M.J. CHARITABLE TRUST

Newsletter Issue 19

WHO ARE WE?

M.J. Charitable Trust is working to provide education and health services to the impoverished sections of society in India.

Dr. Ashok Kumar Jainer established the trust in 2008 to fulfil his dreams of a better society for all. This Trust provides selfless and unconditional service to the mankind. Everyone working in the Trust is committed, dedicated and working unpaid, there is no admin cost. The Trust is registered and has been awarded 80G of the income tax act of India.

VISION: A world in which everyone obtains good education and health.

MISSION: We seek a world of hope and working to ensure that kids growing up in poverty get an excellent education and health.

VALUE: Improve well being of people and convert their suffering into self-reliance. We treat them with respect, dignity, compassion and always be responsive to their needs.

OBJECTIVES

1. Provide quality assured education for children growing in poverty.
2. Provide prompt and safe health care facilities to the poor in rural areas.
3. Provide food and basic amenities for people living in slums.
4. Raising awareness of common illness in rural part of India.

GLIMPSES OF TRUST

Our trust, M J Foundation, works for the essential needs of the people who could not afford them for their poor financial conditions. We basically work in three segments: Health, Education and Social Empowerment. Have a glimpse of our trust:

- **HEALTH**

For the betterment of health we provide free clinic service in remote areas. Through this service more than six thousands patients obtained fringe benefit. In addition to that, we also have added a range of surgeries that include neurosurgery, plastic surgery, heart surgery and cancer surgeries.

M.J. CHARITABLE TRUST

Newsletter Issue 19

Mani (left) and his wife (right)

Mani, a 48 year old man, was diagnosed with throat cancer. He was unable to communicate with anyone. He could neither spoke in Hindi or in English. One of his relatives then got in touch with MJ Trust and told about his deteriorate condition. At first it seemed impossible to cure his condition but Dr Mathews' Cancer Research Centre which is situated in Trivandrum, Kerala, made it possible to cure him. The surgery was successfully done on 14th March, 2017. It was the first time that our trust had an opportunity to make a contribution in someone's life from South India. We are looking forward to spread our work beyond cultural, religion, caste and geographical boundaries.

• EDUCATION

We support education for those who wants to achieve their dream in education but can't afford. These children are from different parts of the country. They have dreams but no funds to achieve them.

This is a picture of a very talented boy who belongs to a poor family. His father works in a post office and could not afford his education. He got admission into IIT Patna and M J Foundation finds it lucky to support him to achieve his dreams. It's our pleasure to support him to build his future career and professional qualifications.

• SOCIAL EMPOWERMENT

Our trust also looks towards social empowerment. We provide monthly pensions to widows who have no earnings and no earning members too and also have to manage daily livings. We also organize free food bhandara in slum areas and provide winter clothes to the poor peoples.

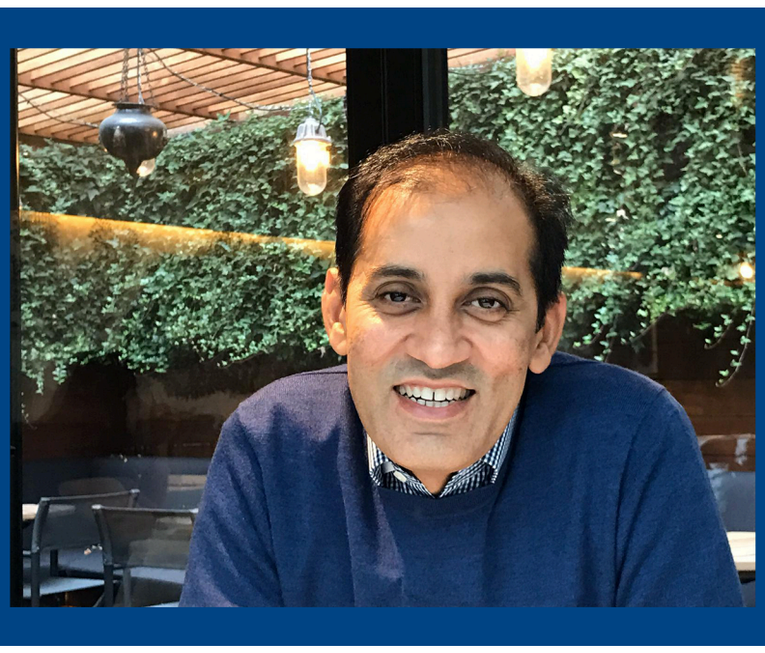
M.J. CHARITABLE TRUST

Newsletter Issue 19

Free food bhandara

LISTEN TO OUR EXPERT

Aplastic Anaemia (AA)



