IPF-TIMES The Official Newsletter of IPF

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(for circulation to IPF members only)

Dear Friends,

It gives us immense pleasure to bring forth the *1st edition* of the quarterly E-newsletter of our Forum – the **"IPF- TIMES"**

IPF-TIMES is the official newsletter of the Innovative Physicians Forum. The purpose of **IPF-TIMES** is three-fold: to *inform, to inspire, and to invite*. First, the newsletter ***informs*** the IPF members about current issues, developments, and activities related to our forum as well as in the field of Internal Medicine and Allied specialties. Second, the newsletter ***inspires*** current and prospective members to contribute information about the current guidelines and best practice parameters in their field of expertise. Third, the newsletter ***invites*** members to share insights and provide feedback to take IPF to greater academic heights.

This edition of **IPF-TIMES** includes blessings from our visionary Patron, Dr O. P. Sharma, along with inspiring words of encouragement from the Chairperson, Dr Meena Chhabra, and our dynamic Secretary General, Dr JK Sharma. It also includes *Journals watch* section and state-of-the-art articles by three of our esteemed members.

We sincerely hope that this effort will serve its purpose of providing you an enjoyable academic reading. We shall be enriched by your suggestions and look forward to the invaluable support of IPF fraternity in making this effort fruitful.

Warm regards,

E-newsletter team

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Message from the Patron: Dr OP Sharma

It gives me a great pleasure & sense of pride when I see the progress of Innovative Physicians Forum.

First an assembly of handful like-minded physicians & then changing it to a registered body. Regular scientific meets with interactive sessions, hosting a web-page & now initializing an E-News Letter.

I am sure the E-News Letter will become a platform where members will exchange their views, the experts will give updates & the office will use it a means of connection among the members of IPF.

I send my best wishes on this auspicious occasion of launch of **IPF-TIMES** - an innovative initiative of Innovative Physicians Forum.

With Good Wishes

Dr. O. P. Sharma

Message from the Chairperson: Dr Meena Chhabra

I am delighted to see the progress of our Innovative Physicians Forum, which in one year of its inception has moved to the extent that it has a website & an E- newsletter of its own. These achievements will make it a popular scientific body and physicians will feel pride to participate in its activities. I appeal all members to contribute articles, information & updates so that our colleagues may be benefitted.

God bless our IPF.

Dr Meena Chhabra

Message from the Secretary General: Dr JK Sharma

It is a matter of pride for us clinicians that we assembled and discussed the need for updating ourselves with newer developments in the field of medical sciences & within two months this assembly took the shape of a registered body of elite medical personnals i.e. IPF. It was officially registered on March, 28th, 2017

The regular scientific meets encouraged the members to progress further. There then came an informative web page followed by a multipurpose E-newsletter. I am sure these two instruments will make us visible among our large medical fraternity by disseminating clinically relevant information.

Your participation will encourage us and your suggestions will help us to serve you better.

Dr JK Sharma

IPF MEDICON 2018

1st Annual Conference of the Innovative Physicians Forum

Sunday, 2 December 2018

Venue: Hotel The Lalit,

Barakhamba Road, New Delhi

HIGHLIGHTS OF IPF MEDICON 2018

- 1st Dr OP Sharma IPF Oration
- State of the art lectures
- Panel Discussions
- Pro-Con Debates
- Free Papers / PG Workshops
- Poster Presentation

Specialties covered:

Diabetes & Endocrinology
Hypertension & Cardiology
Gastroenterology
Pulmonology & Nephrology
Rheumatology
Infectious diseases
Neurology
Urogenital Infections

Contact for registration

Organizing Secretary: Dr J. K. Sharma

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SICK DAY RULES FOR PATIENT WITH DIABETES

Dr Amit Gupta

MBBS, DNB (Internal Medicine), MNAMS, Fellowship of Diabetes India (FDI), DFID (CMC Vellore), Fellow Cardiff UK (PGDip Diabetes)

Introduction and Background

Patients with diabetes need special care during acute illness as they are prone to both hyperglycemia, hypoglycemia, increased glycemic variability and increased risk of complications of diabetes itself as well as increased morbidity and mortality due to the acute illness. Blood sugar levels may rise acutely to alarming levels in patients with both Type 1 and type 2 diabetes.

