Chaperone System Inhibition

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Abstract :

Aims and objectives :

Persister cells are dormant, drug-susceptible bacterial cells that can survive stresses such as antibiotic exposure, nutrient deprivation, or acidic environments, resuming growth once favorable conditions return. Their persistence drives chronic and recurrent infections, biofilm formation, and the emergence of antimicrobial resistance, presenting a major challenge to effective therapy. This study tackles this pressing issue in the superbug *Pseudomonas aeruginosa*, a key member of the ESKAPE pathogens, by targeting its chaperone system as a novel therapeutic strategy.

Methods :

The expression levels of the chaperone proteins DnaK and ClpB were first evaluated in *P. aeruginosa* persister cells. To target the chaperone system, both proteins, key components of the bi-chaperone complex responsible for clearing

protein aggregates, were cloned and expressed individually. DnaK was subsequently targeted with the repurposed drug nitroxoline, and its effects on *P. aeruginosa* were assessed by qRT-PCR, while binding interactions were analyzed using isothermal titration calorimetry.

Results :

The elevated expression of the bi-chaperone complex in *P. aeruginosa* persister cells demonstrated its critical role in clearing protein aggregates formed during persister formation, a process essential for the restoration of cell growth. Binding analyses confirmed that nitroxoline specifically bound to DnaK.

Conclusion :

The study demonstrated that targeting the bi-chaperone system effectively disrupts persister survival in *P. aeruginosa*. Future investigations could explore optimized chaperone inhibitors as a novel therapeutic strategy against superbug-associated chronic infections.

Gastrointestinal Features as Presenting Manifestation in Paediatric Rheumatology Patients — A Case Series

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Background :

Pediatric rheumatic diseases are multisystemic with variable organ involvement. Gastrointestinal (GI) features, though uncommon, may precede

systemic symptoms, leading to delayed diagnosis and missed therapeutic windows [1,2]. Recognizing GI-dominant presentations is vital for early identification of autoimmune etiology.

Objective :

To evaluate the frequency and spectrum of GI manifestations as initial presentations of pediatric rheumatologic disorders.

Methods :

A retrospective cross-sectional study was conducted at the Pediatric Rheumatology Clinic, RKMS & VIMS (Apr 2023 – Sep 2024). Demographic, clinical, and laboratory data were extracted from medical records of children whose initial complaints were GI-predominant.

Results :

Of 90 patients (SLE = 20, JIA = 50, HSP = 10, MCTD = 5, JDM = 5), 10 (11.1%) presented with predominant GI symptoms. Underlying etiologies : SLE (n = 6), HSP (n = 2), MCTD (n = 1), SJIA (n = 1). Abdominal pain was most

frequent. SLE cases manifested as autoimmune hepatitis (2), lupus hepatitis (1), pancreatitis (1), and ascites (2), consistent with published pediatric SLE data^[3,6]. Two developed lupus nephritis later. HSP presented with severe abdominal pain and GI bleeding preceding rash^[4,5]. The SJIA case had macrophage activation syndrome. All responded to immunosuppressive therapy (steroids, HCQ, AZA, MMF).

Conclusion :

Gastrointestinal manifestations can precede classical systemic features of pediatric autoimmune diseases. High suspicion and prompt rheumatologic evaluation in unexplained GI presentations enable early immunosuppression, preventing irreversible organ injury and improving outcomes^[6,9].

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Maxillary Sinus Haemangioma — Presentation, Investigation and Management

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Introduction :

Maxillary Haemangioma are rare and originally described by Smith in 1959 as an intra-osseous lesion which bled profusely at surgery. He described them as central or peripheral. Choukas in 1963 recognised two varieties: the osseous, as previously described, and the mucosal variety arising from the antral mucosa, which may be excised with minimal blood loss.

AIMS :

To present our experience in the diagnosis and management of a series of mucosal maxillary antral haemangioma.

Materials and Methods :

In the 12 year period from 2013 to 2025 we have encountered 5 cases of antral mucosal haemangioma. All were adults (19 to 45 years),

with 3 males and two females. All presented with intermittent epistaxis, not particularly profuse, and intermittent nasal obstruction. Diagnostic nasal endoscopy in all cases showed a mucosal bulging in the middle or inferior meatus, with a typical bluish discoloration

Results :

All patients underwent Contrast enhanced CT scan of nose and paranasal sinuses, which showed a heterogeneous mass, not particularly enhancing. One patient underwent excision by a lateral

rhinotomy approach, all others were addressed endoscopically with minimal bleeding. Pre-operative embolization was not performed in any case. Excision was total and no recurrence has been noted. With follow up period ranging from 3 months to 5 years.

