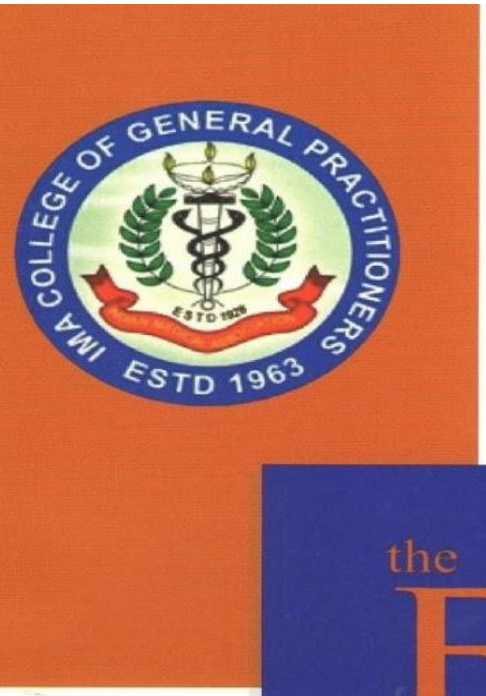

the FAMILY DOCTOR

THE OFFICIAL JOURNAL OF IMA COLLEGE OF GENERAL PRACTITIONERS

MARCH 2024

Content

Indian Medical Association
College of General Practitioners
IMA CGP HQ : IMA Building, Doctors Colony,
Bharathi Nagar, Tambaram West, Chennai-600045

Dr. Satyajit Borah, MS
Dean, IMA CGP HQs

Message

It is an accepted norm in the healthcare service that the Primary Physician or the Family Physician is the centre of the healthcare system. He/ She is the only physician providing easily accessible primary care to patients across the lifespan. In a rapidly changing world, it is an accepted fact that many families prefer to consult the same physician from childhood through adolescence and adulthood and into old age, not only for the trivial health issues, but also for critical health decisions, as they find the Family Physician easily approachable and more reliable. For maintaining a good service at par with the current trends, these Family Physicians need a wide swath of knowledge and keep themselves up-to-date in order to diagnose, test, and treat patients of all ages and all conditions.

The College of General Practitioners, Indian Medical Association is committed to uplift the knowledge and skills of Family Physicians of the country through its limited resources and means. A journal for the Family Doctors definitely plays an important role in enriching the knowledge of our physicians and I appreciate the effort of the CGP HQs team under the stewardship of Dr. Ravi Shankar.

I am happy that another issue of the Family Doctors Journal is going to be published and I hope our members and Physicians will enjoy reading it.

(*Satyajit Borah*)
Tezpur: 1st March 2024

Dear General Practitioners,

Warm greetings to each of you!

It is with great pleasure that we welcome you to the latest edition of The Family Doctor Journal. As dedicated healthcare professionals, each of you plays a crucial role in providing Primary Medical Care to communities across India. Your commitment to serving as the first point of contact for patients, offering comprehensive care, and coordinating with specialists when needed is truly commendable.

In India, General Practitioners (GPs) are the backbone of our healthcare system, bridging the gap between patients and specialized medical care. Despite facing challenges such as limited resources and time constraints, GPs demonstrate unwavering dedication in delivering quality healthcare services. Your tireless efforts in diagnosing and managing medical conditions, promoting preventive care and providing compassionate support to patients and their families are invaluable.

I would like to draw your attention to upcoming events for your reference:

- March 9th & 10th: West Zone CGP Conference in Aurangabad (Maharashtra)
- April 7th: World Health Day CME Program
- April 21st: Online CME on Trauma Update
- May 19th: World Family Physicians Day, Central Celebration at Ahmedabad
- June 1st & 2nd: East Zone Conference at Ranchi (Jharkhand)
- July 7th: Virtual CME on Immunization Updates
- August 3rd & 4th: South Zone Conference at Rajahmundry (Andhra Pradesh)
- September 8th: Virtual CME on Diabetes Update
- October 5th & 6th: North Zone Conference (Venue Yet to be Fixed)
- November 8th to 10th: International Conference of Family Medicine, ICON 2024 at Chennai
- December 17th & 18th: CGPCON 2024 at Kaziranga (Assam)

I encourage each of you to participate in these events as they will undoubtedly enhance your knowledge and skills.

At last, before finishing my letter, I want you all to follow the 4 D concept in your everyday practice. This will take you a long way.

1. **Dedication:** Provide the best care possible to patients.

2. **Diligence:** Stay updated, thorough, and attentive in all aspects of care.

3. **Decency:** Treat patients with respect, empathy, and confidentiality.

4. **Discretion:** Use professional judgment, maintain privacy in all interactions and keep the ethical values.

By adhering to these four principles - Dedication, Diligence, Decency, and Discretion - General Practitioners can uphold the highest standards of professionalism and provide optimal care for their patients. You are no more a General Practitioner but will be a Family Physician caring the every aspect of the Patient and his Family to give a Holistic Health.

Thank you for your dedication to the field of medicine.

Warm regards,

Dr.R.Anburajan
Hon.Secretary,
IMA CGP HQs

"Don’t just wait for what to happen. Act first”

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Diagnosis and Evaluation of COPD Patients

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Introduction:

COPD is expanded as Chronic Obstructive Pulmonary Disease and the Global Initiative for Chronic Obstructive Lung Disease (GOLD) defines COPD as a "heterogeneous lung condition characterized by chronic respiratory symptoms (dyspnea, cough, expectoration, exacerbations) due to abnormalities of the airway (bronchitis, bronchiolitis) and/or alveoli (emphysema) that cause persistent, often progressive, airflow obstruction".

Approximately 10 percent of individuals aged 40 years or older have COPD, although the prevalence varies between countries and increases with age. COPD affects males and females equally.

COPD is consistently ranked among the top causes of death in the United States and it was the third leading cause worldwide. As a consequence of its high prevalence and chronicity, COPD causes high resource utilization with frequent emergency visits, multiple hospitalizations due to acute exacerbations, and the need for chronic therapy. Chronic bronchitis and Emphysema are the clinical and pathological forms of COPD.