Sickness may include common diseases like cold, flu or flu like symptoms, nausea, vomiting and diarrhea, an ear or toothache, sore throat, acute febrile illnesses, UTI and genitourinary tract infections. Acute illness may also include more serious disorders like severe systemic infections, sepsis, pneumonia, trauma, myocardial infarction, stroke. During an acute illness there is increased demand for insulin due to release of hormones like adrenaline, cortisone, growth hormone. Patients with type 1 diabetes have complete deficiency of insulin and don't have insulin reserves to meet the increased demand during acute stressful conditions. Type 2 diabetes patients have both insulin deficiency and insulin resistance and they are equally susceptible for glycemic excursions. They may also be on some complex regimens like a combination of oral hypoglycemic agents and insulin therapy. It is proven beyond doubt that an adequate control of blood sugar is important during acute illness so that acute complication of diabetes like diabetic ketoacidosis (DKA), hyperosmolar nonketotic diabetic coma and hypoglycemia which add significantly to morbidity and mortality can be avoided.

Since diabetes is a lifelong illness and significantly adds to the financial burden to the individual, family as well as nation, it is important to minimize hospital admissions for trivial issues and in such a background it becomes extremely important to have a set of some sick day rules which if adequately taught to the patient, will actually empower patients to handle their blood sugar during acute stressful events and even during not so serious but sick days. To address this issues various organizations, associations and societies have framed and suggested certain principles commonly mentioned as sick day rules. Sick day rules must be a part of diabetes self- management and education.

For the purpose of discussion these sick day rules may be divided into two categories first those meant for management of acute sickness at home and second those which are meant for management of in hospital patients. In this article sick day management applies to management of blood sugar at home during acute sickness/illness.

Sick day rule for acute sickness at home are as follows:

1. Self-monitoring of blood glucose (SMBG): Frequency of SMBG should be increased during acute sickness. It is advised that blood sugar should be monitored every 3 to 4 hours during an acute illness.
2. Patient should be advised to continue taking oral medications for diabetes.
3. In patients who are on insulin, insulin should never be omitted as acute sickness is likely to increase the insulin requirements. Dose of insulin may be titrated as guided by frequent SMBG. Patient should be advised to continue insulin even if there are symptoms like vomiting and diarrhea.
4. Certain authors and guidelines also advice testing for urine ketones when blood sugar levels are more than 270 mg/dl. However routine testing for blood Ketone testing is not indicated.

5. Patient should be advised to take ample amount of non-carbohydrate liquids.
6. Patient should take adequate rest. It is advisable not to indulge in strenuous physical activity or heavy exercise
7. The goal is to keep the blood sugar levels between 80 to 180 mg/dl and to keep the urinary ketones to small or negative if they are positive.
8. In case of any acute illness it is advisable to discuss and consult the treating physician doctor for any clarification and suggestion.

Special Situations:

Patients who are on multiple daily dose insulin and oral hypoglycemic agents sick day rules must be discussed and taught to the patient in advance During acute illness patient may also experience hypoglycemic episodes so in such patients it is important to educate about the Symptoms and Signs of hypoglycemia and management of hypoglycemia at home .Glucagon injection can be kept at home and patient can be advised to use it in cases of severe life threatening episodes of hypoglycemia.

"Sick day rule must be taught to all the patients living with diabetes as an integrated tool for diabetes self-management and education"

Follow up care and Management

- Once patient become better they should be advised to decrease the insulin doses and adjust medications as guided by the blood glucose monitoring.

Identifying serious symptoms and hospital transfer:

- Altered sensorium or poor level of consciousness
- Persistent ketonuria for more than 06 hours
- Blood glucose levels more than 400 on two consecutive glucose testing despite the administration and use of short acting regular insulin.
- Poor oral intake or inability to accept fluids orally
- Patient should be advised to attend hospital or call the doctor in case of uncertainty or doubts regarding the action to be taken for the sick day management.