Conclusion :

Mucosal type of maxillary sinus haemangioma can be managed efficiently with external or endoscopic route. Complete excision guided by CECT scan results in reduction of recurrence rate.

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Hirayama Disease : A Rare Disease with Atypical Features

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Introduction :

Hirayama disease is a rare neurological disorder characterized by self-limited, asymmetrical, slowly progressive atrophic weakness of the forearm and hand, predominantly affecting young males. Displacement of the posterior dural sac during neck flexion causes repetitive trauma to the spinal cord, leading to lower cervical cord injury.

Case Details :

An 18-year-old male presented with difficulty in holding objects, buttoning and unbuttoning clothes, performing fine motor tasks, and progressive **thinning of the small muscles** of both hands for the past two years. The onset was

insidious, initially involving only the right hand, and later gradually affecting the left. Although the weakness progressed initially, there had been no progression over the last six months. He also complained of **tremulousness** in both hands for the past one year. There was no history of neck pain, sensory symptoms, gait disturbance, bowel or bladder involvement, neck trauma, or toxin exposure.

Neurological examination revealed lower motor neuron-type weakness and atrophy of both forearms and hands, with sparing of the brachioradialis. Wasting of the **thenar muscles was more pronounced** than hypothenar muscles and was more severe on the right hand. The power of proximal muscles of the right upper

limb was mildly reduced (power 4/5). A coarse tremor was present in both hands. Sensory examination, cerebellar function, and cranial nerve testing were normal.

Nerve conduction studies showed normal sensory responses. Electromyography (EMG) of all four limbs and the tongue revealed an incomplete recruitment pattern with evidence of chronic denervation restricted to C5–T1-innervated muscles. MRI of the cervical spine showed atrophy of the lower cervical cord. Flexion MRI demonstrated a **posterior epidural enhancing**

lesion from C5 to T1 compressing the cord.

Discussion :

The overall clinical features, nerve conduction studies, and MRI findings were consistent with Hirayama disease. The patient was managed with neck stabilization using a **cervical collar**.

Conclusion :

We report a case of Hirayama disease with atypical features, including **bilateral involvement, proximal muscle weakness, and coarse tremor in both hands**.

RMC-7977 A Broad RAS Inhibitor Increases The Sensitivity Towards Bortezomib

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Background :

Bortezomib is widely used in the treatment of multiple myeloma, though its application in other cancers remains limited. Furthermore, instances of resistance to Bortezomib have been reported. Studies indicate that Ras signalling significantly influences cancer cell sensitivity to chemotherapeutic drugs. A new experimental drug, RMC-7977, targets the active, GTP-bound form of the RAS protein. Given RMC-7977's broad Ras-inhibitory effects, we sought to evaluate its potential to enhance cancer cell sensitivity to Bortezomib.

Objective :

This study aimed to assess the effects of RMC-7977 and Ras signalling on Bortezomib sensitivity.

Methodology :

We examined the effects of Bortezomib on

RPMI-8226 (multiple myeloma), HeLa (cervical cancer), and HepG2 (hepatocellular cancer) cells and evaluated Ras protein stability in these cell lines. Additionally, we explored the impact of combining RMC-7977 with Bortezomib on HeLa and HepG2 cells, analyzing Ras signalling in these cells when treated with Bortezomib, both with and without RMC-7977.

Results :

HeLa and HepG2 cells showed lower sensitivity to Bortezomib compared to RPMI-8226 cells. However, combination therapy with RMC-7977 increased Bortezomib sensitivity in HeLa and HepG2 cells. Cycloheximide significantly affected Ras protein levels in RPMI-8226 cells but did not alter them in HeLa and HepG2 cells.

Conclusions :

These findings highlight the crucial role of Ras signalling in determining Bortezomib sensitivity

and suggest the potential of RMC-7977 in enhancing Bortezomib efficacy. This study could expand the therapeutic scope of FDA-approved Bortezomib and open new avenues for treatment involving RMC-7977.

Keywords :

Cancers, Bortezomib, RMC-7977, Ras inhibitor, Cycloheximide.

An Observational Study of Changes in Bone Homeostasis in Patients Undergoing Long-Term Dialysis

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Abstract :**Background :**

Chronic Kidney Disease (CKD) has become a major non-communicable disease worldwide, frequently complicated by disturbances in mineral and bone metabolism, collectively known as CKD–Mineral and Bone Disorder (CKD–MBD). Patients undergoing long-term haemodialysis represent a particularly high-risk group for altered bone homeostasis, secondary hyperparathyroidism, and fragility fractures. Despite its clinical significance, longitudinal data on biochemical and densitometric changes in these patients remain limited in the Indian context.