Pathology of COPD:

All the structures of lung are affected in COPD including airway, parenchyma and pulmonary vasculature.

- **Airways**: In the airways, COPD results in chronic inflammation, increased numbers of goblet cells, mucus gland hyperplasia, fibrosis, as well as narrowing in and loss of small airways. Among patients with chronic bronchitis who have mucus hypersecretion, an increased number of goblet cells and enlarged submucosal glands are typically seen.
  Chronic airway inflammation in chronic bronchitis and emphysema is frequently characterized by the presence of CD8+ T-lymphocytes, neutrophils, and CD68+ monocytes/macrophages.
- **Lung parenchyma**: Emphysema affects the structures distal to the terminal bronchiole, consisting of the respiratory bronchiole, alveolar ducts, alveolar sacs, and

alveoli, known collectively as the acinus. These structures in combination with their associated capillaries and interstitium form the lung parenchyma. The part of the acinus that is affected by permanent dilation or destruction determines the subtype of emphysema.

1. **Proximal acinar** (also known as **centrilobular**) emphysema refers to abnormal dilation or destruction of the respiratory bronchiole, the central portion of the acinus. It is commonly associated with cigarette smoking and is the most common emphysema subtype seen in patients with COPD. Centrilobular emphysema is also seen in coal workers' pneumoconiosis.
2. **Panacinar emphysema** refers to enlargement or destruction of all parts of the acinus. Diffuse pan acinar emphysema is a characteristic of alpha-1 antitrypsin deficiency, although it can be seen in combination with proximal acinar emphysema in other patients with COPD.
3. In **distal acinar** (also known as **paraseptal**) emphysema, the alveolar ducts are predominantly affected. Distal acinar emphysema may occur alone or in combination with proximal acinar and panacinar emphysema. When it occurs alone, extensive subpleural paraseptal emphysema may be associated with spontaneous pneumothorax, but it is otherwise of little clinical significance.

- **Pulmonary vasculature**: Changes in the pulmonary vasculature in COPD include intimal hyperplasia and smooth muscle hypertrophy/hyperplasia, which are thought to be due to chronic hypoxic vasoconstriction of the small pulmonary arteries lead to Pulmonary arterial Hypertension

Risk factors:

Family history

Smoking history

Most common risk factor. Passive smoking is also a risk factor

1)Age at initiation Average amount smoked per day since initiation

2)Date when stopped smoking or a current smoker

Environmental history, Biomass fuel exposure

History of childhood pulmonary infections, HIV, or tuberculosis

The exact threshold for the duration/intensity of cigarette smoking that will result in COPD

Symptoms:

Dyspnea:

Ask about the amount of effort required to induce uncomfortable breathing. Many individuals will deny symptoms of dyspnea, but will have reduced their activity levels substantially.

Cough:

Cough with or without sputum production should be an indication for spirometric testing. The presence of chronic cough and sputum has been used to define chronic bronchitis.

Wheezing:

Wheezing or squeaky noises occurring during breathing indicate the presence of airflow obstruction

Acute chest illnesses:

Inquire about occurrence and frequency of episodes of increased cough and sputum with

varies frindividual to another. In the absence of an additional genetic/environmental/occupational predisposition, smoking less than 10 to 15 pack-years of cigarettes is unlikely to result in COPD.

CLINICAL PRESENTATION:

The three cardinal symptoms of COPD are dyspnea, chronic cough, and sputum production. The most common early symptom is exertional dyspnea and less common symptoms include wheezing and chest tightness

Approximately 62 percent of patients with moderate to severe COPD report variability in symptoms (eg, dyspnea, cough, sputum, wheezing, or chest tightness) over the course of the day or week to week; morning is typically the worst time of day.

Patients with COPD may experience weight gain (due to activity limitations), weight loss (possibly due to dyspnea while eating or increased metabolic work of breathing), limitation of activity (including sexual), cough, syncope, or feelings of depression or anxiety. Weight loss generally reflects more advanced disease and is associated with a worse prognosis.

Comorbid diseases that may accompany COPD include lung cancer, bronchiectasis, cardiovascular disease, osteoporosis, metabolic syndrome, skeletal muscle weakness, anxiety, depression, and cognitive dysfunction.

Most of COPD patients have three types of presentations.

Patients who have an extremely sedentary lifestyle but few complaints: These patients require careful questioning to elicit a history that is suggestive of COPD. Some patients unknowingly avoid exertional dyspnea by shifting their expectations and limiting their activity. They may be unaware of the extent of their limitations or that their limitations are due to respiratory symptoms, although they may complain of fatigue.

Patients who present with progressive dyspnea and chronic cough: For these patients, dyspnea may initially be noticed only during exertion. However, it eventually becomes noticeable with progressively less exertion or even at rest. The chronic cough is characterized by the insidious onset of sputum production, which occurs in the morning initially but may progress to occur throughout the day. The sputum is usually mucoid but becomes more purulent during exacerbations.

Patients who present with intermittent pulmonary symptoms and signs: These patients have minimal symptoms at baseline but episodically develop some of the following: cough, purulent sputum, wheezing, fatigue, and dyspnea. Typically, the interval between exacerbations decreases as the severity of the COPD increases. This symptom complex can be a diagnostic challenge due to overlap with other common chronic diseases. For example, the combination of intermittent wheezing and dyspnea may lead to an incorrect diagnosis of asthma. Conversely, other illnesses with similar episodic manifestations (eg, heart failure, bronchiectasis, bronchiolitis) are often incorrectly diagnosed as a COPD exacerbation

DIAGNOSTIC EVALUATION

Whom to evaluate:

- Age >40 years
- Patients with dyspnea, chronic cough, or chronic sputum production
- Patients with gradual decline in activity level
- Patients with risk factors for COPD (eg, cigarette smoking, indoor biomass smoke).
- chronic respiratory illnesses, particularly early in life, may suggest a genetic predisposition to COPD.
- Adults without any symptoms should not undergo further testing for COPD

Signs of COPD:

Mild disease

Physical examination: may be normal

Subtle clues:

1)Prolonged expiratory time

2)Faint end-expiratory

Moderate to severe disease

Physical examination:
1)Hyperinflation (eg, increased resonance to percussion) 2)Decreased breath sounds 3) Wheezes, crackles at the lung

Severe disease:

1) An increased anteroposterior diameter of the chest ("barrel-shaped" chest)

2) Depressed diaphragm

End-stage disease and chronic respiratory failure:

1) Tripod position (Patients may adopt positions that relieve dyspnea, such as leaning forward with arms outstretched and weight supported on the palms or elbows)

2) use of the accessory respiratory muscles

3) Pursed lip breathing

4) Hoover sign (paradoxical retraction of the lower interspaces during inspiration)

5) cyanosis, Asterixis due to severe hypercapnia, and an enlarged, tender liver due to right heart failure, neck vein distention due to increased intrathoracic pressure, especially during expiration.

Adjunctive signs:

1)Yellow stains on the fingers due to nicotine and tar from burning tobacco are a clue to ongoing and heavy cigarette smoking

2)Clubbing of the digits is not typical in COPD (even with associated hypoxemia). Its presence suggests comorbidities such as lung cancer, interstitial lung disease, or bronchiectasis.

Some patients with significant symptomatic COPD fail to report these symptoms to physicians.

To assess those people The **CAPTURE questionnaire** (**C**hronic obstructive pulmonary disease **A**ssessment in **P**rimary care **T**o identify **U**ndiagnosed **R**espiratory disease and **E**xacerbation

For each question, place an X in the box with the answer that is best for you. There are no right or wrong answers, only answers which are right for you.

Please answer each question	No	Yes	
1. Have you ever lived or worked in a place with dirty or polluted air, smoke, second-hand smoke, or dust?	☐	☐	
2. Does your breathing change with the seasons, weather, or air quality?	☐	☐	
3. Does your breathing make it difficult to do such things as carry heavy loads, shovel dirt or snow, jog, play tennis, or swim?	☐	☐	
4. Compared to others your age, do you tire easily?	☐	☐	
5. In the past 12 months, how many times did you miss work, school, or other activities due to a cold, bronchitis, or pneumonia?	**None** ☐	**Once** ☐	**2 or more** ☐

risk) is used.

Patients with a questionnaire score of 0 to 2 are at lower risk, whereas those with scores 3 to 6 should undergo spirometric evaluation.

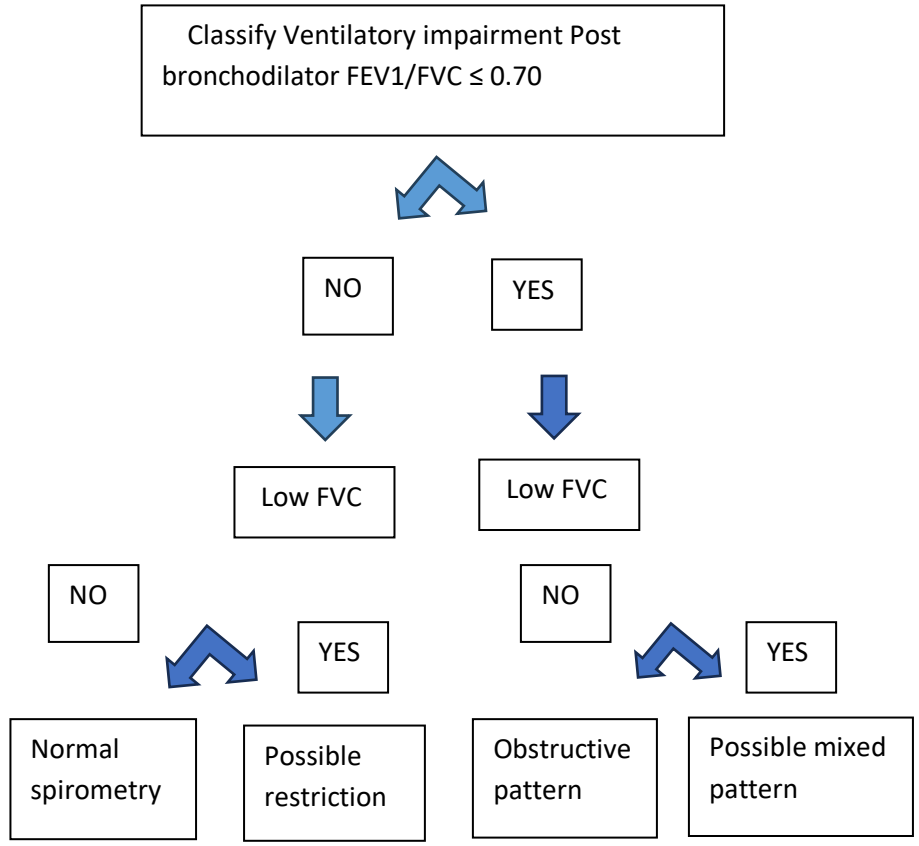
How to evaluate:

Patients at risk for COPD should be evaluated with spirometry and also obtain laboratory testing for dyspnea (eg, complete blood count, thyroid-stimulating hormone, N-terminal pro hormone brain natriuretic peptide [BNP]) and a chest radiograph to assess for other cardiac and pulmonary conditions

Spirometry: Spirometry is required to establish the diagnosis of COPD. When evaluating a patient for possible COPD, we typically perform spirometry before and after bronchodilator administration to determine whether airflow limitation is present and whether it is partially or fully reversible. Airflow limitation that is irreversible or only partially reversible with bronchodilator treatment is a defining physiologic feature of COPD.

Patients without airflow limitation on prebronchodilator spirometry are highly unlikely to have COPD

FEV1/FVC ≤ 0.7 but FEV1 (%) Predicted	Ventilatory defect
≥ 80%	Mild
≥50% – <80 %	Moderate
≥30 - <50%	Severe
<30%	Very Severe



Laboratory studies:

For patients with dyspnea, obtain laboratory studies as part of a broad evaluation for potential etiologies. This often includes a complete blood count for assessment of anemia, an assessment of electrolytes and kidney function, a thyroidstimulating hormone level, and a plasma BNP or N-terminal pro-BNP (NT-proBNP) concentration as a component of the evaluation of suspected heart failure (HF).