References

1. Kitabchi AE, Umpierrez GE, Miles JM, Fisher JN. Hyperglycemic crises in adult patients with diabetes. Diabetes care. 2009 Jul 1;32(7):1335-43.
2. Laffel L. Sick-day management in type 1 diabetes. Endocrinology and metabolism clinics of North America. 2000 Dec 1;29(4):707-23.
3. Cohen AS, Edelstein EL. Sick-day management for the home care client with diabetes. Home Healthcare Now. 2005 Nov 1;23(11):717-24.

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ANNOUNCEMENTS

1. Please keep your date blocked for next Scientific CME of IPF planned for **12 May 2018, 8 PM.**
2. All members are requested to send their **academic achievements, scientific articles and manuscripts** to the Secretary General for publication in the next issue of **IPF TIMES** to be released on 1st July 2018.
3. All scientific deliberations are available on **YouTube** at **official IPF Channel: "Innovative Physicians Forum"**
4. Please keep checking your emails and WhatsApp groups for further notices and informations

IMMUNOFLUORESCENCE IN DIAGNOSIS OF RHEUMATIC DISEASES

Dr Pradeep Suri

MBBS, MD (Path), MBA (HCA)

There are 3 main IFA applications in rheumatology:

1. Antinuclear Antibodies (ANA)
2. ds DNA (CRITHIDIA)
3. Antineutrophilic Cytoplasmic Antibodies (ANCA)

ANA directed against variety of nuclear and cytoplasmic antigens have been detected in serum of patients with many rheumatic and non-rheumatic diseases and patients with no definable clinical symptoms. The immunofluorescence is the gold standard for ANA testing with greater sensitivity than ELISA. Hep-2 cells have approximately 100-150 possible auto antigens. These cells are used to detect ANA's by IFA method. ELISA assays can detect only specific auto antibodies against the limited number (typically 6-10) antigens that are displayed. Additionally, end-titer dilution and pattern identification can be done by IFA which is not possible with ELISA. ANA is very sensitive for SLE (>95%) but specificity of test is low (57%)

Table 1: ANA IN VARIOUS DISEASES

DISEASE	SENSITIVITY
SLE	99 %
SCLERODERMA	97 %
DRUG INDUCED LUPUS	100 %
MCTD	93 %
SJOGREN SYNDROME	80 %
PJCA	71 %
PM/DM	61 %
RHEUMATOID ARTHRITIS	52 %
VASCULITIS	33 %

INTERNATIONAL RECOMMENDATION ON ANA REPORTING:

1. Method
2. Positive /Negative
3. Titre: (End Titre)
    a. Pattern Advice: Reflex Testing Confirmation Monospecific Elisa
    b. Line Immune Assay

The end titer dilutions help increases specificity of autoimmune disease but are not diagnostic. Titre is not reflective of disease activity and is not indicated to follow serially. End titre dilution can unmask a hidden pattern in mixed patterns. Patterns help to make a differential diagnosis by identifying the auto antibodies associated with a particular pattern. Twenty-nine ANA patterns have been recognized including 15 nuclear, 9 cytoplasmic and 5 mitotic patterns. *Some of the common patterns seen on IFA are*

1. Homogenous
2. Nucleoplasm Granular/Speckled
3. Nucleolar
4. Centromere
5. Cytoplasmic Coarse Granular
6. Cytoplasmic Fine Granular
7. Cytoplasmic Filamentous

2) ds DNA Antibody: Anti ds DNA antibodies are useful to establish diagnosis of SLE and monitor disease activity and lupus nephritis. Many versions of the test exist:

