



Dear friends and senior colleagues,

I thank you from the bottom of my heart for the support extended to LOTUS hospital in last 3 years. You all have helped us perform 22 successful bone marrow(stem cell) transplants at our hospital in Nashik, the latest being a 2 year old patient with thalassemia major. To take the stem cell therapy forward we have started a new unit of stem cell therapy and regenerative medicine to provide this therapy for non haematological diseases.

Bone marrow (stem cell) transplantation is well established in haematological medicine as the only curative therapy for thalassemia major, sickle cell anaemia, refractory leukemia, relapsed lymphoma, refractory hodgkin's disease, multiple myeloma, congenital immunodeficiency diseases etc.

As you all know stem cell therapy is also being used for many other non-hematological conditions with variable success. The results are mixed and many centres are misguiding the patients with false promises and exploiting their emotional sensitivities. We at lotus have started a separate unit for stem cell therapy for non –haematological diseases to impart quality and evidence based treatment options for such patients. Our aim is to continuously excel in our services and give new hope to patients and their family with morbid diseases who have no hope otherwise and have exhausted the available medical treatment options.

What is regenerative medicine?

Regenerative medicine is the process of replacing or regenerating human cells, tissues or organs to restore or establish normal function with own or laboratory made cells/tissues. The most easily seen form is bone marrow (stem cell) transplantation for haematological diseases. These innovative medical therapies are showing great promise in many chronic morbid diseases.

How Regenerative medicine helps in healing?

Stem cells originate from locations called stem cell niche (in bone marrow) to repair the damaged part of specific organ. When stem cell niche is unable to provide sufficient stem cells, bone marrow will mobilize stem cells to the damaged site. In certain cases, the bone marrow may not mobilize stem cells due to lack of signals from degenerative site, dysfunction of circulatory system (i.e peripheral artery disease/Diabetic foot) or mobilized cells may not be sufficient to cure the degenerative area. Therefore we have devised technology to transfer stem cells to the damaged area with the hope that they will be converted completely or in part to particular organ with the help of microenvironment of the organs itself.

What is the current scope and what to expect from regenerative medicine?

This is a way to provide solutions for many "lost hope" patients and improving their quality of life. The protocols of regenerative medicine are individualized (unlike drugs) and hence we have to assess each patient and then give proper advice. At present, regenerative medicine will not promise organ creation or replacement, however the therapy improves the quality for the patients so they lead their normal life after having exhausted the existing medical treatment. After concluding that the regenerative therapies are safe and effective, number of patients with debilitating disease are taking the treatment. However please be aware that this is not a solution for each and every therapeutic problem. Stem cells will not perform well in some sort of end stage diseases due to complete death or necrosis of tissue or cells.

What are the current indications for stem cell therapy/ platelet rich plasma (PRP) therapy?

1.Chronic ulcers

- a.Diabetic foot ulcers.
- b.Venous and arterial leg ulcers.
- c.Pressure ulcers (bed sores)
- d.Skin graft donor sites.
- e.First and second degree thermal burns.

2. Avascular necrosis (AVN) of joints:

Patients on long term steroids (rheumatological diseases, nephrotic syndrome etc) have increased risk of AVN. Sickle cell anaemia is another important cause of AVN. We can expect long term pain relief, we can stop the disc prolapse and disease progression. We cannot completely reverse the phenomenon.

3. Non-Union fractures:

When fracture union is delayed for more than 6-8 months the condition is referred as non union or delayed union. The bone marrow stem cell therapy is proven beneficial in healing upto 50% of patients with non-unions. Stem cells induce neo-angiogenesis and provide nutrition for healing osteoblasts.

4. Osteoarthritis:

Platelet rich plasma therapy is beneficial in OA. In many studies it is better than hyaluronic acid. We can expect pain relief and improvement in functionality. We can stop disease progression and if used with mesenchymal stem cells we can even repair the cartilage.

5. Critical limb ischemia/ peripheral arterial disease:

These patients develop non healing wounds and ulcers and may not respond to standard therapies. Stem cell therapy can improve circulation with neo angiogenesis (new blood vessel formation)

6. Spinal cord injury (where the patient have no other option):

All patients with this injury will not respond to stem cell therapy. They can be effective in early phase after the injury. However the treatment can improve the quality of life, bowel and bladder control and some motor/sensory functions.

7. Autoimmune diseases (early systemic sclerosis/SLE etc)

8. Oral submucous fibrosis.

9. Refractory vitiligo/leukoderma.

10. Sports injury and tendon repair.

11. Cosmetic surgery.

As we make new inroads in this newer technology, we may be able to change lives of many patients who otherwise may have to suffer and die a slow physical and mental death.

We at Lotus Institute have trained staff, expert cell therapists and required infrastructure to make a positive change in life of many patients and their families with help of stem cells.

I sincerely hope you would make use of the technology and our expertise in this field to improve the quality of life of your patients. Please feel free to ask me personally for further details.

Indications for which bone marrow transplant has been performed at Lotus Hospital in last 3 years:

Thalassemia Major	8
Acute leukemia	5
Multiple myeloma	5
Non-Hodgkins Lymphoma	1
Aplastic Anaemia	2
Myelodysplastic Syndrome	1

For appointments

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