Chest radiograph:

For patients with suspected COPD, obtain a chest radiograph to evaluate for alternative parenchymal processes and assess pulmonary comorbidities. Plain chest radiographs have a poor sensitivity for detecting moderate COPD (50%).

Radiographic features
Xray Chest PA view
1) Rapidly tapering vascular shadows
2) Increased radiolucency of the lung
3) Flat diaphragm
4) Tubular heart shadow
5) Hanging shoulder sign of Hilum
6) Increased Rib space in x ray
7) >3 cm Hyper lucency above clavicle
8) Increased Lung shadows for >7 anterior ribs
Xray Chest Lateral View
1) Increased retrocardiac space
2) Increased retrosternal space
3) Barrel shaped chest

Computed tomography:

For alternative diagnoses or if spirometry is not available, then HRCT thorax to be considered. HRCT Thorax has greater sensitivity and specificity than standard chest radiography for the detection of emphysema.

In the absence of other findings, CT-detected emphysema, air trapping, and airway remodelling involving a significant portion of the lungs is highly suggestive of COPD,

Certain CT scan features can anatomically characterize the emphysema as centriacinar (centrilobular), panacinar, or paraseptal, although this is usually not necessary for clinical management.

Centriacinar emphysema occurs preferentially in the upper lobes and produces holes in the center of secondary pulmonary lobules. The walls of emphysematous spaces are usually imperceptible, but central vessels may be visible

Panacinar emphysema more commonly involves the lung bases and involves the entire secondary pulmonary lobule. Panacinar emphysema can cause a generalized paucity of vascular structures. Among patients with alpha-1 antitrypsin deficiency, panacinar emphysema is the more common pattern.

Paraseptal (distal acinar) emphysema produces small, subpleural collections of gas located in the periphery of the secondary pulmonary lobule. It is considered to be the precursor of bullae

Post Diagnostic Work up:

Following a diagnosis of COPD, additional testing may be appropriate to assess disease severity and guide optimal initial therapeutic management. Etiologic evaluation, including alpha-1 antitrypsin testing.

Alpha-1 antitrypsin (AAT) testing:

It is appropriate to test all patients with COPD for alpha-1 antitrypsin (AAT) deficiency by obtaining an AAT serum level and AAT genotyping

Exercise capacity:

Objectively measured exercise impairment is a strong signal of overall health status and a predictor of prognosis in COPD.

For patients with COPD, we perform a formal six-minute walk test with ambulatory oximetry measurement. Timed walking tests can assess pulmonary disability and may uncover previously unrecognized severe disease in patients with reduced dyspnea perception or sedentarism.

Lung volumes:

When a reduced forced vital capacity (FVC) is present on postbronchodilator spirometry, we perform lung volume measurement by body plethysmography to determine whether the reduction in FVC is due to air trapping, hyperinflation, or a concomitant restrictive ventilatory defect.

Body plethysmography is strongly preferred for lung volume measurement when available because gas dilution methods may be insensitive for the detection of air trapping. Decreased inspiratory capacity (IC) and vital capacity, accompanied by an increased total lung capacity (TLC), functional residual capacity (FRC), and residual volume (RV), are indicative of hyperinflation.

An increased FRC or RV with a normal TLC is indicative of air trapping without hyperinflation.
Restrictive deficits will present with a reduced TLC, and restrictive interstitial lung diseases will demonstrate reductions in TLC, FRC, and RV.

Diffusion Lung capacity of Carbon Monoxide (DLCO):

Perform additional assessment of gas exchange in-

1) Patients with COPD with moderate to severe airflow limitation
2) Marginal resting oxygen saturation [O Sat] (O Sat ≤92 percent)
3) Exertional hypoxemia (O Sat<90 percent)
4) Severe dyspnea (modified Medical Research Council [mMRC] score ≥2).

Although DLCO decreases in proportion to the severity of emphysema in most patients with COPD, it cannot be used to detect mild emphysema because it is neither a sensitive nor a specific test. However, reductions in DLCO are associated with increased symptoms, worsened health status, and increased risk of death independently of airflow obstruction and other clinical findings. DLCO reductions out of proportion to airflow limitation may suggest concomitant restrictive lung disease or pulmonary hypertension, which require further work-up.

Arterial blood gas (ABG)

A resting arterial blood gas demonstrating arterial oxygen tension (PaO) ≤55 mmHg (7.33 kPa) is an indication for continuous supplemental oxygen. Similarly, the presence of chronic respiratory acidosis should lead to evaluation for sleep-disordered breathing and possible nocturnal non-invasive ventilation.

CT imaging:

While chest CT imaging is not recommended for all patients. CT imaging of thorax is done in the following circumstances:

1) Patients with persistent exacerbations
2) Symptoms out of proportion to disease severity on lung function testing
3) FEV1 less than 45 percent predicted with significant hyperinflation (as consideration for endobronchial valve placement)
4) Those meeting criteria for lung volume reduction surgery
5) Patients meeting criteria for lung cancer screening.

Resources:

1) Global Initiative for Chronic Obstructive Lung Disease (GOLD) -2024 UPDATE
2) Fishman’s Pulmonary Diseases and Disorders, Sixth Edition
3) Murray & Nadel's Textbook of Respiratory Medicine, Seventh Edition

The Therapeutic Value of Physiotherapy

Mr.S.KRISHNASAMY B.Sc., M.P.T., Ph.D.

Physiotherapy is an adjunct form of treatment modality

It is used widely in many degenerative as well as postural disorders in younger age groups in concurrence with medical or surgical management by the clinicians.

Physiotherapy comes into play in prevention or delaying the degeneration of so many disorders. We shall discuss its usage in a few common clinical conditions in this article so that a family physician can treat such patients with confidence.