DR SANJAY TIWARI

MRCPCH, FRCPATH, PHD , CONSULTANT IN THE UK

Aplastic Anaemia (AA) is a rare and heterogeneous disorder. The incidence rate is 1 million per year but 2 to 3 times higher in East Asia. It is defined as pancytopaenia with a hypocellular bone marrow in the absence of abnormal infiltrate or marrow fibrosis. To diagnose AA there must be at least two of the following counts:

- **Haemoglobin <100g/l**
- **Platelet count <50x109/l**
- **Neutrophil count <1.5 x 109/l.**

IT IS CLASSIFIED AS:

- **Severe AA**
- **Very severe AA**
- **Non severe AA**

Whilst the majority of cases are idiopathic (70-80%) so a careful drug history, occupational exposure and family history should be determined. It is important to exclude inherited bone marrow failure syndromes (IBFMS) as cause of Aplastic Anaemia. The two most common IBFMS are Fanconi Anaemia (FA) and Dyskeratosis Congenita (DKC).

Clinical Presentation

Patients commonly seek medical attentions because of symptoms of anaemia (lov haemoglobin) and thrombocytopaenia (low platelets). Serious infection is not frequent symptom early in the course of the disease. The presence of shor stature, skin hyper/hypo pigmented areas and skeletal abnormalities, particularl affecting the thumb is suggestive of Fanconi Anaemia(FA) . Dyskeratosi Congenita (DKC) is a multisystem disorder characterised by a characteristic triad of oral leukoplakia, reticular skin pigmentation and nail dystrophy.

Management

TRANSFUSION SUPPORT

Platelet and red blood cell transfusions should be given to reduce the risk of bleeding complications and anaemia and to maintain quality of life. The transfusion trigger in most AA patients is 70 g/L but patients' co-morbidities may require a higher transfusion trigger. Prophylactic platelet transfusions should be given when platelets level is < 10 x 109/l without fever or any bleeding signs or any history of major bleeding events. If the afore mentioned clinical concerns are present, the threshold for prophylactic platelet transfusions is raised to platelets < 20 x 109/l.

PREVENTION OF INFECTION

SAA with prolonged neutropenia is a major risk factor for invasive infections. Anti-fungal prophylaxis with an agent with anti-Aspergillus activity should be given when the neutrophil count is <0.5 x 109/l. The use of prophylactic antibiotics is not recommended if the neutrophil count is >0.5 x 109/l. In severely neutropenic patients, the use of antibiotic prophylaxis needs to balance the potential increased risk of bacterial resistance.

TREATMENT OF INFECTIONS

Febrile neutropenia is an indication for immediate hospitalisation. Diagnostic procedures should include careful physical examination, blood cultures and cultures from other relevant sites and chest X-ray, if there are respiratory signs. However, treatment of infection must be started immediately without waiting for the culture results.

Irradiated granulocyte transfusions can also be considered in life threatening infections with neutropenia; these must be irradiated in every case.

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M.J. CHARITABLE TRUST

Newsletter Issue 19

Treatment Choices in Idiopathic SAA

Matched Sibling Donor (MSD) Haematopoietic Stem Cell Transplant (HSCT)

Stem cell transplantation remains is the only curative therapy to date for SAA as it replaces the hypo-cellular marrow with healthy bone marrow stem cells that are then able to take over blood cell production. MSD HSCT is the first-line treatment recommendation for children with SAA or vSAA with survival figures ranging from 85% to 97%. Current limitations following MSD HSCT include graft rejection, acute graft versus host disease, chronic graft versus host disease (GVHD) and late effects.