Aim :

To evaluate the longitudinal changes in bone homeostasis among CKD patients on maintenance haemodialysis, with specific assessment of bone biomarkers, bone mineral density (BMD), and their interrelationships over time.

Materials and Methods :

A longitudinal observational study was conducted at the Department of Orthopaedics, Ramakrishna Mission Seva Pratishthan, Kolkata, including 100 adult CKD patients on haemodialysis for

over three months. Demographic data, comorbidities, and nutritional supplementation history were recorded. Biochemical parameters—serum calcium, phosphate, alkaline phosphatase (ALP), parathyroid hormone (iPTH), vitamin D, albumin, and creatinine—were measured at baseline and after six months. Bone Mineral Density was assessed using Dual-Energy X-ray Absorptiometry (DEXA) at the femoral neck. Statistical analyses were performed using SPSS version 25, with $p = 0.05$ considered significant.

Results :

Osteoporosis (Z score = -2.5) was observed in 17% and osteopenia in 49% of participants. Age (>50 years) and female sex were significantly associated with lower BMD ($p = 0.001$ and <0.001 , respectively). iPTH levels showed a strong negative correlation with Z score ($\tilde{r} = -0.781$, $p < 0.001$), whereas vitamin D exhibited a strong positive correlation ($\tilde{r} = +0.702$, $p < 0.001$). ALP levels were elevated in patients with severe osteoporosis but did not significantly change over six months. Serum calcium and phosphate remained largely stable and showed no significant association with BMD. Nutritional supplementation led to significant improvement in serum albumin and vitamin D ($p < 0.001$),

but changes in BMD were not statistically significant over the six-month period.

Conclusion :

Patients on long-term dialysis demonstrate significant alterations in bone homeostasis, characterized by secondary hyperparathyroidism, vitamin D deficiency, and reduced BMD, especially among elderly and female patients. Regular monitoring of iPTH, vitamin D, and

DEXA-based BMD is crucial for early detection and prevention of osteodystrophy. Nutritional and vitamin D supplementation improve biochemical parameters but may require prolonged follow-up to manifest measurable effects on bone density. Early screening and multidisciplinary management are essential to mitigate fracture risk and improve quality of life in CKD-MBD patients.

Investigating the Role of Calcium in the Encystation Process of *Entamoeba*

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Abstract :

Calcium plays an essential role in the growth and survival of organisms, including *Entamoeba histolytica*, the causative agent of amoebic dysentery. This parasite alternates between two stages : the environmentally resistant, transmissible cyst stage and the pathogenic trophozoite stage. Investigating the role of calcium in the trophozoite-to-cyst transition could provide a novel strategy to disrupt disease transmission. Our objectives are - i) Effects of Calcium in the encystation of *Entamoeba* and ii) Analyzing the role of mechanosensitive, calcium ion regulatory proteins (Piezo proteins) in *Entamoeba* encystation by genetic manipulations. To investigate calcium roles in *Entamoeba* encystation, the cells are treated with calcium chelators. We found that calcium

increases encystation efficiency and enhances the number and size of Multinucleated Giant Cells (MGCs) in *Entamoeba*. We have identified calcium binding domains in Piezo proteins. The two *Entamoeba* Piezo proteins and calcium binding domain in Piezo proteins were analysed from the database. Investigation the role of calcium, along with Piezo proteins during the encystation process of *Entamoeba* will provide critical insights into the molecular mechanisms of parasite survival and transmission, which can be harnessed to develop novel therapeutic agents targeting parasitic infections as well as disease transmission.

Keywords :

Entamoeba, Encystation, Calcium chelators, Multinucleated Giant Cells (MGCs)

Increasing Species Diversity and Antifungal Drug Resistance of Candida Isolates Over A 5-year Period (2019-2023) at A Hospital in Eastern India with High Prevalence of Amphotericin B Resistance

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Abstract :

Background and purpose :

We analysed the species diversity and antifungal drug sensitivity of *Candida* isolates reported from 2019 to 2023 at our hospital to guide empirical treatment protocols.

Materials and methods :

Clinical samples were cultured by standard microbiological techniques; yeast isolates deemed clinically significant were identified and tested for antifungal drug sensitivity using the Vitek 2 Compact system (BioMerieux, France). Statistical analysis was done using SPSS software and P values <0.05 were considered significant.

Results :

The diversity of species as well as the antifungal drug resistance of *Candida* isolates increased markedly over the period of 5 years. A high percentage of isolates resistant to Amphotericin B and Voriconazole was noted.

Conclusions :

These findings emphasize the need for caution in empirical use of antifungal drugs. Similar surveillance at regional levels is necessary and antifungal drug sensitivity should be included in hospital antibiograms to prevent the spread of multi drug resistant nosocomial strains.