Osteoarthritis Knee Joint:

It is primarily cartilage erosion of the articular surface of the femoral condyle and Tibial plateues, it can be Unicompartmental (Medial segment) or Bicompartmental or rarely Tricompartmental.

Risk factors for OA Knee:

1) Obesity

2) Congenital or acquired deformities like Genu varum, Genu valgum

3) Prolonged standing

4) History of Trauma around Knee joint can predispose to early OA Knee

Physiotherapy interventions used:

1) Deep Heat Therapy-Short wave diathermy (SWD) Improves regional vasodilatation thereby clearing the 'P' substance and improving nourishment to the tissues. Henceforth relieves pain and sustains relief.

2) Moist heat-Wax bath- Works on similar principle and can be done at home effectively. However, to sustain pain relief it should be done periodically**.**

3) Interferential therapy (IFT) Blocks pain carrying pathway and stimulates the neural system to release pain masking substances like Opioids, Endorphins and Endokelfins.

4) Quadriceps and Hamstrings exercises (Isometric, Isotonic and Isokinetic to improve the Tone, Power, Strength, and Endurance of the agonist and antagonist muscle groups around the knee joint.

5) Mobilization exercises for Knee and Hip joint to preserve and improve mobility

6) Active and Passive stretching for IT band to improve lateral stability of the joint

7) Remedial advises and lifestyle modifications like avoiding prolonged standing, climbing stairs, walking on uneven surface and sitting on the floor with cross legs are emphasized.

Cervical Spondylosis:

It is a common degenerative condition leading to narrowing of intervertebral space between cervical vertebra with structural damage and erosion of the fibrocartilagenous disc in between causing compression on the exiting nerve root. These patients often present with cervico -brachial neuralgia and in rare cases may be associated with a rudimentary cervical rib causing VBI (Vertebro -Basilar Insufficiency). In extreme cases, it might end up being an indirect cause for Thoracic Outlet Syndrome.

Physiotherapy management for Cervical Spondylosis -

1) ICT-(Intermittent Cervical Traction) it effectively stretches the para cervical structures provided the neck is positioned in a favorable way depending upon the anterior or posterior or postero lateral narrowing of inter vertebral space. If executed improperly, might prove to be counterproductive.

2) IFT – Preferred modality whenever the pain is of neuromuscular origin.

Note: IFT ideal for neuromuscular pain and SWD preferred if the pain is due to skeletomuscular cause.

3) Isometric neck exercises to tone up the posterior neck muscles

4) Shoulder Bracing and shrugging exercise for brachial neuralgia

5) Neck positioned in extension by placing a roll under the neck to counter flexion strain while lying supine.

Low backache:

Pain in the low back can be diffuse, dull, spasmodic, excruciating and radiating to the buttock, thigh and calf depends upon the severity of degenerative changes in the Lumbo-Sacral segment.

Possible causes are

- Postural, commonly designated as mechanical LBA It is common in people whose profession mandates frequent bending activities and in those who do not follow proper ergonomics (improper sitting posture especially in professionals who tend to sit for long hours)at their workplace.
- Lumbar spondylitis and spondylosis
- Lumbar Disc Diseases (Ranging from Desiccated to Herniated disc)
- Congenial deformities like Spina bifida, Hemi Vertebra, Sacralization and Reactive Inflammation due to Repetitive Similar or Stress Injuries (RSI) Para Spinal Muscle Spasm

Management -

An objective and subjective assessment is absolute necessary before planning a meticulous Physiotherapy program

1) In most cases bed rest and restricted activities ranging from few days to few weeks will reduce the pain considerably

2) SWD and IFT are very effective in pain relief

3) Pelvic Traction {Sustained or Intermittent)

4) Core Muscle stretching followed by strengthening exercise targeting the spinal extensors, flexors and lateral flexors essential to improve the anchoring support.

5) Counselling and educating the patient about their condition and encouraging them to adopt a healthy lifestyle is integral to avoid future recurrence.

Hope this article gives a comprehensive idea about the physiotherapy intervention of few of the common clinical condition to help the general practitioners treat their patients better.

A Case Report of Diabetic Striatopathy

Dr. M. Raja, M. D, Physician

Case details:

Background:

75/m, Coronary artery disease - post PTCA and hypertensive,on regular aspirin,statins,atenolol,nifedipine and ramipiril for his co-morbids. His daily mobility is restricted by osteoathritis of both knees and deformed left leg after the femur fracture 2 yrs ago that was internally fixed.

Present illness:

He presented with recent increase in imbalance and dizziness. He has nocturia. He denied any past history of diabetes. On examination, he had involuntary movements of his left limbs suggestive of choreo-ballism which developed in the last 5 days. There was no recent fever with respiratory or skin infections. No paucity of limb movements. No recent head injury.He had similar involuntary movements on the right side for less than a week that resolved spontaneously preceding his left sided involvement. His vitals were normal.

Diagnosis and treatment:

Blood investigations showed RBS-480; A1C-10.3. Urine acetone negative. MRI brain showed old lacunar infarcts in bilateral basal ganglia, thalami and corona radiata. A clinical diagnosis of Diabetic striatopathy was considered. He insisted again he was not diabetic. He was convinced about the new diagnosis of diabetes and started on anti-diabetic drugs, insulins for first two days and changed to oral hypoglycemic drugs. With tablet haloperidol, involuntary movements lessened; clonazepam was added. He had significant improvement.

Follow-up:

He presented again after few days with reappearing of involuntary movements on the left side. Haloperidol was stopped and Sodium valproate-valproic acid added along with clonazepam. Presently, involuntary movements subsided and glycemic status is under control.