1. Crithidia Luciliae

2. FARR Assay ELISA A) Conventional B) Nucleosome coupled (NcX)

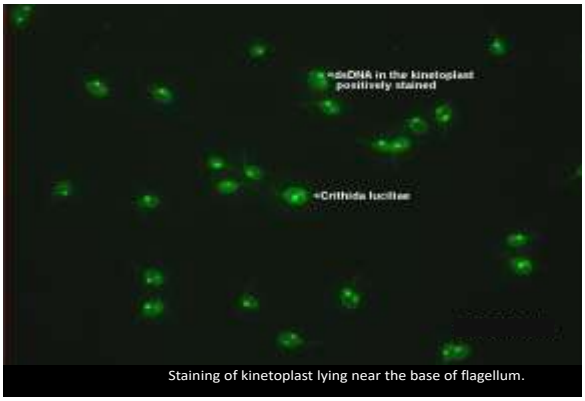

Fig 1 : Crithidia organism with ds DNA

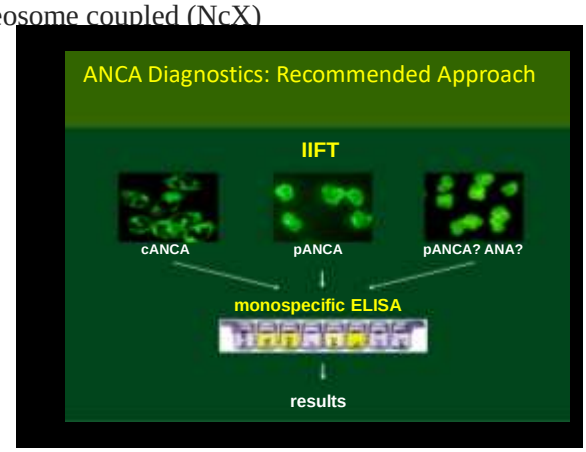

Fig 2: 1999 International Consensus on Diagnosis of ANCA associated vasculitis

3) Antineutrophilic Cytoplasmic Antibodies (ANCA)

C-ANCA and P-ANCA are the two main types of ANCA patterns on IFA and their main target antigens are PR3 and MPO respectively. C-ANCA is most frequently observed in Wegener's Granulomatosis (WG) and its sensitivity for active WG is 90%. P-ANCA antibodies with MPO occur in Microscopic Polyangitis (45%), Churg Strauss Syndrome (60%), and Wegener's Granulomatosis (10%). P-ANCA immunofluorescence can also occur in other conditions but the target antigen is rarely MPO. The ideal approach is to do both IFA and ELISA increase the sensitivity. The recommended approach is to first do IFA and then does mono specific ELISA based on the ANCA pattern.

TAKE HOME MESSAGE

1. ANA should be done by IFA method and end-titre, pattern, advice for reflex testing should be reported.
2. ds DNA should be done on ANA positive patients preferably using both IFA and ELISA to diagnose SLE and monitor the diseases activity.
3. The recommended approach for diagnosis of ANCA associated vasculitis is screening with IFA and confirmation by monospecific ELISA.

REFERENCES

1. Chan et al. Report on 2nd International Consensus on ANA patterns (ICAP) workshop in Dresden 2015. Lupus 2016; 25: 797-804.
2. Damoiseaux J et al. From ANA screening to antigen specificity: AN EASI -survey on daily practice in European Countries. Clin.Exp Rheumatol 2014; 32: 539-546

GLIMPSES of CME on 22 March 2018

RHEUMATIC DISEASES – A Clinical Insight

Dr Neeraj Jain

MBBS, DNB (Medicine), MNAMS, Fellowship Rheumatology (Royal National Hospital for Rheumatic Diseases, Bath, UK and King Edwards Memorial Hospital, Mumbai)

Arthropathies—that is, diseases affecting the joints—are at the heart of rheumatology. Final diagnosis involves identification of a specific disease, evaluation of its activity, accumulated damage, the impact on function and participation in daily activities, and prognosis. As the first step, we have to recognize that this is an articular syndrome. It is suggested by pain that emerges with virtually all movements of the joint as opposed to selective pain found in periarticular lesions. On examination, pain has similar intensity with active and passive mobilization and both can be limited in range, unlike in peri-articular lesions where active and passive findings are discordant. Resisted movement will not affect the pain. Palpation will typically cause pain along the margins of the joint. The presence of crepitus, capsular swelling, effusion and/or deformity further confirms the articular origin.

