The effect of mesenchymal stem cells of umbilical cord on the treatment of cleft palate in children

Mobina Vatankhah
Farzanegan School, Iran

Cleft palate or harelip is one of the most common congenital defects in humans and harelip with cleft lip in whites is estimated 1 out of every 7,000 to 1000 births. In recent years, surgeons and doctors have tried to resolve this problem immediately after birth by the operation but sometimes we encounter things that cannot be easily solved by a surgical procedure so our goal is to use stem cells to eliminate the disease and prevent operation because children are often afraid of surgery and pain later on. Also, the need for general anesthesia for bone remodeling involves complications such as long-term pain and nerve disorders. By the advent of the use of alternative stem extraction techniques, a better alternative to the invasive method of cleft lip and palate therapy has been developed. The cleft lip is a controversial issue that has led the world’s leading medical and educational centers to achieve significant growth and prosperity. The oral-pink cleft is not the exception as the most common congenital anomaly in the craniofacial region. The bone graft as an alveolar cleft is an inseparable part of the process of treating patients with a one-way or two-way cleft lip and palate.

The statistics show that in the United States of America, out of every 10 children, 6 children have oral-pectoris disorder. An annual cost of $200million is spent on the treatment of children with this malformation. This disease includes complications, such as speech impairment, nutrition, hearing loss and repeated infections of the ear and dental disorders. Surgery can fix the problem of cleft lip. Before surgery, the doctor may use special equipment and accessories, such as dental splints or medical bandages to protect the child and reduce his problems. Most doctors recommend that baby undergoes surgery at the age of 6months. However, the exact time of surgery is different for each infant and depends on a variety of factors, including the extent of the cleft lip and the overall health of the baby. The baby may have to undergo several other surgical procedures during the course of her growth. For example, if your baby’s nasal appearance is affected by a cleft lip, nasal surgery may be advisable at a certain age. Due to the complications of these surgeries on the baby, physicians are looking for a more appropriate way to cure this disorder. In the recent decade, many articles on the extraction and cultivation of bone marrow stem cells for the treatment of this malformation have been published in the valid journals and magazines, but there are major problems in extracting these types of stem cells. Despite having these studies, it has not yet been possible to cultivate and inject these cells into the target tissue, because the extraction and cultivation of bone marrow stem cells are time-consuming and this abnormality should be treated urgently and at the earliest days of birth.

mobinavatankhah@gmail.com