Discussion:

- Acute onset movement disorders are common in poorly controlled hyperglycemia. They can be hyperkinetic (choreoathetosis, dystonia, tremors, akathisia, restless leg syndrome etc.) and hypokinetic (parkinsonism).
- Hemichorea- hemiballism is the most common.
- Diabetic striatopathy (DS) is an umbrella term referring to a hyperglycemic condition associated with both or either one of the two following conditions:
  (1) acute onset chorea-ballism;
  (2) striatal hyper density on computed tomography (CT) or striatal hyperintensity on T1-weighted magnetic resonance imaging (MRI)

- DS is the complication of long-standing, poorly controlled non- ketotic hyperglycemia with acute hyperglycaemic surge; it can also be the first presentation of previously undiagnosed diabetes.
- Normal brain imaging does not exclude the diagnosis of DS because nearly 50% cases may not have any characteristic neuroradiological lesions.
- Generally diabetic movement disorder carries excellent prognosis. A majority of cases rapidly resolves with insulin therapy alone with or without use of adjunctive neuroleptics.
- Additional therapies such as haloperidol, tetrabenazine, risperidone, tiapride (ballism and chorea), levodopa (parkinsonism), trihexyphenidyl, clonazepam (dystonia), pramipexole (restless leg syndrome), propranolol (tremor), carbamazepine (hemifacial spasm) etc. have been used with varying success rates.
- Surgical interventions such as pallidotomy, ventrolateral thalamotomy, transcranial magnetic stimulation, and globus pallidus internus deep brain stimulation had been tried for intractable symptoms.

How to Preserve the Uterus

Dr.Sheela.M
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The Uterus, a vital reproductive organ, plays a crucial role in menstruation, pregnancy, and overall female health.

While various life stages and medical conditions might necessitate its removal, understanding strategies to preserve your uterus can be empowering.

The National Family Survey (NFHS)2023 study – higher prevalence of around 11.35% in India.

Here are some approaches to consider for maintaining uterine health and preserve uterus:

1. Regular gynaecological chekups:Early detection of disease allows for prompt intervention and potentially avoids complications that might necessitate a hysterectomy. For example cervical precancerous conditions, abnormal vaginal discharge, heavy menstrual bleeding.
2. Healthy lifestyle : Balanced diet, regular exercises.
3. Minimally Invasive Procedures: When dealing with abnormal uterine bleeding in reproductive age group women, hysteroscopy might be considered which is an another hand. Structural causes of AUB-Polyps, fibroids, endometrial precancerous condition can be cured through hysteroscopic procedures.
4. Laparoscopy: Larger fibroids in young women can undergo myomectomy with better outcome.
5. Mirena (Levonorgestrel releasing intrauterine systems)- This can be used for adenomyosis, fibroids less than 3 cm, ovulatory dysfunction, endometriosis and endometrial hyperplasia which potentially avoids hysterectomy.
6. Uterine-Preserving Treatmen Options in Obstetrics: Recent advances in techniques like uterine artery embolization in placenta accrete, high resolution ultrasound in diagnosing rare cervical, corneal, and scar ectopic pregnancies at earlier gestation can save uterus.

Every individual’s circumstances are unique. The best approach for preserving the uterus will depend on various factors, like disease specific, patient’s medical condition and ways to improve the quality of life.

List of New Drugs Approved in the Year 2023 till date

S.No	Name of Drug	Indication	Date of issue
1	Fesoteroterodine Fumarate Extended ReleaseTablets 4mg and 8mg and Fesoteroterodine Fumarate Bulk	Indicated for the treatment of overactive bladder with symptoms of urge urinary incontinence, urgency and frequency.	06-01-2023
2	Trifarotene 50 microgram/g (0.005% w/w)Cream	Indicated for the cutaneous treatment of Acne Vulgaris of the face and /or trunk inpatients 12 years of age and older.	13-01-2023
3	Crisaborole Ointment 2%	Indicated for topical treatment of mild to moderate atopic dermatitis in adult andpaediatric patients 2 years of age and older	20-01-2023
4	Prussian Blue Insoluble 340 mg and MagnesiumHydroxide 500 mg Capsule	As decorporation agent indicated fortreatment of patients with known orsuspected internal contamination withradioactive cesium and/or radioactive or non radioactive thallium to increase their rates of elimination.	20-01-2023
5	Prussian Blue Insolube 340 mg Capsule andPrussian Blue Insolube Bulk Drug	As decorporation agent indicated fortreatment of patients with known orsuspected internal contamination withradioactive cesium and/or radioactive or non radioactive thallium to increase their rates of elimination.	27-01-2023
6	Imeglimin Hydrochloride Tablet 500mg/1000mg	Type 2 diabetes Mellitus	06-01-2023
7	Crisaborole Bulk Drug	Indicated for topical treament of mild to moderate atopic dermatitis in adult andpediatric patients 2 years of age and older	10-02-2023
8	Remifentanil Hydrochloride 1mg/2mg forInjection	As an analgesic agent for use during the induction and maintenance of general anesthesia for inpatient and outpatient procedures. For continuation as an analgesic into the immediate	15-02-2023

		postoperative period in adult patients under the direct supervision of an anestesia practitioner in a posto perative anesthesia care unit or intensive care setting. As an analgesic component of monitored anesthesia care in adult patients.	
9	Cannabidiol Bulk Drug, Cannabidiol Oral Solution 100mg/ml	Indicated for the treatment of seizuresassociated with Lennox- Gastaut syndrome, Dravet Syndrome, or tuberous sclerosis complex in patients 1 year ofage and older	06-04-2023
10	3-(trimethoxysilyl)propyl dimethyl octadecyl ammonum chloride , Benzalkonium chloride, &Didecyl Dimethyl ammonium chloride	For surface Disinfectant and HandSanitizer	24.04.2023
11	Ibuprofen Sodium Dihydrate Bulk Drug, Ibuprofen Sodium Dihydrate 256/512mg Tablet	For the symptomatic relief of mild to moderate pain such as headache, backache, period pain, dental pain, neuralgia, rheumatic and muscular pain, migrane, cold and flu symtoms, sore throat and fever	26.04.2023
12	Niraparib Tablet 100mg	Niraparib is indicated as monotherapy for the maintenance treatment of adult patients with advanced epithelial (FIGO stage-III and IV) high- grade ovarian, fallopian tube or primary peritoneal cancer who are in response (complete or partial) following completion of first-line platinum -based chemotherapy. as monotherapy for the maintenance treatment of adult patients with platinum-	01.05.2023