Secondly, four fundamental features of the articular pattern should be defined:

1. 'Inflammatory' or 'non-inflammatory' in nature of the disorder
2. The temporal pattern of the disorder; especially acute versus chronic duration
3. The spatial pattern: primarily, mono-, oligo- or polyarticular arthritis and the presence of axial involvement
4. The existence of extra-articular and/or systemic manifestations.

	Inflamed joint	Damaged joint
Early morning stiffness	Prolonged	Brief
Inactivity stiffness	Prolonged	Brief
Increased warmth	+	–
Stress pain	Yes	No
Capsular soft tissue swelling	+	–
Effusion	+ + +	+ /–
Coarse crepitus	–	+ + +
Erythema	+ /–	–
Malalignment/deformity	–	+ /–
Instability	–	+ /–

- Number of joints affected
  - Monoarthritis: one single joint affected
  - Oligoarthritis: 2–4 joints affected
  - Polyarthritis: >4 joints affected
- Acute versus chronic
  - Acute: onset in hours or days
  - Sub-acute: up to 6 weeks
  - Chronic: onset over weeks (more than 6 weeks) or months
- Additive versus migratory
  - Additive: the affected joints are added progressively
  - Migratory: the inflammatory process flits from one joint to another
- Persistent versus recurrent
  - Persistent: once it has set, the arthritis persists over time (persistent ≥6 weeks)
  - Recurrent: episodes or crises of arthritis separated by symptom-free intervals.
- Predominantly proximal versus predominantly distal
  - Proximal: arthritis mainly affects large joints—that is, proximal to the wrist or ankle and the spine
  - Distal: the arthritis mainly affects the small joints of the hands and feet, with or without the wrist and ankle
  - Large and small joints affected—there is a mixture of joint sizes
- Symmetrical versus asymmetrical
  - Symmetrical: affects approximately the same joint groups on each side of the body
  - Asymmetrical: there is no clear relationship between the joints affected on either side of the body
- With or without inflammatory low back pain
- With or without systemic manifestations

Common Rheumatological disorders

Rheumatoid Arthritis

- A chronic systemic inflammatory disease of unknown cause
- Presence of morning stiffness which lasts for > 30 minutes
- There is involvement of small joints of the hands and feet followed by involvement of large joints in a symmetrical fashion
- Articular inflammation may be remitting, but if continued, may result in joint damage and disability

Gout

- A group of disorders related to hyperuricemia
- Characterized by deposition of monosodium urate (MSU) crystals in tissue, resulting in acute & chronic arthritis, soft tissue masses called tophi, urate nephropathy, & uric acid nephrolithiasis
- The 1st metatarsophalangeal joint is most commonly involved at presentation (podagra)
- Other common sites include midtarsal, ankle, and knee joints.

Systemic Lupus Erythematosus (SLE)

- Multisystem autoimmune inflammatory disease characterized by a chronic relapsing/remitting course
- Varies from mild to severe disease and may be life-threatening (CNS and renal forms)
- Systems affected: Mucocutaneous; Musculoskeletal; Renal; Nervous; Pulmonary; Cardiac; Hematologic; Vascular, Gastrointestinal

Diagnosis

- ANA, Anti dsDNA and anti-Smith antibodies
- Low serum complements levels: C3, C4, Ch50
- Urinalysis: Proteinuria, hematuria, cellular cast

Scleroderma

- A chronic disease of unknown cause characterized by diffuse fibrosis of skin and visceral organs and vascular abnormalities
- Range from a mild disease, affecting the skin, to a systemic disease that can cause death in a few months
- The disease is categorized into 2 major clinical variants:
  - Diffuse: Distal and proximal extremity and truncal skin thickening
  - Limited: Restricted to the fingers, hands, and face