IMMUNOSUPPRESSIVE THERAPY (IST)

For children with SAA who lack a MSD, the current favoured alternative first-line therapy is with IST with horse ATG combined with cyclosporine (CSA). The mechanism of action of IST is unknown but is believed to remove/reduce the autoimmune T cell clones that have led to marrow failure. ATG preparations are derived from inoculation into either horses or rabbits with human lymphocytes. The sera obtained following inoculation will thus have antibodies to human lymphocytes. Horse ATG has been shown to be superior to rabbit derived ATG for the treatment of idiopathic SAA. The reason why horse ATG is superior to rabbit ATG is unclear. Steroids are started following ATG to minimize the development of serum sickness, a common complication following ATG. CSA is typically continued for a minimum of 6 months, followed by a slow taper of the drug to reduce the risk of later relapse.

Current results with IST have demonstrated an overall response rate of 60-75% with a long-term survival of 80-90%. The majority of these responses will be partial remissions i.e. have subnormal blood counts but are transfusion independent. Improvement in peripheral blood counts after IST is delayed, starting after an average of 3-4 months. There is a significant risk of relapse (10-30%) and clonal evolution (10-15%) after ATG at 10 years, which does not plateau. Due to the

UNRELATED DONOR HSCT

For children who lack a MSD and have failed IST, the next therapeutic option, is an unrelated donor HSCT. There have been dramatic improvements in outcomes following matched unrelated donor (MUD) HSCT over the last two decades due to improvements in supportive care, the development of high resolution HLA typing and less toxic conditioning regimens. MUD HSCT post failed IST provides encouraging outcomes with overall survival (OS) of 83% and an event free survival (EFS) of 81% similar to MSD HSCT.

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M.J. CHARITABLE TRUST
Newsletter Issue 19

Non-severe Aplastic Anaemia

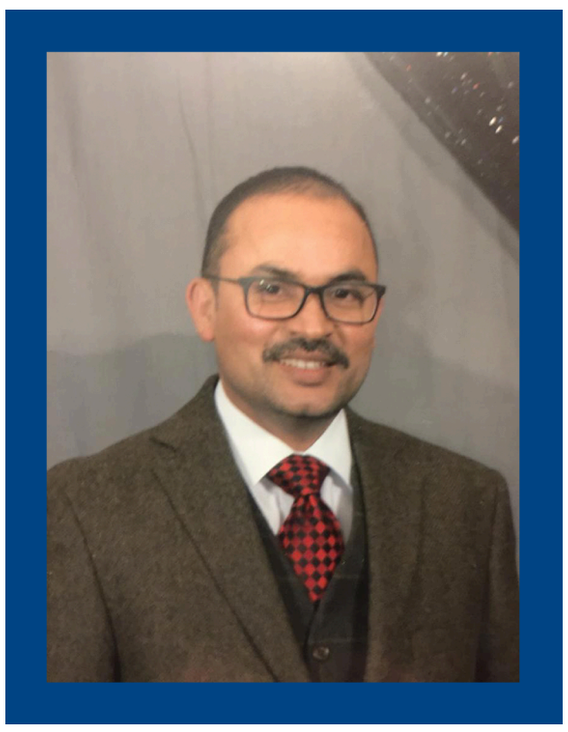
Transfusion-independent children with neutrophil count >0.5 x109/L should be observed. Those with transfusion dependence should follow the algorithm for SAA.

Management Of Inherited Bone Marrow Failure Syndromes (IBMFS)

The management of IBMF syndromes is complex and requires a multidisciplinary approach with referral to genetic counselling. For those children who develop SAA and have a MSD, HSCT is the favoured option. However, sibling donors need to be carefully screened for the same IBMF syndrome. In the absence of a MSD, unrelated donor HSCT or androgens may be used in DKC and FA. Androgens such as danazol, can increase telomerase activity and elicit a haematologic response in a substantial proportion of patients with specific inherited BMF syndromes, namely Fanconi anaemia and DKC. For children with SAA who lack a matched unrelated donor or who fail androgens, mismatched donors can be considered.

Monitoring for late effects, especially malignancies, in FA and liver/pulmonary complications in DKC is essential. Whilst successful HSCT will ameliorate the bone marrow failure, it will not reduce the risk of non- haematological malignancies. In FA, regular head and neck and gynaecological screening from the teenage years is recommended to detect any malignancies at an early age. Human papilloma virus vaccination is recommended in both genders.