		sensitive relapsed high grade serous epithelial ovarian, fallopian tube , or primary peritoneal cancer who are in response (complete or partia) to platinum- based chemotherapy	
13	Polmacoxib Bulk Drug, Polmacoxib Capsule2mg	Indicatged for treatment of Idiopathic(primary) osteoarthritis of Hip/Knec	01.05.2023
14	Amines, N- C10-16-alkyl trimethylenedi-,reaction products with chloro acetic acid 1.0000% w/w	Surface celaning, aerial Misting, HandSanitization (Not for covid use)	04.05.2023
15	Squaric Acid 0.748 mg/ml & Squaric Acid1.745 mg/ml Solution (Spray)	Disinfection of Inanimate surface likefloor, toilet, garbage areas only	04.05.2023
16	Dalbavancin Hydrochloride Bulk Drug,Dalbavancin Injection 500mg	Dalbavancin for injection is indicated for the treatment of adult patients with acute bacterial skin and skin structure infections (ABSSSI), caused by susceptible isolates of the following Gram-positive microorganisms staphylococcus aureus (including methicillin susceptible and methicillin resistant strains), streptococcus pyogenes, streptococcus agalactiae, streptococcus dysgalactiae, streptococcus anginosus group (including S. anginosus, S. intermedius,S. constellatus) and Enterococcus faecalis (vancomycin susceptible strains)	23.05.2023
17	Lobeglitazone Sulfate 0.5mg+Glimepiride 1mgTablets	Indicated an adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus who	23.05.2023

		are already treated with a thiazolidinedione and sulphorylurea or who have inadequate glycemic control on a thiazolidinedione alone or a sulphonylurea alone.	
18	Sovateltide Bulk Drug & Sovateltide Injection30 µg	Cerebral ischemic Stroke.	31.05.2023
19	Lifitegrast Bulk drug & Lifitegrast OphthalmicSolution 5%w/v	Indicated for the treatment of signs andsymptoms of dry eye disease (DED)	05.06.2023
20	Plecanatide Bulk Drug & Plecanatide Tablets3mg	1.) Chronic idiopathic constipation (CIC) 2.) Irritable bowel syndrome with constipation (IBS-C)	08.06.2023
21	Treprostinil Bulk Drug and Treprostinil Solutionfor infusion 1mg/ml & 10mg/ml	For the treatment of idiopathic or heritable pulmonary arterial hypertension (PAH) to improve exercise tolerance and symptoms of disease in patients classified as New York Heart Association (NYHA) functional class III	27-07-2023

BEST PRACTICES FOR INJECTION

General Information:

- All preparations should be done using aseptic technique.
- Do NOT use the initial concentrate or the infusion solution if there is any sign of precipitationand presence of foreign matter in either one.
- Do NOT mix other drugs to the infusion solution to avoid any possible drug interactions.
- Any unused portion should be discarded after the recommended period of use.
- For multiple use vials, reconstituted solution must be labelled with t im e and date immediately after preparation and must be placed under recommended storage condition.
- Flush IV line before and after administration. The most c om m on fluid administered as an IV flush is sodium chloride 0.9%. In some instances, glucose 5% may be used if it is more suitablefor use due to compatibility with the IV medicine being administered.

***This general information may not be applicable to all the medications stated in this guideline. Please refer to the product inserts or consult your pharmacist for further information.**

Table 1: Infection Prevention and Control Practices

Do	Do Not
DO carry out hand hygiene (use soap and water or alcohol rub), and wash carefully, including wrists and spaces between the fingers, for at least 30 seconds. (follow WHO's 'My 5 moments for hand hygiene')	DO NOT forget to clean your hands.
DO use one pair of non-sterile gloves per procedure or patient.	▪ DO NOT use the same pair of gloves for more than one patient. ▪ DO NOT wash gloves for reuse.
Do disinfect the skin at the venepuncture site.	DO NOT touch the puncture site after disinfecting it.
DO discard the used device (a needle and syringe is a single unit) immediately into a robust sharps container.	DO NOT leave an unprotected needle lying outside the sharps container.
DO seal the sharps container with a tamper-proof lid.	DO NOT overfill or decant a sharps container.
DO immediately report any incident or accident linked to a needle or sharp injury, and seek assistance; start Post-Exposure Prophylaxis (PEP) as soon as possible, following protocols.	DO NOT delay PEP after exposure to potentially contaminated material; beyond 72 hours, PEP is NOT effective.

References:

1. World Health Organization, 2010. W HO best practices for injections and related procedurestoolkit (No. WHO/EHT/10.02). World Health Organization.

2. Pharmaceutical Services Division, Penang State Health Department, 2016. AntimicrobialDilution Protocol.

STORAGE CONDITIONS OF DRUGS

The storage conditions for materials and/or products and/or cosmetics should follow the required storage specification of the materials and/or products and/or cosmetics.

Where temperature is not stated (in terms of range) on the labels of the materials and/or productsand/or cosmetics the following definitions should be followed:

ON THE LABEL	MEANS
Freezer	The temperature is thermostatically controlled between -20°C and -10°C
Refrigerator	The temperature is thermostatically controlled between 2°C and 8°C
Cold place	The temperature does not exceed 8°C
Cool place	The temperature is between 8°C and 15°C
Room temperature	The temperature is between 15°C and 30°C
Warm	The temperature is between 30°C and 40°C
Excessive heat	The temperature is above 40°C
Do not store over 30°C	The temperature is between 2°C and 30°C
Do not store over 25°C	The temperature is between 2°C and 25°C
Do not store over 15°C	The temperature is between 2°C and 15°C
Do not store over 8°C	The temperature is between 2°C and 8°C
Do not store below 8°C	The temperature is between 8°C and 25°C
Dry place	No more than 75 ± 5% relative humidity in normal storage conditions; to be provided to the user in a moisture resistant container.
Protect from light	To be provided to the user in a light resistant container.

Reference:

Ministry of Health Malaysia, 2nd Edition 2013. Guidelines on Good Distribution Practice (GDP).

