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## An Unbelievable Evolution – Transplantation

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### Commentary

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#### ABSTRACT

Article entitled “Transplantation: Unbelievable Evolution and an Amazing Gift to Human Population” has provided basic idea about the word transplantation. Transplantation can be defined as the procedure in which transfer or replacement of patient’s damaged organs takes place from one person to other or with in the same individual. It has explained the need of transplantation, types of transplantation and different types of transplantation technologies involved.

#### INTRODUCTION

Article entitled “Transplantation: Unbelievable Evolution and an Amazing Gift to Human Population” has provided basic idea about the word transplantation. This article has explained the main motto and need of transplantation for human race and also explained different types of transplantation technologies in this article. There are few people who lost their valuable lives due to organ loss or improper functioning of organs. These people might not listen to the word Transplantation, as there is no such development in scientific research in ancient times to transfer organs from one person to other.

Transplantation can be defined as a clinical practice for overcoming many diseases by the transfer or replacement of patient’s damaged organs takes place from one person to other or with in the same individual [1,2]. There are different types of transplantations and some of them include heart transplantation, hair transplantation, kidney transplantation, pancreatic transplantation, lung transplantation, liver transplantation, etc.

#### RENAL TRANSPLANTATION

Renal transplantation is a process of transferring desirable kidneys by replacing effected kidneys to the patients with last stage kidney disease [3,4]. There are many programs conducting worldwide for kidney donation and the success of these programs depends on the number of patients involved in that particular program [5]. The achievement of renal transplantation has become 95% in now a day [6] and it has become an effective treatment in renal replacement therapy [7].

#### HEART TRANSPLANTATION

The first heart transplantation was performed by Dr. Christiaan Barnard in the year 1967 [1]. Treatment for heart failure is a very difficult task. But, heart transplantation is the only treatment available [8]. Heart is the first organ formed from the inner cell mass of blastocyst in early embryogenesis. Mature cardiac muscle cells known as cardiomyocytes are terminally differentiated and unable to regenerate in the adult heart [9,10]. There is no drug approved by FDA for heart disease and failure as a new treatment for humans in the previous years [10]. Heart failure can be characterized by a ventricular dysfunction which constitutes the end-stage cardiopathies and heart transplantation is the third most common organ transplantation in many transplant centers [11, 12].

### **LIVER TRANSPLANTATION**

Liver transplantation is one of the most challenging surgical procedures among different types of transplantations as there is chance of heavy blood loss during this transplantation [13,14]. It is a well-suggested treatment for patients with last stage liver disease [15]. One of the major causes for liver disease is alcohol [16]. Hepatocellular carcinoma is a common solid tumor and liver Transplantation is the best therapeutic approach for this disease [17,18]. Liver transplantation is a well-known and commonly used procedure at major medical centers [19] as this procedure is reducing blood loss in patients [20].

### **LUNG TRANSPLANTATION**

Lung transplantation is the best therapeutic option for patients with pulmonary disease who are resistant to medical treatment [21]. Idiopathic pulmonary fibrosis is the most common form of interstitial lung disease [22]. Lung transplantation has become one of the best treatments of choice for patients with idiopathic pulmonary fibrosis [23]. Lung transplant has been the preferable treatment for above 40 years for several end-stage respiratory diseases. The first human lung transplantation was performed in the year 1963. But, the patient died after 18 days because of renal failure [24].

### **PANCREATIC TRANSPLANTATION**

Pancreatic transplantation is a preferable technique for patients with Type 1 and Type 2 diabetes [25]. Pancreas transplantation was achieved in 1960s [26]. This technique of pancreatic transplantation is very much useful for the diabetic patients [27].

### **HAIR TRANSPLANTATION**

Hair transplantation has become a popular method among different types of hair loss treatments. This technique will not lead to linear scar and it results in low pain and discomfort at the donor site [28]. It will be possible to create undetectable and natural-looking transplant by using large grafts [29].

### **CONCLUSION**

Article entitled "Transplantation: Unbelievable Evolution and an Amazing Gift to Human Population" has given basic idea about transplantation. It has explained the need of transplantation, types of transplantation and different types of transplantation technologies involved. It has given nice introduction followed by different types of organ transplantations included Kidney Transplantation, Heart Transplantation, Liver Transplantation, Lung Transplantation, Pancreatic Transplantation, Hair Transplantation, etc.

This article fails to explain about cell transplantation and tissue transplantation. It also fails to explain the history of transplantation and the efforts of scientists involved in it. But, the title given for this article explains the transplantation as Unbelievable evolution which is absolutely true and it has also explained how it has become wonderful gift to human population by comparing both present and past situations of human life.

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