

Accredited by :



July 2017

newsletter

Vol. XXI | No. 7 | Price: 50 Paisa



**Rajiv Gandhi Cancer Institute
and Research Centre**

A Unit of Indraprastha Cancer Society
Registered under "Societies Registration Act 1860"



EDITORIAL

THE 4 WIVES IN OUR LIVES

There was a rich merchant who had 4 wives. He loved the 4th wife the most and adorned her with rich robes and treated her to delicacies. He took great care of her and gave her nothing but the best.

He also loved the 3rd wife very much. He was very proud of her and always wanted to show off her to his friends. However, the merchant was always in great fear that she might run away with some other men.

He too, loved his 2nd wife. She was a very considerate person, always patient and in fact was the merchant's confidante. Whenever the merchant faced some problems, he always turned to his 2nd wife and she would always help him out and tide him through difficult times.

The merchant's 1st wife was a very loyal partner and made great contributions in maintaining his wealth and business as well as taking care of the household. However, the merchant did not love the first wife and although she loved him deeply, he hardly took notice of her.

One day, the merchant fell ill. Before long, he knew that he was going to die soon. He thought of his luxurious life and told himself, "Now I have 4 wives with me. But when I die, I'll be alone. How lonely I'll be!"

Thus, he asked the 4th wife, "I loved you most, endowed you with the finest clothing and showered great care over you. Now that I'm dying, will you follow me and give me company?" "No way!" replied the 4th wife and she walked away without another word.

The answer cut like a sharp knife right into the merchant's heart. The sad merchant then asked the 3rd wife, "I have loved you so much for all my life. Now that I'm dying, will you follow me and give me company?" "No!" replied the 3rd wife. "Life is so good over here! I'm going to remarry when you die!" The merchant's heart sank and turned cold.

He then asked the 2nd wife, "I always turned to you for help and you've always helped me out. Now I need your help again. When I die, will you follow me and give me company?" "I'm sorry, I can't help you out this time!" replied the 2nd wife. "At the very most, I will send you to your grave." The answer came like a bolt of thunder and the merchant was devastated.

Then a voice called out: "I'll leave with you. I'll follow you no matter where you go." The merchant looked up and that was his first wife. She was so skinny, almost like she suffered from malnutrition. Greatly grieved, the merchant said, "I should have taken much better care of you while I could have!"

Actually, we all have 4 wives in our lives

- The 4th wife is our body. No matter how much time and effort we lavish in making it look good, it'll leave us when we die.
- Our 3rd wife? Our possessions, status and wealth. When we die, they all go to others.
- The 2nd wife is our family and friends. No matter how close they had been there for us when we're alive, the farthest they can stay by us is up to the grave.
- The 1st wife is in fact our soul, often neglected in our pursuit of material, wealth and sensual pleasure. It is actually the only thing that follows us wherever we go. Perhaps it's a good idea to cultivate and strengthen it now rather than to wait until we're on our deathbed.

Dr. A. K. Dewan
Director - Surgical Oncology

NEUTROPENIC PATIENT IN ICU – CHALLENGES & MANAGEMENT



Neutropenia is defined by either an absolute or functional defect of polymorph nuclear neutrophils. Mild, moderate and severe neutropenia are defined as, absolute neutrophil count of 1,000–1,500 cells/mm³, 500–1,000 cells/mm³, and <500 cells/mm³, respectively. Myelodysplastic syndromes and hematologic malignancies generally cause pancytopenia. In addition, cancer patients may experience neutropenia as a side effect of chemotherapy or radiotherapy.

The survival rates have improved in cancer patients as a result of more intensive regimens and stem cell transplantation. However, this has increased the incidence of neutropenia. Infection is the major cause of morbidity and mortality in neutropenic patients. The risk of serious complications depends on the duration of neutropenia (>7 days) and the presence of comorbidities. Infections often progress rapidly leading to hypotension and/or other life-threatening complications requiring admission to the Intensive Care Unit (ICU). Further, it is more difficult to identify the source of infections in neutropenic patients as symptoms of infection are often diminished.

Clinical Presentation and Management in ICU

A patient with neutropenia may get admitted to ICU due to septic shock, respiratory failure, enterocolitis, hepatic or renal dysfunction etc. as a result of infectious complications. Moreover, many patients may get admitted due to non-infectious reasons as well, e.g. pleural effusion, ascites, pericardial effusion, chemotherapy/disease induced cardiomyopathy, mucositis induced diarrhea etc.