CANCER: Its Causes and Preventions



DR. UDAIVEER PANWAR MBBS, MD, DNB, FRCR
CONSULTANT CLINICAL ONCOLOGIST
UNIVERSITY HOSPITALS PLYMOUTH NHS TRUST, PLYMOUTH, UK

Cancer is a lethal disease. Worldwide 1 in 5 men and 1 in 6 women develops cancer during their lifetime. In India this prevalence is around 1 in 10 for both males and females, most likely it is a result of incomplete patient registry.

Designed by nine DIGITAL

Now, the question is - Is there anything one could do to prevent the development of cancer?

The answer is yes.

Obesity or simply being overweight is a risk factor for nearly 12 different types of cancer including Breast, Prostate, Bowel and Ovary. It is also a risk factor for various heart diseases and type 2 diabetes. So maintaining a BMI of < 25 will help avoid many major diseases in the modern world.

Moderate physical activity (such as brisk walking) as well as vigorous physical activity (including running, fast cycling and aerobics) decreases the risk of colon, womb and post-menopausal breast cancer. We should aim for at least 150 minutes of moderate intensity activities per week. Additional physical activity benefits reduce the risk of heart attacks, type 2 diabetes and hypertension. It also improves bone health, prevents falling risks, improves mood and helps to sleep better.

What we eat has a significant impact on our overall health. Food that contains high fat and sugar contributes to weight gain and all the problems associated with that. Eating processed meats of any form or a diet rich in red meat is a recognized risk factor for developing bowel cancer. Red meat is a good source of nutrients and can be a part of healthy and balanced diet as long as the quantity is about 350–500g cooked weight (or 525–750g raw weight) a week. Diets that are high in plant foods, such as fruit, vegetables, whole grains and beans helps to reduce the risk of bowel cancer. We should all aim to eat at least 5 portions of fruit and vegetables a day. Sugar drinks contain high calories resulting weight gain and hence should be avoided.

UNRELATED DONOR HSCT : Drinking alcohol is linked to several types of cancers including breast, bowel, liver, mouth & throat, oesophagus and stomach. To reduce the risk of developing alcohol related cancer it is recommended not to drink alcohol at all. If you are drinking alcohol, keep it within the national acceptable limits. In India women should drink no more than 12 units per week while for men it is no more than 18 units. Women and men should have at least one alcohol free day per week.

TOBACCO SMOKING : Smoking causes lung cancer, but it can also cause many other types of cancer including Breast, Bowel, Blood, Bladder, Liver, Mouth, Pancreatic and Stomach cancer. E-cigarettes do not have tobacco and are therefore much less harmful when it comes to risk of cancer. However, it holds other harmful risks like COPD, heart disease and other lung diseases.

Infections like sexually transmitted human papilloma virus (HPV), are linked to cancers like oropharyngeal cancer, cervical cancers and anal cancers which are all common cancers in India. Barrier method of contraception can reduce the risk of these cancers and now there are vaccinations available for boys and girls to prevent HPV associated cancers. The vaccination should be done before starting sexual activity - ideally between 11 to 13 years of age.

Breastfeeding is not only good for your baby but also protect you against developing breast cancer.

So, in summary, I would say living a healthy balanced life with good diet, good exercise, avoiding harmful substances like smoking, drinking alcohol within limits, safe sex, breast feeding your child and offering them vaccination for preventable cancers can all significantly reduce the risk of developing cancer. Please educate your near and dear ones and disseminate the information for wider benefits.