CONVERSIONS & CALCULATIONS OF DRUG

Accurate conversions and calculations of medication dosages are crucial to ensure safe drugadministration.

1. **Metric measures**

1 milligram (mg) = 1,000 micrograms (mcg)
1 gram (g) = 1,000 mg
1 kilogram (kg) = 1,000 g
1 liter (L) = 1,000 milliliter (ml)

2. **Calculating dosages & administration rates**

Concentration of solution in mg/ml = $\frac{\text{mg of drug}}{\text{ml of solution}}$
Infusion rate in mg/minute = $\frac{\text{mg of drug}}{\text{ml of solution}}$ x flow rate (ml/hour) ÷ 60 minutes
Concentration of solution in mcg/ml = $\frac{\text{mg of drug x1,000}}{\text{ml of solution}}$
Infusion rate in mcg/minute = $\frac{\text{mg of drug x 1,000}}{\text{ml of solution}}$ x flow rate (ml/hour) ÷ 60 minutes
Infusion rate in mcg/kg/minute = $\frac{\text{mg of drug x 1,000}}{\text{kgml of solution}}$ x flow rate (ml/hour) ÷ 60 minutes ÷ weight in
Infusion rate in ml/hour = ml of solution ÷ 60 minutes
Infusion rate in gtt/minute = $\frac{\text{ml of solution}}{\text{time in minutes}}$ x drip factor (gtt/ml)

Reference:

Schull, P.D., 2009. McGraw-Hill's IV Drug Handbook. McGraw Hill Professional.

BRINGING UP A KID

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Are your all reading stories to your child?

Here is why it's important for you to spend time reading with your child!

Reading is to your mind what exercise is to your body. It's a incredible gate way for a child which makes all other types of learning easy and possible. More you read, more they learn.

Right age to start reading:

Reading aloud to young babies is a very enjoyable activity. Our human body is a beautiful creation. The ability to hear, vocal imitation and response to human sounds starts developing as early as 4 months. At four months we describe infant as 'Hatching' socially. They become interested in wider world. Hence, we recommend reading to the babies can begin anywhere between 4 and 6 months of age. Research shows that if we start reading books to child from 6 months of age, it will enhance vocabulary and reading skills 4 years later when they start formal learning at school.

Reading aloud to your baby does not have to be a serious or complex. It also need not be time-consuming process. It can be done as a leisure activity. Baby and parent have to be relaxed and not in a hurry.

Attention of babies can be taken to the pictures in a book even before they can hold books. You can initially start with touch and feel books. Later on you can switch to narrative picture story books as they grow up.

Advantages Of reading to your child:

- Reading aloud to will introduce the baby to new words and will help to build vocabulary. This will in turn help in creation of fluency of language.
- It's plays a pivotal role in their development as it provides the building blocks for language and creative skills.

- Reading together also gives a signal of emotional security, attachment, love and bonding with parents.
- Interaction with parent and child provides stimulation for early cognitive skills and school readiness
- It helps to build the imaginative and imitation skills, which help the babies to learn from new experiences in their environment and thereby helps in early brain development.
- When you smile, frown, blow your mouth or make different expressions and sounds, the baby learns to imitate the same which help to build social and play skills.
- Reading helps to expose them to all types of concepts, subject and also helps building child's understanding of humanity and the world around them.

Narration is one of the best ways to help our child understand something without having to experience it for themselves.

If you have not been reading start now. It is never too late to introduce the habit of reading to the young ones. Let us make the journey of learning enjoyable. We will give them chance to experience the beauty of literature from Childhood.

Ref: IAP Guidelines for parents – early childhood guidelines

Nelson textbook of paediatrics -21sr edition

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IMA CGP Calendar of Events : 2024

*Date**	*Venue*	*Event*
January 07 (Sunday)	Chennai	Governing Council Meeting **Dean Charge Takeover & Convocation**
February 04 (Sunday)	Online	Cardiology Update Program Host Faculty : Karnataka SF
March 09, 10 (Saturday, Sunday)	Aurangabad (Maharashtra)	West Zone CGP Conference
April 07 (Sunday)	Online (HQ)	World Health Day
April 21 (Sunday)	Online	Trauma Update Host Faculty : Assam SF
May 19 (Sunday)	Hybrid Ahmedabad	World Family Physician Day (Central Celebration)
June 01, 02 (Saturday, Sunday)	Ranchi (Jharkhand)	East Zone CGP Conference
July 07 (Sunday)	Online	Immunization Update Host Faculty : Maharashtra SF
August 03, 04 (Saturday, Sunday)	Rajahmundry Andhra Pradesh	South Zone CGP Conference
September 08 (Sunday)	Online	Diabetes Update Host Faculty : Odisha SF
October 5,6 (Saturday, Sunday)	Not fixed	North Zone CGP Conference
November 01 to 03 (Friday to Sunday)	Chennai	**ICON 2024** (International Conference of Family Medicine)
December 07, 08 (Saturday, Sunday)	Kaziranga (Assam)	**CGP CON 2024, Convocation** Governing Council Meeting
December 27, 28 (Friday, Saturday)	Not fixed	**NATCON 2024**

* ***Subject to change, if colliding with other important HQ events/ local situations***

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INDIAN MEDICAL ASSOCIATION
COLLEGE OF GENERAL PRACTITIONERS
WEST ZONE CGP CONFERENCE : 2024

Organised by IMA MS

Hosted by IMA CHHATRAPATI SAMBHAJINAGAR

WEST ZONE CGP CONFERENCE-2024

on 9TH & 10TH March 2024 at
Chhatrapati Sambhajinagar (Aurangabad (M.S.))

8TH March Pre-conference CME & Workshop
9th & 10th March Conference
First IMA Chhatrapati Sambhajinagar Conference
(1st IMACSNcon)

Theme :
"Symphony of Knowledge and Advancement: Harmonising Minds, Inspiring Change."

Dr. Yashwant Gade
Organising President

Dr. Anupam Takalkar
Organising Secretary

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Indian Medical Association
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6 MMC Points Expected