Sjogren's Syndrome

- Chronic inflammatory disorder characterized by lymphocytic infiltrates in exocrine organs
- Presents with diminished salivary and lacrimal gland function, manifested as sicca symptoms such as dry eyes, dry mouth, and enlargement of parotid glands
- Extraglandular symptoms may also be present, such as arthralgia, arthritis, Raynaud phenomenon, myalgia, pulmonary disease, GI disease, leukopenia, anemia, lymphadenopathy, neuropathy, vasculitis, renal tubular acidosis, and lymphoma

Vasculitis

- An inflammatory disease of the blood vessels
- Disease presentation results from the destruction of blood vessel walls, with subsequent aneurysm formation, bleeding, thrombosis, or ischemia in the various vascular beds and organs
- Diagnosis should be considered whenever a patient has a persistent, unexplained systemic illness or focal signs

Polymyositis/Dermatomyositis

- Systemic CTD characterized by inflammatory and degenerative changes in proximal muscles, sometimes accompanied by skin rash
- If skin manifestations (Gottron sign, heliotrope) seen, it is designated as dermatomyositis

Diagnosis

- Presence of compatible skin rash of dermatomyositis
- Depends on history, physical examination & laboratory investigation
- Diagnosis of muscle component (myositis) usually relies on four findings
  - Weakness
  - Creatine kinase &/or aldolase
  - Abnormal electromyogram
  - Findings on muscle biopsy

REFERENCES

1. Aletaha D, Neogi T, Silman AJ, et al. 2010 Rheumatoid arthritis classification criteria: an American College of Rheumatology/European League Against Rheumatism collaborative initiative. *Arthritis Rheum.* 2010 Sep. 62(9):2569-81.

Journal Watch

1. Lower Cardiovascular Risk Associated with SGLT-2i in > 400,000 Patients: **The CVD-REAL 2 Study** - In this large, multinational, study of patients with type 2 diabetes from clinical practice in the Asia-Pacific, North America and the Middle East regions, initiation of an SGLT-2i was associated with a lower risk of all-cause death, hospitalization for heart failure, myocardial infarction and stroke, as compared to other glucose-lowering drugs. **Kosiborod M, et al; CVD-REAL Investigators and Study Group. Lower Cardiovascular Risk Associated with SGLT-2i in >400,000 Patients: The CVD-REAL 2 Study. J Am Coll Cardiol. 2018 Mar 7. pii: S0735-1097(18)33528-9. doi: 10.1016/j.jacc.2018.03.009. [Epub ahead of print]**

2. European Heart Rhythm Association (EHRA)/Heart Rhythm Society (HRS)/Asia Pacific Heart Rhythm Society (APHRS)/Latin American Heart Rhythm Society (LAHRS) **expert consensus on arrhythmias and cognitive function: what is the best practice. https://doi.org/10.1093/europace/euy046**

3. Prolonged DAPT in patients with acute coronary syndrome without excessive risk of bleeding should remain the standard of care **"6-month versus 12-month or longer dual antiplatelet therapy after percutaneous coronary intervention in patients with acute coronary syndrome (SMART-DATE). JY Hahn, YB Song, JH Oh, DK Cho, JB Lee, JH Do - The Lancet, 2018 – Elsevier**

4. Beta-blocker exposure in pregnancy does not increase risk for fetal cardiac anomalies after adjusting for maternal comorbidities, according to a research letter published in JAMA Internal Medicine. **Beta-blockers safe for pregnant women. Duan L, et al. JAMA Intern Med. 2017;doi:10.1001/jamainternmed.2017.0608.**

5. **Cardiovascular Safety of Febuxostat or Allopurinol in Patients with Gout.** William B. White et al. CARES. All-cause mortality and cardiovascular mortality were higher with febuxostat than with allopurinol. **N Engl J Med 2018; 378:1200-1210**

Congratulations!

Winners of the Interactive CME Quiz on 22 March 2018

Dr Meena Chhabra **Dr D. K. Chauhan**

Dr Puneet Khanna **Dr Vikas Maurya**