Udaiveer Panwar

Hepatitis B

DR VIPUL KUMAR, M.D. (INTERNAL MEDICINE)
SENIOR PHYSICIAN AND GASTROENTEROLOGIST

Hepatitis B is a disease in which inflammation of liver is caused by infection with Hepatitis B Virus (HBV). This infection usually spreads from person to person by infected needles, sexual contact and mother to child at birth. Usually, such an association is not present and most of the people may be considered as infected by food or water.
A recent onset Hepatitis B is known as Acute Heptatitis B . it menifests as fever, malaise, pain in abdomen, nausea, vomiting, loss of appetite, deep yellow urine, yellow sclera/skin (Jaundice) . These symptoms may be mild or severe in different patients. When these symptoms are associated with raised Serum Bilirubin and Liver enzymes (AST, ALT) along with Hepatitis B specific Antigen and Antibodies in blood , then it is labeled as "Acute Viral Hepatitis B". This condition is usually self limiting and gets cured in 2-3 months in approx. 95 % of cases. Symptomatic treatment for fever, abdominal pain, nausea is required for initial 1-2 weeks. Some people also take herbal liver supplements but a knowledgeable person should be consulted for a good liver tonic . Regression is suggested by improvement in symptoms and Blood tests. High carbohydrate diet and Juices may be inappropriate and a usual low fat, low spices, balanced diet which is palatable according to person's taste should be taken . Routine household activity is permitted but the patient may have to take few days leave from work initially. Running and Gym should be avoided till the normalization of Serum Bilirubin.

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Newsletter Issue 19

When blood tests for Liver inflammation and Hepatitis B viral markers persist for more than 6 months , then it is termed as Chronic Hepatitis B. The initial presentation of Chronic Hepatitis B may not be same as Acute Hepatitis B. In fact it may present with malaise , yellow sclera, weight loss , poor appetite for an indeterminate period or without any symptoms . In many patients the disease is detected only on routine blood tests e.g before blood donation or general health check up .

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Several variants such as Chronic Active and Chronic Persistent Hepatitis B have been described based on Liver Histology findings. Chronic Hepatitis B usually does not interfere with the routine life of the patients. Its treatment is with Hepatitis B specific antiviral drugs such as Tenofovir and Entecavir. Response to treatment and initial assessment is done by HBV DNA PCR Quantitative testing. The HBsAg marker in the blood may persist life long even after HBV DNA becomes undetectable after successful treatment.

Untreated Chronic Hepatitis B may (after a few years) progress to "Cirrhosis of Liver" and further to "Hepatocellular Carcinoma". These are serious and life threatening conditions and may present as severe jaundice, vomiting of blood, ascites, loss of consciousness and many other features of "Liver Failure". Although rare, but few patients of HBV related Cirrhosis of Liver may get completely cured by antiviral treatment.

HBV infection is preventable by Hepatitis B vaccine. It has a three dose schedule and is given to all babies starting at birth. Anybody not immunized previously can get it at any age of life, although very old people may not get benefitted. High Risk groups like medical professionals may take booster dose every five to ten years.

Jaundice , Acute Hepatitis, Chronic Hepatitis, Cirrhosis of Liver, Hepatocellular carcinoma and Liver Failure may also be caused by several other diseases including Hepatitis A/C/E , Non Alcoholic Hepatitis, Alcoholic Hepatitis, Drugs and Toxins, Iron or Copper Metabolism disorders, Autoimmune Diseases, Congenital Diseases etc. Therefore, a proper consultation is needed if anybody has severe symptoms or prolong disease.

(disclaimer- This article is for general knowledge of the public and is a mix of scientific knowledge and personal experience of the author who has treated thousands of patients with Hepatitis B related diseases in last 28 years.)

Dr Vipul Kumar, M.D. (internal Medicine) is a Senior Physician and Gastroenterologist at Bareilly, India and is also a Faculty in Rohilkhand Medical College, Bareilly . He is a Life Member of Indian Society of Gastroenterology as well as Indian Association for Study of Liver. He has extensive experience in treatment of whole spectrum of Hepatitis B related diseases.

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Newsletter Issue 19

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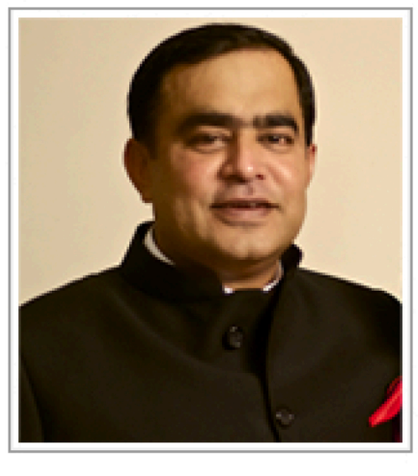

Mahimvir Singh,
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SOCIAL EMPOWERMENT

Dr Aditi bhati