Multidisciplinary teamwork is core to the patient management in the ICU. The admissions are indicated if (1) the critical condition may be reversed in principal, (2) the hematological / oncological long-term prognosis and the extent of other comorbidities justify aggressive and potentially risky therapies and (3) the respective patient does not decline intensive care treatment.

Patients should ideally be cared in isolation area with strict adherence to universal precautions. Removal of indwelling catheters early on in patients with no other detectable focus of infection has been independently associated with survival.

Antimicrobial Therapy in ICU

Antimicrobials are the mainstay to treat severe infections. Empirical antibiotic/antifungal therapy in suspected infections should be initiated according to local microbiology and antibiogram. Microbiologically adequate empirical therapy is associated with successful outcome from infections. The aim of empiric therapy is to cover the most likely and most virulent pathogens that may rapidly cause serious or life-threatening infection in neutropenic patients. In all febrile neutropenic patients, empiric broad-spectrum antibacterial therapy should be initiated immediately after blood cultures have been obtained and before any other investigations have been completed. In critically ill patients, combination antibiotic regimens are usually used.

Abdominal distension or diarrhea should prompt suspicion of either neutropenic enterocolitis (typhlitis) or *Clostridium difficile* colitis. Suspected neutropenic enterocolitis should prompt the addition of metronidazole and antifungal therapy for *Candida* coverage.

As per IDSA recommendations, an empiric antifungal agent should be added after four to seven days in high-risk neutropenic patients who are expected to have a total duration of neutropenia >7 days who have persistent or recurrent fever and in whom reassessment does not yield a cause. However, in ICU patients, antifungal therapy should be considered earlier. Hepatic or renal dysfunctions should be taken into consideration when choosing an antifungal drug.

Acute Respiratory Failure and Neutropenia

Acute respiratory failure (ARF) may occur in up to 50% of patients with neutropenia. Early admission is warranted for management as delayed admission is associated with worse prognosis. DIRECT mnemonic has been described to evaluate these patients: **D**elay since the onset of malignancy or haematopoietic stem cell transplantation (HSCT), symptom onset and the implementation of antibiotics/prophylaxis; **I**mmune deficiency; **R**adiographic appearance; **E**xperience and knowledge of the literature; **C**linical picture; and findings by high-resolution computed Tomography (CT) of the chest.

High resolution CT scans are more sensitive than chest radiographs. CT findings may also allow for distinguishing fungal from non fungal lung infiltrates. Sputum/ tracheal aspirate/ bronchoalveolar lavage sample should be obtained for assisting the diagnosis.



Beside antimicrobial drugs, the patients may need either non-invasive or invasive ventilation support. When no improvement is seen, invasive mechanical ventilation must be considered early to ensure the highest chance of survival for neutropenic patients with hypoxemic ARF.

Acute Respiratory Distress Syndrome (ARDS) and Neutropenia Recovery

ARF that occurs until 3 days before to 3 days after neutropenia recovery may be associated with a deterioration in oxygenation and exacerbation of pre-existing pulmonary disease. The patients with pulmonary infiltrates during neutropenia, delayed or prolonged neutropenia and pneumonia are at risk for ARDS during neutropenia recovery.

Neutropenic Enterocolitis (Typhlitis)

The intestinal tract is a common site of infection in neutropenic patients. Neutropenic enterocolitis is a life-threatening condition due to inflammatory/hemorrhagic/necrotizing involvement of the lower intestinal tract. Moreover, other diagnoses such as *C. difficile* associated colitis, graft-versus host disease, or other abdominal syndromes including cholecystitis, cholangitis, appendicitis need to be ruled out.

Recent studies favor the success of conservative treatment in most patients. Surgical intervention is now reserved for selected cases of neutropenic enterocolitis. General supportive measures include bowel rest with nasogastric suction, parenteral nutrition if necessary, and intravenous fluid support. Platelet transfusions may be necessary in patients with severe thrombocytopenia. In our hospital, because of close monitoring needed in these patients, early ICU admission is the rule.

Perianal Cellulitis

Perianal cellulitis should be promptly recognized in neutropenic patients, as they are associated with significant morbidity and mortality. Necrotizing cellulitis and cellulitis-induced septic shock require surgery.

Vasopressor Regimen during Septic Shock

International guidelines for management of severe sepsis and septic shock apply for neutropenic patients. Cancer patients recently treated with chemotherapy had similar needs in vasopressor support during septic shock compared with untreated cancer patients and patients without malignancy.

Multidrug Resistant Bacteria

Multidrug-resistant bacteria have become more prevalent among neutropenic patients. Antibiotic selection promotes the induction of extended-spectrum chromosomal β -lactamases, enterobacteriaceae that produce *Klebsiella pneumoniae* carbapenemases are now reported worldwide. Vancomycin resistant enterococci have become a prominent pathogen in cancer patients.

Summary

Infections in neutropenic patients often progress rapidly and require prompt admission in ICU. Early adequate multidisciplinary management includes prompt initiation of antimicrobial therapy and life sustaining therapies. Multidrug-resistant bacteria, particularly from the nosocomial setting, have become more prevalent among neutropenic patients in ICU over the last decades.

RGCIRC has been a flag bearer in successful management of cancer patients including neutropenic patients for last two decades. A dedicated ICU team working in collaboration with the hematologists, oncologists, surgeons, microbiologists, physiotherapists and dieticians backed by well equipped setup with facilities for continuous monitoring, for early intervention, invasive and non-invasive ventilation, & renal replacement therapy are helpful in providing comprehensive and efficient care delivery.

Dr. Lalit Sehgal

Head – Liver Transplant Anaesthesia &
Critical Care (SICU)

Date of Printing - 25th July 2017
Date of Publishing - 29th July 2017

Posted at : Ashok Vihar Head Post Office, Delhi-110052
Registered with Registrar of Newspaper Under No. 68797/98
Postal Department Registration No. DL(N)/004/2015-17
Licensed to Post without prepayment under No.:"U"(DN)-162/2015-17

DOCTORS' DAY CELEBRATION 2017



Doctors' Day was celebrated with much fervor on Wednesday, 5th July 2017. The day is celebrated in healthcare organizations all over the world to recognize the contributions of physicians to individual lives and communities. In India, the date coincides with the birthday of the legendary Bharat Ratna awardee Dr. B. C. Roy.

The day was marked by celebrations in the evening with cultural dance performed by Ms. Sakshi Tondon & her group. The said performance was very well appreciated by the gathering. At the end, the closing remarks were by Dr. Sudhir K. Rawal, Medical Director.

CME - IMA LUDHIANA, PUNJAB



RGCIRC organized a CME in association with IMA Ludhiana on Friday, 7th July 2017 at IMA Bhawan, Ludhiana, Punjab. Dr. Vineet Talwar, Co - Director - Medical Oncology delivered a lecture on "Targeted therapy in Urinary Bladder" and Dr. Rupinder Sekhon, Sr. Consultant – Surgical Oncology spoke on "Robotic in Uro Oncology" in the said CME.



CME - IMA HALDWANI, UTTARAKHAND



RGCIRC organized a CME in association with IMA Haldwani on Saturday, 15th July 2017 at Hotel Blue Sapphire Clarks Inn, Rampur Road, Haldwani, Uttarakhand. Dr. Munish Gairola, Director – Radiation Oncology delivered a lecture on "Advancements in Radiation Oncology" and Dr. Sajjan Rajpurohit, Consultant – Medical Oncology spoke on "Newer Technology in Medical Oncology" in the said CME.

Mr. D. S. Negi (C.E.O.)
Dr. S. K. Rawal
Dr. A. K. Chaturvedi
Dr. D. C. Doval
Dr. Gauri Kapoor
Dr. Anurag Mehta
Dr. S. A. Rao
Dr. P. S. Choudhury
Dr. Dinesh Bhurani
Dr. Rupinder Sekhon
Dr. (Col.) A. K. Bhargava
Dr. Vineet Talwar
Dr. Munish Gairola
Dr. Shivendra Singh
Dr. Rajeev Kumar
Dr. Rajan Arora
Dr. R. S. Jaggi
Dr. L. M. Darlong
Dr. Swarupa Mitra
Dr. Ullas Batra
Dr. Sumit Goyal
Dr. Lalit Sehgal
Dr. Sunil Kr. Khetarpal



Architect's Impression of RGCIRC (post expansion)

Printed & Published by Mr. K. K. Mehta on behalf of Indraprastha Cancer Society & Research Centre and Printed at Raju Art Printers, 18-A, Old Gobind Pura Extn., Street No.2, Parwana Road, Delhi-51, Tel. : 8744820804, Published from RGCIRC, Sector-5, Rohini, Delhi-110085

To:

If undelivered please return to :

Rajiv Gandhi Cancer Institute & Research Centre
Sector-5, Rohini, Delhi-110085

Editor : Dr. A. K. DEWAN